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2015 INTE

INTERNATIONAL CONFERENCE ON NEW HORIZONS IN EDUCATION

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PREFACE

"International Conference on New Horizons in Education (INTE)" is an international educational activity for academics, teachers and researchers. INTE promotes development and dissemination of theoretical knowledge, conceptual research, and educational practices through conference activities, journals (TOJET, TOJNED and TOJDEL). Its focus is on creating, sharing, and disseminating scientific knowledge among academicians, school administrators and teachers in educational field. This conference is now a well-known educational event worldwide and the number of paper submissions and attendees are increasing every year.

The 6th International Conference on New Horizons in Education is being held between June 10-12, 2015 in Barcelona, Spain. This year INTE has received more than 800 abstract submissions. After a review process, araound 600 papers in various fields of education have been accepted for presentation in INTE 2015 Barcelona, Spain.

We would like to thank all participants who will present their academic works in INTE 2015, Barcelona and especially to our distinguished guests and keynote speakers for their collaboration and contribution for the success of the INTE-2015.

We wish you a successful conference and good time in Barcelona, Spain.

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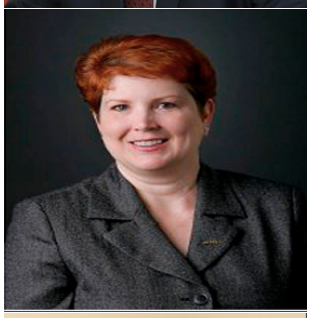
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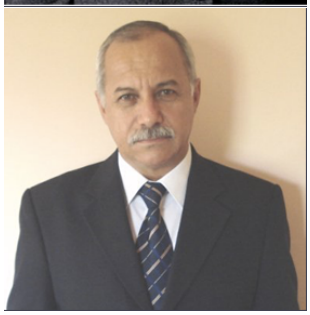
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A BLENDED LEARNING APPROACH TO ENHANCE LEARNING AND TEACHING OF FLUID MECHANICS: AN EXAMPLE DEMONSTRATING SUCCESS

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ABSTRACT
Fluid Mechanics is a core subject in civil, mechanical, chemical and aeronautical engineering undergraduate courses. This subject needs a relatively strong background in mathematics and physics, which is not well satisfied for a good number of students enrolled to fluid mechanics subject in Australian universities. This paper presents a case study on teaching and learning of fluid mechanics at University of Western Sydney (UWS), Australia. In UWS, fluid mechanics was rated as a high-failure subject based on the data over a decade. More recently, UWS has adopted a Blended Learning Approach (BLA) to teach fluid mechanics to its undergraduate classes. In the adopted BLA, various learning materials have been made available to the students such as online recorded lectures, online recorded tutorials, hand written tutorial solutions, discussion board and online practice quizzes. Based on the data of over 734 students over 4-year period, it has been shown in this paper that a BLA has improved the learning experience and success rate of the fluid mechanics students in UWS. The findings of this paper would be useful in adopting a BLA to other subjects to enhance the learning of fluid mechanics and similar subjects.

INTRODUCTION

Engineering courses have traditionally been delivered face-to-face for many years; however, due to technological developments in the last three decades, courses are being offered in a number of different modes. Based on online proportion of the course delivery, tertiary courses may be categorized into four types: (i) traditional: 0% online course component i.e. content is delivered in writing or orally; (ii) Web facilitated: 1 to 29% of the course content is delivered online; (iii) blended/hybrid: 30 to 79% of the course content is delivered online; (iii) online: 80 to 100% of the course content is delivered online (Allen and Seaman, 2011). In some developing countries, traditional mode of engineering course delivery is still practiced; however, in many developed countries, some universities and colleges have been offering engineering courses online or at least planning in this direction. However, most of the engineering schools in the developed worlds are still doing face-to-face delivery, but with varying degrees of online activities (i.e. blended delivery). Blended learning approach (BLA) can be defined as a flexible learning and teaching method, which attempts to use the best of the face-to-face and online course delivery modes to achieve the desired learning objectives for the students.

The BLA has direct links with teacher-centered paradigm of teaching and learning and student-centered one. The teacher-centered paradigm is viewed in line with the traditional on campus face-to-face delivery of engineering course where 'chalk and talk' approach still plays a major role. The student-centered approach is more in line with the blended learning (Jaeger and Adair, 2014) and online delivery mode. This mode is supported by a variety of tasks including problem-based and case-based learning and use of immersive scenarios and role-play and group works. In the teacher-centered approach, students need to show to the teachers that they have mastered the skills to the teacher's satisfaction. In the student-centered approach, students themselves can assess their ability. For example, Reeves and Laffey (1999) mentioned that in an undergraduate engineering course, problems can be defined in such a way that students have to learn, assess and demonstrate their learning through challenging tasks such as planning a mission to Mars and designing a research station including a renewable power source to sustain life after the establishment of the station.

In a non-engineering case, Pennell et al. (1997) mentioned about a web-based task where students need to learn business communication skills by accepting temporary employment in a virtual recording company. In this job, students have to make appointments, keep diary, interview employees, and write memos, letters and reports. In a fluid mechanics course, a group of students can be asked to design a water supply scheme for a rural community that involve interviewing stakeholders e.g. local people, government officials, political leaders and professional engineers, and collate data, carry out data analysis, complete design of water pipeline and drainage networks, present design to the stakeholders and hypothetical clients. However, in this task some guidance and intervention by the teacher or a senior student can be beneficial to monitor the learning process and to provide progressive feedbacks to the students for attaining an acceptable level of learning at the conclusion of the task. Tasks can be designed to reduce the roles of a teacher, for example, on-line assistance can be provided via skype meetings or other technology assisted off campus meetings. Reeves et al. (2002) argued that design of complex activities is

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central component of course design for online learning, which is also essential for blended learning. This has also been supported by various theories of learning such as situated cognition (McLellan, 1996), anchored instruction (Bransford et al., 1990), problem-based learning (Savery and Duffy, 1996) and cognitive flexibility theory (Spiro et al., 1987).

In recent years, the use of learning management systems (LMSs) (e.g. proprietary Blackboard and open-source Moodle software) has become widespread (Martin, 2012). Massive open online course (MOOC) may follow some of the conventions of an ordinary course (e.g. predefined timeline and weekly topics), but MOOC may not carry fee, no prerequisite, and no formal accreditation (McAuley et al., 2010). These types of courses may attract a great number of students. For example, Lewin (2012) reported that one course, offered by a Stanford faculty in 2011, attracted 160,000 students; approximately 23,000 of these students completed this 10-week course. Martin (2012) reported a Fall 2011 Stanford University course consisted of weekly lectures containing two or three 45-minute topics that consisted of 15 to 20 short videos, each video containing multiple-choice or fill-in-the-value types embedded questions for students to attempt. The class server was able to grade the students immediately. These lectures were motivated by Khan Academy style. The course though online, it was like a typical lecture. In a blended course offered in the University of Massachusetts Lowell by Martin (2012), a project was to be completed by students. The teacher met once a weekly for a 75-minute roundtable session where discussions focused on confusing topics. The 'flipped class room' concept involves use of recorded lectures in the web and class room time for hands-on learning activities (Day and Foley, 2006). Mere use of collaborative eLearning or of active constructivist pedagogy, does not guarantee good outcomes. For example, when students perceive that a course is badly implemented where they are overloaded with work and there are no clear goals and poor feedback, the students may rate the course poorly irrespective of pedagogy or technology being used (Ellis et al., 2008). In fluid mechanics, a good number of students in UWS believe that they are overloaded with work in fluid mechanics.

Most eLearning in the universities combines eLearning with face-to-face activities (e.g. BLA); however, there are growing numbers of universities that are reducing the face-to-face activities, mainly to reduce the cost, to meet the needs of students who are working while studying and who do not like to travel to campuses. Thus, many universities would like to develop fully online courses. Ellis et al. (2008) found a close association between conceptions of learning through discussions with approaches to face-to-face and online discussions and learning outcomes. Other have pointed out limitations of online courses e.g. Martin (2012) stated that a modern university is a much larger ecosystem than its collection of courses; students attending on-campus courses derive great value from being in contact with their peers, involving with leadership roles in campus and engage with research labs. This shows that BLA is preferable to online course delivery.

Chandler et al. (2013) presented assessment of a BLA completed by more than 6,000 learners in USA and internationally. They noted that in terms of achieved knowledge and overall satisfaction, online instruction combined with face-to-face hands-on activities exhibited a statistically significant improvement in the learners' understanding of the course material. Allen and Seaman (2011) presented a report on online education in the US based on responses from over 2,500 colleges and universities. They noted that in USA about 6 million students took at least one online course in fall 2010, and 31% of all higher education students took at least one course online. They noted that one-third of all academic leaders continue to believe that the learning outcomes for online education are inferior to those of face-to-face instruction. However, academic leaders from online course offering institutions had much more favorable opinion on online courses.

In this paper, it is argued that BLA can be better suited in teaching so called 'difficult' subjects like fluid mechanics. In this regard, a case study is presented for fluid mechanics class in University of Western Sydney (Australia). The students' data of four recent years are used in this study to demonstrate the effectiveness of BLA in teaching fluid mechanics.

FLUID MECHANICS TEACHING AND LEARNING ISSUES IN UNDERGRADUATE CLASS

Fluid mechanics is regarded one of the most challenging subjects in undergraduate engineering course. This subject is delivered generally in the second year in a number of undergraduate engineering courses (Rahman and Amin, 2014). Learning of fluid mechanics is reported to be challenging due to its complex nature and the level of mathematics involved (Alam et al., 2004). Many students find this subject difficult due to inability in differentiating the concepts between solid and fluid mechanics; in the former, there is no internal frictional resistance (i.e. viscosity), turbulence, hydraulic jump and vortex unlike fluid mechanics. In Australia, many students enrolled in fluid mechanics lack necessary mathematical background to understand the concepts involved in fluid mechanics, which often lead to the their failure in the first attempt of the subject. Fluid mechanics involves use of large numbers of variables along with a many equations of complex nature. The

lectures are heavily inter-dependent, and hence students missing a few lectures often struggle in catching up. Depending on the new e-generation's learning habits, the delivery of fluid mechanics and similar heavy subjects need a complete overhaul, which are still being delivered in the old-fashioned way in Australian universities (Hadgraft, pers. comm., 2013).

There have been numbers of studies dealing with learning aspects of fluid mechanics and related subjects. For example, Leal (1991) pointed out that critical attention would be needed to solve problems in the areas of teaching and research related to fluid mechanics. Baldock et al. (2006) presented a combined task of problem-based and project based learning where physical model based data were compared in the areas of fluid flow modeling. The approach enabled students preparing high quality professional reports in fluid mechanics. Chanson (2004) stated that the influence of fieldwork on learning hydraulics courses in an Australian university was quite high where combination of lectures and field works enabled students to achieve better learning outcomes.

In another study, Johnson (1999) highlighted the weaknesses of having traditional lecture-based delivery of hydraulic engineering. Two different effective teaching techniques were proposed by him; firstly, the problem-based learning to enable students to take responsibility on assigned tasks by taking an active role in their learning. The second approach was based on a cooperative learning that prepared students to work in a small team environment consisting of students and an instructor using small project based work and assignments. Alam et al. (2004) presented an eLearning method of teaching fluid engineering subjects that involved hands-on practical experiments, video images of real-world laboratory experiments and simulations from computer-based exercise. Furthermore, Alam et al. (2007) proposed a three-step teaching approach in fluid science that could greatly enhance students' learning outcomes, be cost effective, user-friendly and likeable by students, which was composed by video clips of laboratory experiments and examples from computer simulation. Gotler (2006) presented an eLearning method of teaching laboratory components of fluid mechanics in Washington State University where students were allowed to work in structured groups, which enhanced communication skills of the students.

FLUID MECHANICS COURSE IN UNIVERSITY OF WESTERN SYDNEY (UWS)

Fluid mechanics is taught in the first semester of second year of the four-year bachelor degree courses in UWS. It is a core subject in three degrees: Bachelor of Civil Engineering, Bachelor of Environmental Engineering and Bachelor of Mechanical Engineering. It has two pre-requisites, Mathematics 1 and Physics 1. Fluid mechanics is the first course in fluid science and is a prerequisite to a number of subjects in later years of the degree, e.g. hydraulics, hydrology and fluid dynamics. The subject content of fluid mechanics at UWS includes fluid properties, fluid statics, energy equations, momentum, dimensional analysis and similitude, flow in conduits, introductory boundary layer concepts, introductory open channel flow, flow measurements, drag and lifts. The subject content of fluid mechanics in UWS is very similar to other engineering schools in Australia. The class composition of fluid mechanics in UWS in year 2014 is shown in Table 1. Numbers of interesting features may be highlighted e.g. only 8% students are female, which is typical in engineering courses in Australia as engineering profession is regarded as male-dominated profession in Australia (Rahman et al., 2008). About 40% students do not come directly from school. There are only 17% international students, which is much lower than many other courses in UWS and other Australian universities. There are 17% students who are repeating the subject in 2014.

Table 1: Student profile for fluid mechanics subject in UWS (2014)

No. of enrolled students	222				
Gender mix	Male: 8%	Female: 92%			
Domestic vs. international	International: 17%	Domestic: 87%			
Educational background	School: 58%	Diploma: 16%	Higher education: 11%	Others: 15%	
Language spoken at home	English: 57%	Arabic: 17%	Hindi: 5%	Chinese: 4%	Others: 17%
Country of birth	Australia: 59%	China: 5%	India: 4%	Iraq: 3%	Others: 29%
Attempt status	1st attempt: 84%	2nd attempt: 13%	3rd attempt: 3%		

BLENDED LEARING APPROACH IN TEACHING AND LEARNING OF FLUID MECHANICS IN UWS

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BLA has been adopted to teach fluid mechanics in UWS since 2013 with the author of this paper as subject coordinator. The author started teaching of fluid mechanics in UWS since 2002. The adopted BLA components are illustrated in Figure 1. The lecture time was used following flipped class room approach i.e. the time was effectively used to show selected YouTube lecture to demonstrate principles like momentum, Bernoulli equation, floods, aerodynamic effects, open channel flow and measurement of streamflow. This time was also used to explain the confusing topics such as when one can ignore velocity in applying energy equation, how to use Moody diagram and to answer questions on confusing issues rose by the students. At the beginning of each lecture, a good revision was provided covering the previous lectures. Interactive discussion on difficult topics was initiated by the lecturer, which engaged the students very well. Progressive informal feedbacks were obtained by the lecturer through private discussion with many students. The attendances to lectures were about 30% to 40%, but on three days of in-class quizzes, the attendance was about 98%. The final lecture was on the reflection of the course, which was well attended. The struggling students were encouraged to consult with the lecturer to assist in grasping the fundamental concepts of fluid mechanics i.e. understanding the basic equations, units of the variables and use of online materials. It has been found that students attending lectures and utilizing the time by engaging with the lecturer and fellow students were performing better in the assessment.

The vUWS (online system to host subject content such as lecture notes, videos, tutorial solutions and practice quizzes) was used to send notices to students (with immediate email to students) for issues that were found to be confusing/important to students. Students did not use discussion board that much; this is because they preferred discussing issues face-to-face during lecture time. Recorded tutorials were watched very frequently, in particular before the in-class quiz tests. An informal feedback session was conducted on a sample of students who rated the tutorial class and hand written tutorial solutions were the most useful resources, followed by the revision of lectures at the beginning of lecture time. Text book was regarded almost useless, and lab report writing was regarded to be the most difficult exercise, in particular, conducting a literature review on the topic of lab experiments undertaken by the students.

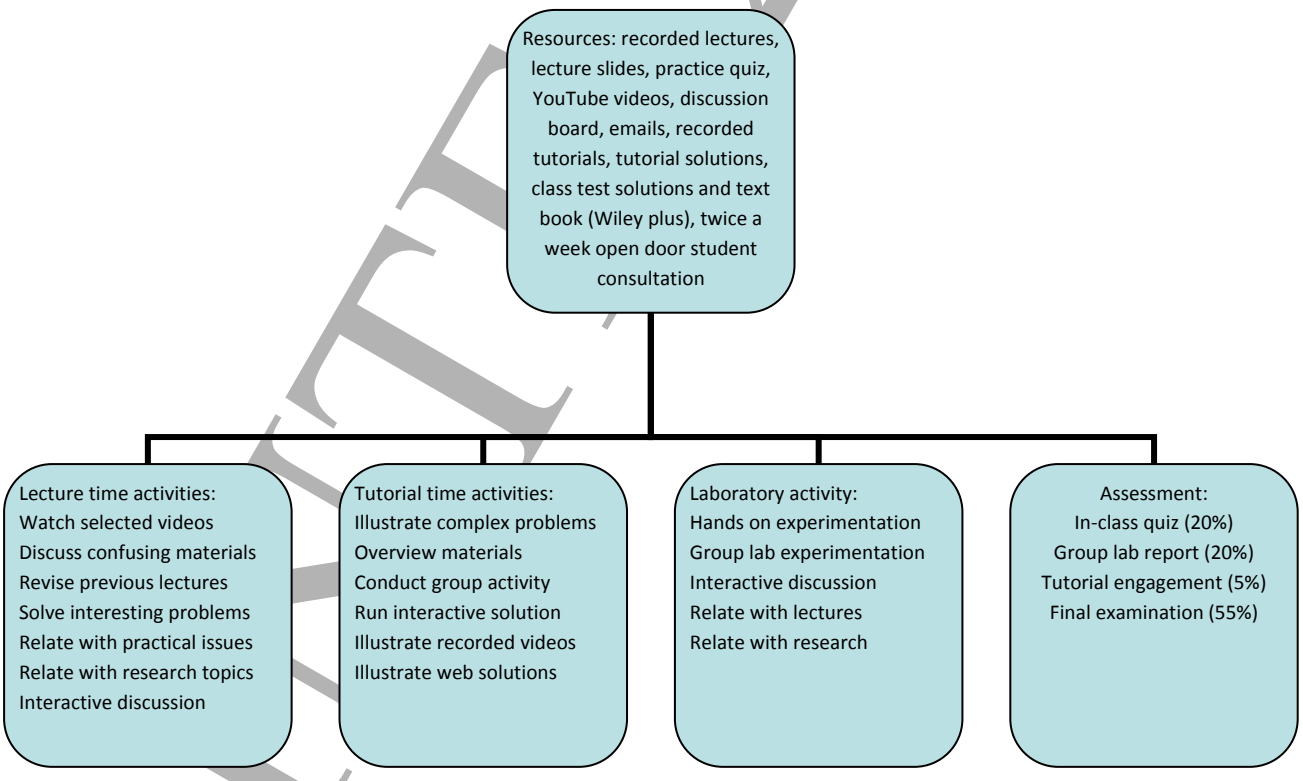


Figure 1: Components of blended learning approach (BLA) in fluid mechanics

RESULTS DEMONSTRATING SUCCESS OF THE BLENDED LEARNING APPROACH in UWS

The success of adopting BLA in teaching of fluid mechanics at UWS was assessed by (i) student feedback

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reports; (ii) results/grades of students; and (iii) informal peer feedbacks.

The students' feedback on unit (SFU), though cannot be taken as the sole measure of the quality and effectiveness of a subject delivery, it gives a good impression of the quality of offering. For fluid mechanics, the SFU was continuously poor for years 2002 to 2013 (12 years) and was in the list of concerned units in UWS. The lectures of the subject was changed few times by bringing senior academics (one full Professor, one Associate Professor and two Senior Lectures, all of them are research active and highly experienced academics having experiences of lecturing in high-notched universities). However, situations with SFT showed hardly any sign of progress. Since introduction of blended learning approach in 2013, a notable improvement was seen in SFU as illustrated in Table 2.

The results and grades of the students also improved remarkably in years 2013 and 2014 compared with years 2011 and 2012 as can be seen in Figure 2. This shows an increase in high distinctions (HD)/distinctions (D) numbers and a reduction in the number of failing students, with an overall increase of the numbers of students successfully completing the subject. It was also found that the numbers of students achieving higher than 90% increased for the BLA case compared with the traditional approach. Table 2 presents summary of SFU reports (with percentages of students responded to university administered survey were in the range of 30% to 40%, a typical rate in UWS). Table 2 clearly shows that BLA increases the overall student-satisfaction for all the surveyed items. The overall percentages of students 'strongly agreed' and 'agreed' are 11% higher in year 2013 (BLA case) compared with 2012 (traditional approach); in 2014 (BLA case), it is 33% higher than 2012 (traditional case). The overall score in 2012 is the lowest, which triggered the adoption of the BLA for the subject in subsequent years.

Table 2: Analysis of student feedback on unit (SFU) reports traditional vs BLA cases (% of students 'strongly agreed' and 'agreed' with the survey item shown in column 1)

Survey item	2011 (%) (traditional)	2012 (%) (traditional)	2013 (%) (BLA)	2014 (%) (BLA)
The subject (unit) covered what the learning guide said it would	79	68	84	98
I was able to see the relevance of this unit to my course	78	61	84	98
The learning activities in this unit have helped my learning	75	58	79	92
The assessments in this unit have helped me learn	72	65	63	94
I was able to learn from feedback I received in this unit	53	65	54	90
There were clear guidelines for all assessment tasks in this unit	63	45	71	92
The learning resources provided for this unit helped me to engage in learning	66	64	67	89
The unit provided a reasonable amount of flexibility for study	66	65	63	94
The teaching & learning spaces used for this unit were adequate	71	60	84	98
The amount of work required in this unit was reasonable	74	55	75	94
In this unit people treated each other fairly & with respect	75	74	76	96
This unit helped me develop my skills in critical thinking, analysing, problem solving & communicating	69	54	66	90
Overall, I've had a satisfactory learning experience in this unit	69	58	67	96
Overall Average	**70**	**61**	**72**	**94**

A number of UWS academics expressed explicit positive view of the subject (with BLA), in particular by the Director of Academic Program (DAP) and Deputy Dean. A number of academics in UWS have been encouraged to adopt a BLA e.g. soil mechanics and hydrology. More recently, UWS has appointed a supporting team to assist in developing the resources for BLA offering of the subjects e.g. recording the tutorial classes before the class and placing them in YouTube, placing online practice quizzes in the web and monitoring and reporting their use by the students to the unit coordinator.

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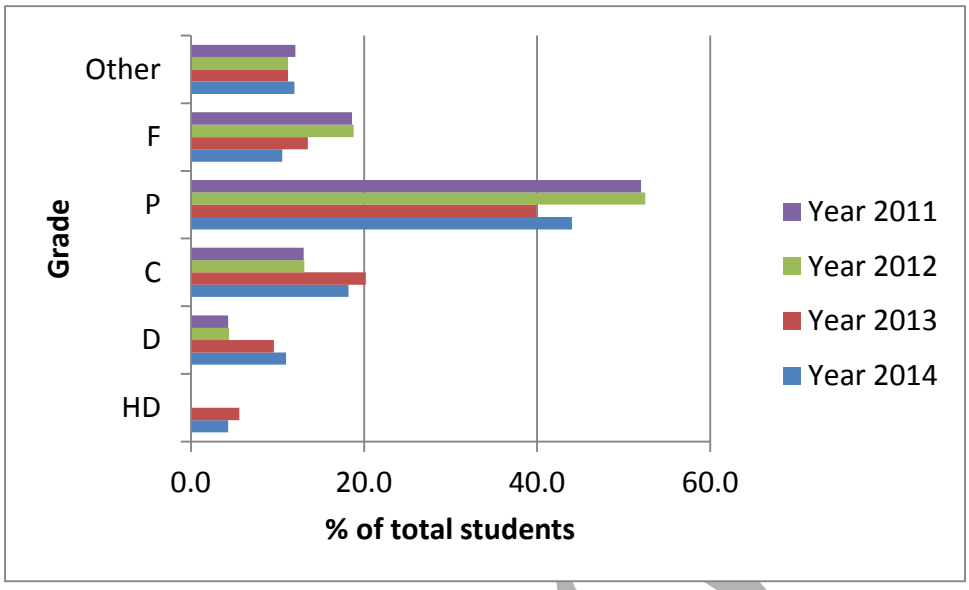


Figure 2: Student grades in traditional vs. blended learning approaches

CONCLUSIONS

This study examines the effectiveness of blended learning approach (BLA) in teaching and learning of fluid mechanics in University of Western Sydney (UWS), Australia. Before introduction of the BLA, fluid mechanics was regarded to be a subject of 'high failure rate' with relatively poor student feedback on unit (SFU) reports. Since the introduction of the BLA in fluid mechanics subject in UWS in 2013, significant improvements in students' learning have been observed, as demonstrated by more positive student survey reports. The particular advantages of the BLA have been found to be the opportunity it offers to the students in making a revision of the course materials for the difficult topics by replaying the recorded lectures, pre-recorded tutorial videos, practicing the online quizzes and using the lecture and tutorial times in engaging with fruitful discussions with the teachers where a big picture of the subject is demonstrated by linking the theories with real world examples and recent research/developments in the subject. The BLA has given the opportunity of catering for the students' need as they require, e.g. less capable students get a chance to catching up, but the higher-end students can also enjoy the challenges embedded in topics covered in fluid mechanics. The findings of the study are expected to encourage academics of UWS and other universities in adopting the BLA in developing their subjects.

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A CLOSE LOOK ON THE PRESCHOOL SELECTION PROBLEM

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It is widely accepted that preschools play an important role in children's development. Quality of a preschool has a critical impact on the later stages of person's life in domains like well-being and success. Therefore, the preschool selection problem becomes an issue for most of concerned parents. In fact, it can be a very difficult problem since there may be many factors influencing parents' decisions on which preschool are the best for their children. This study aims to provide a better insight on the problem through a literature analysis. Important criteria collected though the literature have been evaluated using a multi-criteria decision making approach with the help of a panel of people who are related to the field of interest. The study can be valuable to parents and preschool managers. It may increase the quality of child-school match and the benefit of the preschool education.

Keywords: Preschool, School Selection, Early childhood education, Multi-criteria decision making

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A COMPARATIVE STUDY OF CHINESE TRADITIONAL DRAMA AND SHAKESPEARE'S WORKS

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INTRODUCTION

It is generally believed that both *Romeo and Juliet* and *Butterfly Lovers* are the most famous love tragedies in their respective countries. The two stories have profound influences on the younger generation in past and present times. Most people might not have read the original versions, but they are familiar with the themes in these two works due to modern day adaptations in mainstream media. Even after so many years, these two works and their various adaptations continue to be linked with concepts of love, destiny and tragedy in popular culture.

The story of *Butterfly Lovers* is set in the East Jin Dynasty almost 1600 years ago. In recent times, the story has gained popularity in both the mainstream media and literary circles due to a new interest in ancient literary works from that era. In the last century, there have been numerous film and television adaptations, including the first silent film based on the story produced in Shanghai in 1926. The story has also served as inspiration for various pieces of classical and contemporary Chinese music.

Romeo and Juliet is one of the most famous tragedies written by Shakespeare. There have been numerous studies of *Romeo and Juliet* from different perspectives and cultures published every day by people concerned about, for example, Shakespeare's writing style and language, the origin of the modern drama, and the structure in Shakespeare's romantic tragedies.

With modernization in communication technology, communication between different cultures has become more and more important. "Cross-cultural communication seems to be an effective way to prevent the calamity that the cultural hegemonies and separatism have brought about to the diverse cultures, because only through communication, the uniqueness of the culture will be understood by the people from different cultures."(魏咪娜 1, 2006)

Classical works of literature which retain their relevance in modern times can help us understand not only our own history, religion and culture, but also those of another country. Despite the rapid pace of globalization, people realize that there are still significant differences in the cultures of different countries, so it is important to understand these differences, and classical works of literature such as *Romeo and Juliet* and *Butterfly Lovers* can help us in this regard. Conducting a comparison between these two works, and identifying their similarities and differences is the first step in understanding their deeper cultural meanings and implications.

Ⅱ Similarity between *Romeo and Juliet* and *Butterfly Lovers*

1. Similar tragic themes

The main themes of the two plays are similar, with love, or more specifically, tragic love being their dominant and most important theme. Another significant theme in both stories is the nature of fate in love. The inevitable nature of fate leads to the tragic endings in both stories.

Love is the main driving force behind the actions of the protagonists in both stories. However, the protagonists' desire for love brings them into conflict with societal and familial expectations.

The developing of Romeo's love was so quick and strong. At the first sight, Romeo can't help himself to appreciate the beauty and he described this feeling
honestly.

> Romeo: So shows a snowy dove trooping with crows
> The measure done, I'll watch her place of stand
> And, touching hers, make blessed my rude hand.
> Did my heart love till now? Forswear it, sight!
> For I ne'er saw true beauty till this night. (1. 5. 49-52)

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After that they knew the identities of each other, great regrets with complex changes in mind, Romeo asked "Is she a Capulet? O dear account! my life foe's debt." (1. 5. 119) meanwhile Juliet told her nurse "Go asked his name. If he be married, My grave is like to be my wedding bed."(1. 5. 136). Knowing the answer Juliet sighed "My only love, sprung from my only hate! Too early seen unknown, and unknow too late!" (1. 5.140). From here we can see the faith between this lovers, "Romeo and Juliet surely give a wonderful sanctity to love." (Edwards 81) In order to be together they willing to sacrifice their lives at the expense, although its too hard for them to dealing with the relationship between families they chose to be faithful to the their nature emotion.

The protagonists in *Butterfly lovers* use a different way to express love, on the way to school Liang Shanbo helped her to find the right direction, during years of study, when unfair things happened to the poor students they stood up for them together, when the master use any sentence to look down upon the women Zhu Yingtai argued immediately. From these indirect contacted with each other, appreciated by the spirits, they build their love gradually. After the death of Liang Shanbo, Zhu Yingtai expressed her heart directly before him, like the following.

> Dear brother Liang, it is not I Who is leaving you,
> It is the register of karmic affinity that is here at fault!
> Dear elder brother, because of me you passed away-Overcome
> with emotion I tell you my innermost love! (Idema, 64)

Love is the starting point for happiness, is the continuation of life. As a nature needs for everyone, love, we born with this kind of feeling and want to be loved naturally, However, family conflict, social position, parents arrangement, so many overpowering stresses to the young lovers, but they insist on fighting with the fate "More than any other of Shakespeare's, not even excepting Othello, Romeo and Juliet is a tragedy of unawareness; and more than any other of Shakespeare's, not even excepting Macbeth, it is a tragedy of Fate. Fate is the controlling practiser, and the entire action of the play represents her at work in the details of her housekeeping. "（Evans 22）until the end of their lifes, during this progress these two lovely couples also proved us the emotion between themselves is very precious, this is true love, as we call it nowadays. There is no need to pointing out that universal law by their actions, that is, love is the most powerful thing in universe.

Under the influence of renaissance, Shakespeare himself advocated "humanist" as a symbol of freedom. Romeo and Juliet, as the representative of the Renaissance humanists, reflected their pursuit of the life, ideals, values by their actions. "The tragic conflict in Romeo and Juliet is the struggle between feudal feud and free love." (陈瘦竹 302) Feudal forces as the main governor however, there is no way for them to escape, they can only be combined with their own love buried forever in the end of the play. The story of *Butterfly Lovers* is happened in the East Jin Dynasty, from the play we can see obviously, there are many traces of feudal system. Such as marriage system, legal system, social customs and culture.

"Among all levels of people freedom, first of all, must come true through the spirit world. The freedom of spirit, the movement of ideological emotion, and plenty of fantasy and imaginations, combined with them it is possible to make a free conscious activity nation." (於贤德 5) Cultural background lead us to consider the freedom. that is why peoples kept on fight against the feudal system everywhere. During this special time, environment for us is limited, this kind of social background also can be seen as a foreshadow to the tragic ending.

The tragedy in both stories lies in the fact that both protagonists can love no one else, but at the same time, they are unable to be with each other simply because they were born into a society and family that were unable to accept their love. The protagonists' desire to persist with their love in the face of such resistance is both a sign of the strength of their love, and also the tragic element in both stories. All in all, the fight against fate is the subject we must face for a life time.

2. Similar tragic plots

The plot of the two works is similar too. First, the protagonists in both stories met by coincidence. Romeo met Juliet at a fancy dress party held at Juliet's house, starting with a question to servingman "What lady's that, which doth enrich the hand Of yonder knight?"(1,5,41). when two people meet and sparks strong love willings in each other's eyes, they all forgot family hatred just remember the wonderful date under the moonlight.

While in *Buttery Lovers,* Zhu Yingtai, a female disguised as a men, came across Liang Shanbo in a temple on the way to school while sheltering from the rain. The strength of their love which followed from their coincidental meetings gives the reader an impression that it was their destiny to find and fall in love with each other.

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Despite the fact that their meetings were coincidental, the reader is left to wonder whether there was some unknown force in the background such as fate which was working to bring the destined lovers together at that moment.

Secondly, even though the lovers in both stories faced great opposition from the people around them, there were people in both stories who helped the lovers in some form. Both of their love met some small difficulties during the process on love. In Romeo and Juliet, there was a nurse for Juliet who talked her own thoughts about love, which represents the common manner at that time. Also assisted Juliet to confirm her own heart sincerely through conversation like " 'Yea,' quoth my husband, 'fall'st upon thy face? Thou wilt fall backward when thou comest to age; Wilt thou not, Jule? It stinted and said 'Ay.' " (1. 3. 55-57) and "No less? Nay, bigger! Women grow by men." Besides, there was a priest who helped them most to the end, first took the charge of marriage in secret, and then helped Juliet come up with the plan when Romeo banished, after the miss delivered letter, priest explained the whole thing to Prince in the end.

In Butterfly Lovers, Zhu Yingtai's identity as a girl was kept hidden from Liang Shanbo with the help of the maid and the master's wife. The maid at the same age with Zhu Yingtai helped her cover the true face and give messages to Liang Shanbo before and after the grounded by her father. The master's wife under good education background, no only praise her courage to disguise but also admire her when she saw Zhu Yingtai insist on arguing with the master, stand on the position being a mother, she do her best in their daily life.
Third, both of their love faced unavoidable crises and dead in the end and both stories ended with the tragic plot element of the deaths of the protagonists. In *Romeo and Juliet*, two families already fight for years, with the stress from father, Juliet had planned to died by accident, Shocked by that, Romeo was poisoned to death in Juliet's tomb. After Juliet's resurrection from commit suicide, she was so sad and suicide again beside Romeo. In the *Butterfly Lovers*, Liang Shanbo's proposal was rejected, and Zhu Yingtai has pledged to send the master Ma's house, Liang Shanbo was too sad, who couldn't eat for a meal, got sick, the disease caused by sorrow, and eventually die. Standing at the lover's grave and crying, Zhu Yingtai smell the color changed of heaven and earth, just then the tomb suddenly burst, zhu yingtai jumped into the grave and finished double suicide without hesitation

These two stories ended with the tragic plot element of the deaths of the protagonists. In both stories, this tragic ending was used to highlight the extreme opposition the lovers faced from society and family, and also the inability of the lovers to give up on their love. In fact, in *Romeo and Juliet*, Juliet wanted to fake her death as a solution to escape from her family's opposition. However, due to unfortunate circumstances, Romeo believed Juliet's death was real. Unable to live without his love, Romeo proceeded to take his own life as well.

> Romeo: Will I set up my everlasting rest
> And shake the yoke of inauspicious stars
> From this world-wearied flesh. Eyes, look your last!
> Arms, take your last embrace! and lips, O you
> The doors of breath, seal with a righteous kiss
> A dateless bargain to engrossing death! (5. 3. 111-15)

In the *Butterfly Lovers*, Liang Shanbo was so depressed after learning about Zhu Yingtai's arranged marriage that he passed away from sorrow. In both stories, the death of the protagonists is used to highlight both the impossible nature of their love, and also the strength of the protagonists' love for each other.
Another similarity between both stories is the conflict between the ideals of the protagonists and the traditions and conservatism of society. Under the influence of the renaissance, Shakespeare portrayed *Romeo and Juliet* as humanists, which places a strong emphasis on the needs and desires of the individual. The families of *Romeo and Juliet* played the role of the 'traditionalists' in the story with their inability to accept change and drop old rivalries for the sake of their children.

The traditionalists in the *Butterfly Lovers* are represented by characters such as the main governor, and also non-character elements such as the arranged marriage system, legal system, social customs and culture. Just like in *Romeo and Juliet*, the conflict between the progressive ideal of free love and the traditions of society ends in tragedy for the protagonists.

As a matter of fact, both of them destroyed by the representatives of the feudal force at that time. Under this benefit based relationships, insisting on pursuit for the human nature, the more we showed as dignity and worth as a person, the more we would destroyed. The feudal governor without the noble soul has not been contented

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by the egoism, utilitarianism and money worship. In spite of death for love, their true heart is so beautiful, their love triumphs over hatred between the feudal force, their love earned a glorious time of humanism spirit and lead to the final victory.

Ⅲ. Differences between *Romeo and Juliet* and *Butterfly Lovers*

1 Different ways to express their love

Romeo and Juliet is a typical western love tragedy with strong personal characters, dramatic conflicts, and up and down plots. Compared to *Butterfly Lovers*, Romeo and Juliet's courtship was far more direct. This can be seen in the speed of their courtship, which took place in less a week. Romeo never hid his love of Juliet from Juliet,

> Romeo: I take thee at thy word.
> Call me but love, and I'll be new baptized;
> Henceforth I never will be Romeo (2. 2. 49-51)

and Juliet returned his love in a similarly direct nature.

> Juliet: O, swear not by the moon, th' inconstant moon,
> That monthly changes in her circled orb,
> Lest that thy love prove likewise variable. (2. 2. 109-111)

In contrast, Liang Shanbo's and Zhu Yingtai's courtship was slower, and the lovers were less forthright with their feelings for each other. When Liang Shanbo and Zhu Yingtai first met, Liang Shanbo believed Zhu Yingtai was a boy, and his feelings for her were that of friendship. Zhu Yingtai continued with her disguise as a boy for three years, and implied her love towards Liang Shanbo through symbols and gestures such as becoming sworn brothers with Liang Shanbo. It was only after three years together did Liang Shanbo find out about Zhu Yingtai's true identity.

Despite the differences in the ways of expressing love in both stories, the protagonists' love for each other in both stories are just as strong. What the differences in the expression of love in both stories can tell us are the different attitudes towards love, marriage, relationships between men and women in both cultures.

In *Romeo and Juliet*, the attitude toward love and marriage is choosing the one you love and then bravely pursuing happiness together at the expense of everything else. The expression of love in *Romeo and Juliet* is direct and enthusiastic, and it also reflects a highly idealistic view of love. *Butterfly Lovers*, on the other hand, takes a view that even though there might be attraction between a man and a woman at first sight, true love between a couple is built through time spent together. The relationship in *Butterfly Lovers* proceeds at a far slower pace than Romeo and Juliet, and the reader is able to savor more moments between the lovers.

2 Different ways to protect their love

In *Romeo and Juliet*, the protagonists were very active in protecting their love "So intense are the main duologues of Romeo and Juliet in their lyricism that they seem to `carry' the action of the play." (Kennedy 75) from the opposition of their families. The best example of this is how Juliet and the priest came up with a plan to fool her family into thinking she had died. Although the plan failed in the end, it showed Juliet's complete defiance of her family's opposition to her love of Romeo, and how she was willing to try un-orthodox methods to overcome her family's objection. During the progress, they take all actions immediately to protect themselves. "Its completion is generally marked in the mind of the reader by a feeling that the action it contains is for the moment complete but has left a problem. The lovers have met, but their families are deadly enmity." (Bradley 46) This statement reflected in drama on death in the last part, death for both friendship and love.

In the *Butterfly Lovers*, the protagonists were more passive, and more obedient towards their family's wishes. In the end, Zhu Yingtai gave in to her father's wishes for her to marry into the richer family, despite strong protests from Zhu Yingtai and Liang Shanbo. After learning of the arranged marriage, Liang Shanbo descended into a passive depression, and was unable to take any meaningful action to win Zhu Yingtai back. On the other hand, Zhu Yingtai with the new virtues on nowadays view, "She is also portrayed as a courageous and dauntless woman who is brave in resisting feudal traditions and customs and family rules. She disguises herself as a man and goes out for study without caring about the feudal traditions and family rules. "(李桂萍 17) select her own way to eternal their love.

The differences in the actions of the protagonists in both stories do not mean one couple's love is stronger than the other. What could be inferred from the couples' different actions are differences in the culture of the two stories. Shakespeare's *Romeo and Juliet* was written around the year of 1954, during the Renaissance while the

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Butterfly Lovers was set in 400AD, at a time where Confucianism, which emphasized the collective over the individual, played a huge role in culture of the East Jin Dynasty. During the time of the Renaissance, ideas such as the pursuit of individual liberation and freedom were taking hold in society. Therefore, it could be argued that Romeo and Juliet's resistance to the wishes of their family brought about less psychological distress compared to the actions of Liang Shanbo and Zhu Yingtai in *Butterfly Lovers*. If we take into account the different cultural backgrounds in both stories, Liang Shanbo and Zhu Yingtai's passive resistance can seem just as significant as the bolder actions of *Romeo and Juliet*.

Ⅳ Cultural influence on *Romeo and Juliet* and *Butterfly Lovers*

1. Cultural influence on building the tragic characters - take *Butterfly Lovers* for example

"Tragedy, as an important part of Chinese literature, tends to be sad and mild as a consequence of developing under the great influence of the traditional aesthetic views for a long period."(魏咪娜, 16, 2006) Each nation has its own culture, which includes not only race, customs, etc. but also includes ways of thinking, behaviors, and nature of relationships, etc. Given these unique cultural backgrounds, the question is: how does the cultural background during the time of the *Butterfly Lovers* influence the actions of the protagonists? Let's find the answer on the perspective of history.

The East Jin dynasty came after a period of bitter division, and Confucianism played an important role in uniting the people under a single rule, so naturally, the culture during the time of the *Butterfly Lovers* was heavily influenced by Confucianism. There is a lot of structure and hierarchy in a Confucian society. People's status in society was determined by birth, and many details of a person's life, including love and marriage were determined by Confucian expectations. There were definitely many benefits of adopting Confucianism, but the story of *Butterfly Lovers* showed the inflexible nature of Confucianism, and its intolerance of non-conformity.

In the story, Liang Shanbo's father died at a young age. In a society which places such a high value on family background, the death of his father was a big blow to Liang Shanbo's social standing. The death of his father and loss of social status led to Liang Shanbo's inferiority complex, and his passive and cautious personality. Ultimately, Liang Shanbo's poor social status was the main reason why he and Zhu Yingtai, who came from a privileged position, were unable to be together. The inflexible nature of Confucianism also meant Liang Shanbo was never able to escape from his low social standing. No matter how much he and Zhu Yingtai loved each other, their love could never be accepted by the rest of society.

On the other hand, Zhu Yingtai, who was born into a privileged family, was never burdened like Liang Shanbo, and thus developed an optimistic and idealistic personality who was willing to fight against the expectations of society, believing she and Liang Shanbo will ultimately be together one day. This kind of ending accepted by most of us because that "Chinese classical tradedy pay more attention to ethical significance and disregard the individual personality, emphasis on rationality control to emotion and suppress the resist conflict in behavior." (魏咪娜,1, 2009)As a result, original culture influenced the tragic characters through control their ideologies to life gradually.

2. Cultural influence on discovering the meanings of tragedy - take *Romeo and Juliet* for example

There is a saying by some scholars which goes "simply the Fates have taken this young pair and played a cruel game against them with loaded dice, unaided by any evil in men." (Goddard 27) This saying is merely an extreme expression of the widely held view that *Romeo and Juliet*, in contrast with all Shakespeare's later tragedies, is a tragedy of accident rather than of character and on that account a less profound and less universal work.

While the above saying may be relevant to the themes of tragedy in *Romeo and Juliet,* what is most interesting to this study are the themes of love and violence and how they evolve throughout the story. "In it these two mightiest of mighty opposites meet each other squarely - and one wins. And yet the other wins." (Goddard 28) Under this explain, character personalities are matched well to the plot, and dramatic conflicts show us the personality of the characters in enlightening ways.

In addition, the actions of the characters both main and minor encourage the reader to critically consider the morality and culture of the era *Romeo and Juliet* was set in. Romeo changed his won action by Juliet's cousin without moral burden due to death of friend,

> Romeo: This gentleman, the Prince's near ally,
> My very friend, hath got this mortal hurt
> In my behalf-my reputation stained
> With Tybalt's slander-Tybalt, that an hour

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Hath been my cousion. O swet Juliet,
Thy beauty hath made me effeminate
And in my temper soft'ned valor's steel! (3. 1. 107-113)

In fact, "the moral lesson is so shaped formally that it becomes the main theme of the drama: the opening scene stops the bitter feud temporarily; the middle act results in two deaths and the separation of the lovers when murderous quarreling breaks out again; the closing scene offers the sacrifice of innocents to wipe out in blood the cursed strife of the old partisans." (Stauffer 29) we can see how culture affects the actions of the individual and how the actions of the individual can bring about changes in culture, "Individualism pertains to societies in which the ties between individuals are loose: Everyone is expected to look after himself or herself." (Hu Wenzhong 524) At this particularly relevant point during the period of the Renaissance, which marked a great change in the attitudes and thinkings of people in Europe.

"In Western countries, 'tragic denouement' of the tragedy has been a golden rule since Aristotle. This is because a serious and tragic denouement can arouse the pity and fear, which can effectively purge the audience's emotions." (黄少华 43) From this we can see the original culture background can decided the character personality though a certain way, and then different character express their love tragedy according to the plot demands, conflict upgrading, and the emotional requires. However there must be death of old fashioned sayings and instead of that, a new kind of thoughts trend with the typical character personalities provide us a new atmosphere for our culture. Same to the literature works, there must be death of characters then we can see the new possibilities, when the changing of main trend in society happens, the wrong sections in the old cultural system will be selected and destroyed, through which we can find out the true meanings of tragedy.

CONCLUSION

Romeo and Juliet is widely known as Shakespeare's best love tragedy. After it was first played on the stage in London, "Shakespeare has the satisfaction of seeing the groundlings moved to emotions far beyond anything before known in the theater."(Hillegass 35) Shakespeare's humanist view that society should care for the individual, maintain the dignity of human nature and equal rights was expressed in dramatic fashion through the story of *Romeo and Juliet*, along with its elements of violence and death.

In *Butterfly Lovers*, we are able to see how culture can affect the actions, mentality and attitudes of people in love. "Why there is a tragedy like this? the answer is contradiction between people's desire for freedom and limited space offered by the feudal system for us. Also the contradiction between independent marriage and arranged marriage.□This is the deep roots of tragedy."(华亮,黄怡 1)

Although the struggle of the lovers against their tragic fate was ultimately futile, stories such as the *Butterfly Lovers* bring out the cruelness of the inflexible social hierarchy in Confucianism. Through reading these stories, people might be inspired to change their perspectives and thoughts, which might bring about a new cultural environment.

Looking back to the *Romeo and Juliet* and the *Butterfly Lovers*, it is clear that love is the central theme in both stories, but there exist differences in the attitude towards love, the way love is expressed, and the role culture and society plays in love. The fact that both stories remain popular to this day suggests that the themes of these stories remain relevant in today's society, and that there remain insights to be gained from these two classical works of literature. Therefore, there can be significant benefits in conducting an in-depth study of these two works.

My suggestions to proceed with an in-depth study are as follows. After summarizing the immediate similarities and differences in the two works, look for cultural features that are connected to the similarities, or cultural features which can explain the differences. Finally, use the insights gained through the in-depth study to solve or study a relevant real-life problem. Hopefully, the comparison study will lead to a better understanding of communicating with another culture, and provide new insights on how our own culture will evolve in this globalized world.

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INTE 2015

A COMPARISON OF COMPUTER ASSISTED AND FACE-TO-FACE SPEAKING ASSESSMENT

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Computer technology has long been applied to language testing as a time and cost efficient way to conveniently assess the proficiency of large numbers of students. This research has been conducted to compare computer assisted and face-to-face (direct) achievement tests to find whether the two modes yield similar results in oral assessment and whether one is advantageous over the other. Presented in the paper are the relationships between test scores obtained in two different test modes at two different proficiency levels, the students' perceptions of the test modes, and their anxiety levels with regard to speaking in a foreign language, speaking tests, and using computers. Data were collected through four computer assisted and four face-to-face speaking assessments, a questionnaire on Computer Asssisted Speaking Assesment (CASA) perceptions and another on Face-to-face Speaking Assessment (FTFsa) perceptions, a speaking test and speaking anxiety questionnaire, and a computer familiarity questionnaire. A total of 66 learners of English at tertiary level and four instructors of English participated in the study which was conducted at Uludağ University School of Foreign Languages. The quantitative and qualitative data analyses revealed that the two test modes give very different rankings to the students.

Keywords: EFL, Computer-assisted speaking test, Face-to-face speaking test, achievement tests, anxiety, tertiary

INTE 2015

A COMPARISON OF POSITIONING IN BUSINESS ADMINISTRATION EDUCATION BETWEEN FIRST FIVE ESTABLISHED BUSINESS ADMINISTRATION DEPARTMENTS AT STATE AND PRIVATE UNIVERSITIES IN TURKEY: A CONTENT ANALYSIS ON STRATEGIC DRIVERS AND CURRICULUM

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ABSTRACT
The main purpose of research is to reveal the positioning of business administration education both at state and private universities and attempt to clarify whether these departments train personnel initially to public sector or private sector organizations by conducting a conceptual content analysis of the curriculum of business administration departments. Courses have been evaluated on the concept of "business administration course". The research sample consists of the business administration departments of 10 different universities in total including 5 state and 5 private universities which are well known as top 5 rooted universities in terms of business administration education experience in Turkey. Departments have been classified based on the density of business administration course among all other courses. The Business administration department of Istanbul Kültür University, which allege to train human resources for businesses, is taken as a control variable while classifying the departments. Besides, departments have been examined whether the mission-vision statements indicate linearity with curriculum. As a result of conceptual content analysis it has been found out that state universities have positioned to train human resources for public sector organisations except Middle East Technical University with a %85 of "business administration course" rate. On the other hand private universities are mostly positioned to train personnel for private sector organisations excluding 2 universities of the sample.

Keywords: Positioning, Curriculum, Private universities, State universities

INTRODUCTION

When the history of business education evaluated, it is seen that the first example in Turkey traces to the year of 1883 at Hamidiye Trade School which still continues its education as faculty of business administration in Marmara University. However it is commonly assumed that business education was commenced by German scientists and instructors fled from Nazi Germany during the 2nd World War and began to work at Turkish universities. After 1960s as it happened in many countries American style of business administration education became prominent in Turkey (Yüksel, 1998). Middle East Technical University and Boğaziçi University are the examples of American-style business education. In the second half of 20th century new business administration departments began to establish at Turkish state universities while private universities started to launch their business administration departments in the early 1990s.

Business administration departments of the state universities began the education either under different institution which was transformed into a university or established as one of the departments of faculty of economics and administrative sciences. Private universities' business administration departments which will be the other part of the research are established directly under the current universities in the early 1990s.

The main purpose of this study is to determine the positioning of business administration education both at state and private universities and attempt to clarify whether these departments train personnel to public sector or private sector organizations by conducting a content analysis of the curriculum of business administration departments, which are under the roof of faculty of economics and administrative sciences or other faculties of 10 universities (5 private, 5 public). These 10 universities have been selected according to the establishment year of their business administration departments. In other words these universities are the most experienced in business administration education.
Initially main concepts of the study; positioning, vision, mission and basic goals which form the theoretical framework will be explained and evaluated in the context of the Business Administration Department. Afterwards, the research method will be described and the data obtained through this method will be reviewed.

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Positioning as marketing concept represents the image of product or service in customers' minds against competing products or services. Consequently positioning activity can be realized by product or service differentiation in the target market considering other competitors (Mucuk, 2012). The concept of positioning is not merely a marketing concept. For instance, a political party can be said to be positioning itself in the political arena. This issue is examined in terms of political science (Özdaşlı, 2015). In the context of these definitions positioning in universities has to be defined by clarifying the target group who are interested in business departments. This target group covers potential students, current students, students' parents, faculty members, market demand for labour and other authorized people. Hence the positioning in business departments can be revealed by analyzing the purposes of those departments offer education and identifying for which sectors these departments train personnel.

According to Özdaşlı (2015), graduates of business departments generally employed in private sector as officers or managers in various departments such as marketing, finance, accounting, human resources, foreign trade, etc.; as clerk, manager or specialist in banks; as officers or expert in accounting and auditing firm; as expert in insurance companies; employees as advertising or public relations expertise. In public sector based on the scores obtained in public examinations graduates may be employed in A type positions such as assistant expert, expertise, inspector, district administrative judges or in B type positions as computer operator, clerical work, etc. Graduates may prefer to continue their studies and work as research assistant or teaching assistant offered by faculties. Another option for graduates is to run their own businesses as entrepreneurs.

In terms of business management, mission describes establishment and existence reason of an enterprise as well as its mutual values and tasks which distinguish the organisation from its rivals. Vision statement represents a dream or an ultimate goal to reach in the future. Objectives express the gains of the organisation in accordance with its activities and what activities have been carried out to get what (Ülgen & Mirze, 2013).

It might be considered that business administration departments exist to train personnel for private sector. However many people in Turkey especially parents of business students tend to consider job opportunities at public organisations as "job guarantee" or "fixed income guarantee" for their children (Özdaşlı, 2015).

On the other hand, it's obvious that Public institutions in Turkey stimulate business students and even managers who currently work at any private organisation to study for public examinations in order to be employed in prestigious occupations such as expertise, inspector, administrative judge or district governor (Özdaşlı, 2015).

RESEARCH

Conceptual content analysis technique is used in the study in order to determine the objectives of business administration departments. Content analysis in general is defined as a research technique for making replicable and valid inferences from texts to the context of their use (Krippendorff, 2004). It is used to determine the presence of certain words or concepts within texts. Content analysis is a technique enables researcher organizing, categorizing, and comparing texts and obtaining results from them (Ary, Jacobs, Razevieh, & Sorensen, 2006). In conceptual analysis which is also known as thematic analysis, a concept is chosen for examination, and the analysis involves quantifying and tallying its presence. In this context, courses covered in the curriculum of each business department, categorized based on density of courses. As it was stated earlier, available information about each business department such as strategic drivers, curriculum, ECTS and etc. has been showed on the tables both for state and private universities separately.

Table 1. Available Information Related to the Business Administration Departments of Public Universities

Name of the university	**Establishment year**	**Available information about the department**
Istanbul University	1954	General information, mission and vision statements, curriculum, ECTS, syllabus.
Gazi University	1955	Objectives, Strategic Plan, curriculum, ECTS.
Boğaziçi University	1959	Curriculum, ECTS, course content
Middle East Technical University	1957	General information, mission and vision statements, ECTS, curriculum, syllabus.
Marmara University	1982	General information, statement of the head of department, mission and vision statements, ECTS, curriculum, syllabus.

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As it is indicated on Table 1. According to the main webpage (21.05.2015) of the departments curriculum and ECTS information package of all business departments are available at state universities. Mission and vision statements have been declared by all business administration departments except Gazi and Boğaziçi universities. The rest of the departments mutually share mission and vision statements with other departments (economics, public relations, international relations etc.) of the faculties.

Table 2. Available Information Related to the Business Administration Departments of Private Universities

Name of the university	**Establishment year**	**Available information about the department**
Bilkent University	1984	General information, statement of the head of department, objectives mission statement, Curriculum.
Koç University	1992	General information, Curriculum, course content.
Sabancı University	1994	General information, Curriculum.
Başkent University	1994	General information, Curriculum, ECTS, syllabus.
Istanbul Bilgi University	1994	General information, Curriculum, ECTS, course content.

Table 2. shows us the available information about the business departments of private universities. According to the main webpage (21.05.2015) of the departments general information and curriculums of all business departments at private universities are available while ECTS information package has been given only by two departments and mission statement is declared only by one department. The rest of the departments mutually share mission and vision statements with other departments (economics, public relations, international relations etc.) of the faculties.

Table 3. The Distrubution of Courses to the Areas at Public Universities

Departments University	**Business F**	**%**	**Law F**	**%**	**Economics F**	**%**	**Public Finance F**	**%**	**Other F**	**%**
Istanbul Kültür University	*60*	***70,58***	*2*	*2,35*	*4*	*4,70*	*1*	*1,17*	*18*	*21,17*
Middle East Technical University	70	**85,36**	2	2,43	1	1,21	3	3,65	6	7,31
Gazi University	59	**78,66**	4	5,33	3	4,00	2	2,66	7	9,33
Boğaziçi University	90	**76,27**	6	5,08	6	5,08	2	1,69	14	11,86
Istanbul University	75	**68,18**	5	4,54	5	4,54	1	0,9	24	21,81
Marmara University	76	**67,85**	9	8,03	8	7,14	3	2,67	16	14,28

Table 4. The Distrubution of Courses to the Areas at Private Universities

Departments University	**Business F**	**%**	**Law F**	**%**	**Economics F**	**%**	**Public Finance F**	**%**	**Other F**	**%**
Istanbul Kültür University	*60*	***70,58***	*2*	*2,35*	*4*	*4,70*	*1*	*1,17*	*18*	*21,17*
Istanbul Bilgi University	58	**95,08**	-	0	-	0	1	1,63	2	3,27
Koç University	55	**93,22**	1	1,69	-	0	-	0	3	5,08
Bilkent	108	**88,52**	4	3,27	2	1,63	1	0,81	7	5,73

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University										
Sabancı University	84	**67,74**	3	2,41	4	3,22	-	0	33	26,61
Başkent University	55	**64,70**	5	5,88	4	4,70	1	1,17	20	23,52

As it is seen on table 3 and table 4, Istanbul Kültür University (IKU) has been determined as control variable for the conceptual concept analysis. The reason that IKU has been selected as control variable is because business administration department of this university presents program outcomes which state that the department trains professional managers for enterprises.

As it is seen on Table 3 and table 4, density of business administration courses at IKU is %70, 58 while the total weigh of the other courses is %29, 42. When the course plan of IKU business administration department is examined it can be seen that the courses of other areas are mostly preferred from those which can support business functions and activities with its' content. Of course it doesn't mean that the courses except business courses at other departments do not support business functions but these courses are directly related to the questions which take place at public examinations.

When the distribution of courses at public universities is examined (Table 3), Middle East Technical University becomes prominent with its extremely high business administration course density %85, 36 among other public universities. Depending upon the high business course density, it might be inferred that METU has positioned to train professional managers for private organisations. Yet METU business administration department declares that: *The aim of the program is to train specialists and future administrators needed by public institutions and enterprises, and private companies for the fields of finance, organization, marketing, accounting, management information systems and strategic management*. Hence, despite the high business administration course density the department itself do not claim to train professional human resources solely for private organisations.

Istanbul and Marmara Universities have the lowest business administration course density with around %68 among other public universities. These two universities' curriculums contain more of other courses which help students preparing for public examinations. On the other hand, Gazi and Boğaziçi universities have around %77 percent business administration course density which takes a position between METU and Istanbul-Marmara universities. When the strategic drivers of Gazi and Boğaziçi universities are examined, any declaration or statement have not been found about the positioning strategy of both departments.

When the distribution of courses at private universities is examined (Table 4), Istanbul Bilgi, Koç and Bilkent universities have the highest business administration course density with a an average rate of %92. This rate indicates that most of the private universities in the sample position themselves to train personal for private organisations. While Sabancı and Başkent universities profoundly differ from these three private universities with averagely %66 business administration course density. Sabancı and Başkent universities' curriculums include more public and business law courses as well as courses of economics than other private universities which means that these universities do not only focus on training human resources for private sector but also training personal for public institutions.

CONCLUSION

It is not convenient to infer that other courses are not as important as business administration courses when the density of courses is examined. It is obvious that all the academic staff; instructors and managers of business administration departments are highly qualified in their areas. But there are different approaches among departments while determining the training priorities for students in terms of job opportunities in the future. In this sense some departments may prepare specific curriculums which may lead comparatively higher success in public examinations. However some instructors think that business education is ought to be designed in a way to train human resources for public organisations, hence advanced public or business law courses are not only inconvenient for business education but also do not serve for the ultimate purpose. Yet according to some other instructors, designing the courses and business education system only to train human resources for private sector is not appropriate due to the existence of prestigious positions at public sector such as; administrative law judge, district governor, inspector as well as employment difficulties particularly in Turkey. In this context it can be said that training students either for private sector or public sector is almost equally significant.

Departments focus on specific areas in the 3rd and 4th year of bachelors program especially with the help of elective courses. These specific areas involve courses mostly related to major field of studies in business

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administration such as management and organisation, accounting & finance, marketing or numeric methods. In other words a group of courses that focuses on business functions. By means of this focus, students can get a chance to master their skills and gain deeper knowledge in the selected area.

On the other hand, it might not be a proper approach to direct departments to position their education and curriculum only for private or public sector. Because of the reasons related to current internal environment factors (qualifications and quantities of instructors) or external environment factors (socio-economic conditions of the region), the business departments may determine a position strategy to train personal both for private and public organisations.

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A COMPUTER GAME IMPLEMENTATION: INDIVIDUALLY OR IN A GROUP

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ABSTRACT
In this research, the effect of playing a computer game individually or in a group on students' academic achievements was investigated. In addition, it was determined that whether students gender significantly differ or not according to playing the computer game individually or in a group. In this study, among the experimental research designs, Solomon research model was used. In the study carried out in the first semester of 2014-2015 academic year at a public school, a total of 90 students took part as 2 experimental (n=45) – 2 control groups (n=45). A science computer game that was played on the internet. Students in experimental groups played the science game as three people in groups in addition to science lessons. Students in control gorups played the game on computer individually. The implementation process lasted 16 weeks. For the analysis of "Academic Achievement Test" ANOVA was used. When the findings from the study were evaluated, a significant difference was determined between students who played the game individually or in a group, in favour of students who played the computer game in a group. As the findings were assessed in terms of gender, there was no significant difference between female and male students in terms of playing the computer game in a group or individually.

Key Words: Science lesson, computer game, students.

INTRODUCTION

Yağız (2007) states that game forms and the qualities of the games changed together with the development of technology; games transferred to many media from computers to mobile phones became a time consuming material for today's children; and exemplifies a research done in 2004. According to this research, while the children used to spend averagely 4 hours at home and in video arcades in the mid 1980's, today, girls spend 5,5 hours for games, and boys spend 13 hours for games among primary and secondary school students. In consideration of the contributions of these games which are becoming widespread fast and very interesting for children, new, different perspectives and techniques have been generated. These new implementations are various activities which motivate the students effectively, take the cognitive processes to the top level, and are introduced to students via educational video games in game-based environment. Nowadays, educational video games are being designed in many areas such as social, historical, military, labor, and health and then are being offered to the users (Doğusoy and İnal, 2006).

Güngörmüş (2007:18) defines educational video games as 'the software programs which are prepared via integrating game features to learning activities in order to achieve educational objectives'. Kaplan-Akıllı (2007:4) define educational video games as 'competition based activities which aim at teaching with motivation through a creative and an enjoyable way, which are limited with specific rules, and which require specific skills'. Video games including many types which can be single or multi-players require participation for the development of the real skills. Video games achieve this thanks to instantaneous learning (Aldrich, 2009). One can be more active and can participate more in the learning environment where educational video games are used than one who is passive learner in traditional methods. Thus, it can be seen clearly that a learner can understand the topic easier and improve his/her various skills thanks to the experiences from the virtual world easier in this learning environment (Malta, 2010).

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It is apparent that games drawing humanity's interest for centuries are continuing to have an effect in computer media thanks to changing technology and opportunities. The fact that the harmony of many features of video games with the interests, needs and habits of the children today's knowledge era has become the basis of the idea of using video games in education to have an effective and permanent learning. However, it is very crucial to analyze the designing process of the video games and their structures according to learning approaches, and how learning will occur through these video games.
Educational video games, which are designed for the usage of video games for educational purpose, are spreading fast and they are now in front of all of us as a new technology of a possible key for reaching an effective and permanent learning process.

Papestrergiou (2009) indicates the following reasons for strong potency of the educational video games for learning environment:

- Games provide multi-sensory, active, experimental and problem-based learning.
- The obligation of using the previous knowledge for learner in order to step next level supports the activation of the previous knowledge
- Games provide quick feedback to the learner, which let him/her search and learn through the activities.
- Scoring and level mechanisms of the games give the learner an opportunity to go in self evaluation
- Games are also becoming social environments because of their player groups.

Squire and et. al (2004) state that video games are very essential environments because of the fact that they give the learner a chance to be, to think, to discuss and to play the extra ordinary roles in a new world, and the rich virtual worlds realize this situation. According to this, learner experiences concrete realities defined by words and symbols in virtual worlds. Thanks to these experiences and multi medias, he/she is able to understand complex contents without losing connection between summary ideas and real problems. Moreover, the power of virtual worlds in video games also depends on the development of situational learning and some effective social implementations. Towards all these statements, "Is there a significant difference between students' academic achievements according to playing a computer game individually or in a group" is the question of this study. Also as a subquestion, it was determined that whether students academic achievement significantly differ or not according to the common effect of gender and playing the computer game individually or in a group.

METHOD

Research Model

True experimental design was used in the research. Solomon four group design which has two experiment groups and two control groups was chosen in this research. The groups were assigned to the experiment and control groups with draw detachedly. Two of these four group were used as experiment; the other two were used as the control group. Although post-experimental measurements were done in each group, pre-experimental measurements were done only in two groups, one is experiment and the other is control. Learning can occur in the measurement done before the experimental process. Solomon experiment designs are used in order to remove this situation. Solomon four group model is the strongest experiment model protecting both internal and external validity. Symbolic view of the experimental design used in this research is as follows:

Groups	Neurality	Measurement 1		ExperimentalImplementation	Measurement 2	
G1	R	O1.1	O1.2	X	O2.1	O2.2
G2	R			X	O2.1	O2.2
G3	R	O1.1	O1.2		O2.1	O2.2
G4	R				O2.1	O2.2

G1, G2: Experiment Group G3, G4: Control Group R: Neurality in composing the groups
X: Experiment Process O1.1, O1.2: Pre-test O2.1, O2.2.: Post-test

In this design, pretests help the degree of similarity to be known before the experiment, and the arrangement of post test results according to these values. In order to define how effective X, independent variable is, pretest results and posttest results are used together (Karasar, 2005)

Population and Sampling

The population of the research can be assumed as the elementary schools in Mersin province. The sampling of the research is 90 students taken from four 7th grade classes in a state school in Mersin province. There are four classes in the sampling and these classes were assigned with draw as Experiment I (24), Experiment II (21),

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Control I (22), Control II (23). All of the Science lessons in these experiment and control groups were given by the same teacher.

Data Collection Tools
As data collection tool, 'Academic achievement test' was developed to test the knowledge of the students.

Academic Achievement Test
First, 80 questions from the first 4 units of the 7th grade were collected for the selection of questions used in the game. These 80 questions were thought to be suitable for games. This research was held during the first 4 units. These questions were asked to 108 8th grade students and analyzed at the end of the implementation. ITEMAN 4.0 which is software for the analysis of item and test was used during the analysis process of the questions. Thanks to ITEMAN software, the difficulty level of the questions (p) and point biserial correlation coefficient (biserial) which is used to identify high / low level students were measured. At the end of the analysis, 28 questions whose item difficulty index is between 0, 20 and 0, 80, and whose distinct index is above 0, 30 were chosen. Other questions were removed from the test. Then, the test were analyzed by 2 Science teachers and 3 professors expert in the field, necessary editing was done through their suggestions in order to provide a validity to the test. The reliability of the test was measured using SPSS 22.0 package software, and reliability coefficient was r=0, 78.

Science Game
The game can only be played with three players. At the beginning of the game, three players are paired each other randomly and the games begins. The game takes place in a laboratory. The main aim of the game is to capture the objects in the laboratory. At the first stage of the game, objects are given to the players, who give correct answers to the questions asked. The questions are common. If a player knows the answer, he/she can choose any object he/she wants. After the distribution finishes, the real game starts. The player in turn attempts to capture another player's object. The questions come to the attempting and defending players. Third player watches only. If the player taking the high score is the one who attempted, he/she get the object. If the player taking the high score is the one who defended, it means that he/she could defend his/her object, and enables the opponent to pass. The game ends when all the objects belong to one player.

Game Screen



Implementation Process
In order to conduct the research, the elementary schools were analyzed in the borders of Mersin province. A state school which can give their students the opportunity to use computer laboratory effectively, and has four classes with the same science teacher was chosen as the implementation institution. Interviews were conducted with the science teachers. They were informed about the research and their feedback was taken. On the first day of the first week of the research, pretest was done to the experiment and control groups which were assigned with draw.
On the second day, science game was introduced to the students in experiment and control groups, and information about the rules and steps of the game was given by the science teacher. In the implementation process, lessons were given with the same procedure in both experiment and control group classes. The game was played an hour once a week so they played the game 16 hours totally. The game was played in a different class hour, not in the science lesson hour.

In experiment groups (2), the students were threesome and groups of three students played the game together. But in control groups (2), each student had one computer and they played the game individually. Before the game starts, a student can start the game as a new player or can continue the game with the same name. The

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students who were sitting with groups of three use multi user option. During the implementation, the science teacher of the school guided students. The implementations lasted 16 weeks. During the week after the implementation finished, pretest was done as posttest to the 4 groups (2: Experiment, 2: Control).

Data Analysis

The equation of experiment 1 and control 1 group students' academic achievement, pre-test scores were analyzed. For this, independent samples t-test was used. Then students' academic achievement scores in four groups (2 experiment- 2 control) were analyzed by One-way analysis of variance (ANOVA). ANOVA was used to determine whether there is a significant difference between academic achievement post-test scores of the students playing the computer game in a group or individually. And also two way ANOVA was used to determine whether students academic achievement significantly differ or not according to the common effect of gender and playing the computer game individually or in a group

FINDINGS

Findings were given below according to the research question and sub-question. To test the equality of groups before the implementation, academic achievement test, pre-test scores, mean, standart deviation and independent t-test results were given at Table 1.

Table 1. t-test Analysis of Academic Achievement Pre-test Score, Mean and Standard Deviation Values of Experiment 1 and Control 1Groups

Groups	N	$\overline{X}$	sd	df	t	p
G1	24	40.33	8.89	44	.521	.605
G3	22	41.63	7.96			

As seen in table 1, before computer game implementation, mean of experiment 1 group (G1) is 40.33 and control group 1 (G3) is 41.63. According to the independent t-test analysis of academic achievement pre-test score, there was found no significant difference between experiment and control group students (p=.605).
Findings of the question "Is there a significant difference between students' academic achievement according to playing a computer game individually or in a group" was given at Table 2:

Table 2. One-Way Analysis of Variance (ANOVA) Results of Academic Achievement Post-test Score According to the Groups.

Source	df	SS	MS	F	p	Meaningful Difference
Between Groups	3	1424.53	474.84	6.51	.001	**G1-G3** **G1-G4**
Within Groups	86	6272.75	72.93			
Total	89	7697.289				

As seen in table 2, one-way analysis of variance technique (ANOVA) was used so as to determine whether students' academic achievement levels show a significant difference according to the group variable. At the end of the analysis, the difference according to the group variable was found statistically significant (F= 6.51; p<.05). According to the results of post hoc tests, significant difference was found in favor of students played the computer game in a group ($\overline{X}$=83.75) than individually (G3 $\overline{X}$=74.81, G4 $\overline{X}$=75.47). This result can be because of group interaction. When the students played the computer game in a group, group members could be motivated the others during the game.

The sub-question of this study was indicated as "whether students academic achievement significantly differ or not, according to the common effect of gender and playing the computer game individually or in a group. According to the analysis of this sub-question, two-way analysis of variance (ANOVA) results were given at Table 3:

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Table 3. Two-Way Analysis of Variance (ANOVA) Results of Academic Achievement Post-test Score According to the Common Effect of Gender and Playing the Computer Game Individually or in a Group

Source	df	SS	MS	F	p
Groups	3	1405.69	468.56	1.11	.347
Gender	1	376.78	376.78		
Groups*Gender	3	232.68	77.56		
Error	82	5689.70	69.38		
Total	90	570652			

As seen in table 3, it was seen that there was no significant difference according to playing the computer game individually in a group among the female and the male students. ($F = 1.11$; $p > .05$). This can be because of all students, male or female, doesn't matter, interest on technology and playing diffrent games on the computer. Though all of the male and female students have the same situations and chance during the instruction. And this can be also because of all students want to have fun during learning by playing the computer game.

RESULT

Today, the children's intense interest on video games and their habit of spending their most of the time in front of these games have brought the idea of utilization from video games in education. It's observed that particularly in recent years, researches on this field have increased notably not only in Turkey but also in the world because of the idea that video games may offer both education and fun together. In this research, the effect of video game played with groups or individually on the academic success of the students. Moreover, it's determined that whether students' playing the video game with groups or individually has a significant difference or not according to the gender. As the findings were analyzed, it's observed that there is a significant difference between the students who played the video game individually and those who played with groups, in favor of the students who played in groups. When the literature was analyzed, no research comparing those playing in groups with those playing individually was encountered with. Researches are mostly comparisons of video game based instruction with traditional instruction. For instance, Obut (2005) analyzed the effect of individual instruction with educational video games and traditional instruction on student success. A total of 70 students at 7th grade participated to the research, and experiment and control groups were determined randomly. In the research, a new video game soft ware, which is suitable for the content was created in the computer. This was going to be used in experiment group. According to the findings of the research, it was observed that the instruction through educational video games were more successful and effective than the traditional method.

When the findings were analyzed in terms of gender, it was observed that there is no significant difference among the female and male students with regards to playing video game with groups or playing individually. According to the literature, there are researches on the effects of gender on perspectives to video games. For instance, İnal and Çağıltay (2005) found that some factors effecting the students' video game playing habits and preferences are level of income, having his/her own computer, socio-economic condition of the place she/he lives in, and gender. In another research, Kinzie and Joseph (2008) searched the game playing preferences of the students in the prime school and in the second stage, and suggested some game designs. In the study, it was observed that contrary to the male students, female students have more positive attitudes to the problem solving games and social games; however, the difference was not statistically significant.

According to the results of this study, parallel to the other research results, computer games must be used during the instruction in science lessons and also in other lessons. Other researchers, must study in other lessons using the computer games and the research results must be compared. While using computer games during the instruction, students must play the computer games in a group with 2-3 members rather than playing individually.

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A CONTENT ANALYSIS STUDY ABOUT STEM EDUCATION

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ABSTRACT
The aim of this study is to evaluate the studies about STEM education in mathematics and science disciplines between the years of 2010-2015 through content analysis. For reviewing the reached studies five criteria were used: publication year, disciplines (mathematics, science, and science and mathematics), methodology (qualitative, quantitative and mixed), research areas, and participants. Articles which were accessed from internet in full text, especially were indexed in SSCI (Social Science Citation Index). A total of 51 articles were included in the research. STEM, STEM education, science and mathematics education search terms were used. The findings of the study provided that most studies conducted in 2014 and 23 articles were also related the teaching-learning research field.

Keywords: Content analysis, STEM Education, science and mathematics education

INTRODUCTION

In recent years science, technology, engineering, and mathematics (STEM) education has received a great deal of attention (Bybee, 2010). STEM is an acronym that defines the study of Science, Technology, Engineering, and Mathematics (STEM). This term created by Judith Ramaley. Around the year of 2001, the term Science, Mathematics, Engineering, and Technology (SMET) changed to STEM. Because STEM's sound is nicer and science and technology have supported mathematics and engineering (Sanders, 2009). STEM is a new, whole discipline and associates with other disciplines (Morrison, 2006).

America National Research Council (NRC) (2011) gives importance to education in the STEM disciplines and because of the reduction of the number of graduate students from these disciplines. Provision of scientific and economic superiority in a country depends on trained individuals in science, technology, engineering and mathematics disciplines and the supporting of their education (Raines, 2012). Therefore STEM education is considered important for economic growth and scientific progress (Lacey & Wright, 2009). Petroski (2010) also stated that STEM Education plays a vital role for the development of society and protection of our real life's quality.

Since the last 10 years, STEM is an issue being discussed in the international arena (Bell, 2015). But there was no clear consensus about the definition and significance of STEM education (Bybee, 2013), researchers have different views about the objectives of STEM education (Lin & Williams, 2015) but scientific and technological literacy standards such as International Technology Education Association [ITEA] (2007), National Research Council [NRC], (2012) have focused on its interdisciplinary perspective and integration of these disciplines.

Science education in the STEM educational context aims to discover the nature and understand it properly (NRC, 1996), the goal of technology education is to demonstrate that technology meet people needs with natural world (ITEA, 2007), thanks to engineering education people benefit from nature and use limited resources effectively (Accreditation Board for Engineering and Technology, 2002), mathematics is a language for presenting science, technology, and engineering disciplines and their relationship (American Association for the Advancement of Science, 1993).

Various models are available for STEM education researches (Bybee, 2013). In a chosen discipline (science, technology, engineering or mathematics) teachers carry out his course and integrate this course effectively with other STEM disciplines sometimes with social sciences (Lin & Williams, 2015).

STEM activities are examples of constructivist approaches' applications in education and because of its nature STEM education is student-centered (Bransford, Brown & Cocking, 2000). The general approach of STEM education is interdisciplinary. Problem and performance based learning use in teaching and learning. Education integrates with the digital teaching technologies (Lantz, 2009). STEM Education provides students problem solving ability informally, and then in school students practice their knowledge creatively and can solve more complex problems (Meyrick, 2011). The combination of mathematics and science is important for students in middle school because later in advanced courses in high school to show better performance and their careers (Singh, Granville & Dika, 2002).

In line with the above, the purpose of the paper is to give an overview about STEM Education in science and mathematics disciplines over a period of 5 years. In addition, this paper focuses on publication years, research

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areas, research methods, and types of participants of the articles. The following research questions guided the study:

1. What is the distribution of studies about STEM education between 2010 and 2015 years?
2. What is the distribution of STEM Education studies with regard to their disciplines?
3. In which research areas are STEM Education studies conducted mostly?
4. What are the types of participants included in STEM Education studies?
5. What kind of methods are frequently used in STEM education studies?

METHODOLOGY

This research is a study of content analysis. The aim of the content analysis researches is to investigate the contents of the studies carried out in a particular discipline and understand its development (Apaydın, 2009). In this content analysis study, STEM education papers in science and mathematics education between 2010-2015 years were examined. Related to a specific topic similar data were brought together under themes thus this classification help to understand simply (Yıldırım & Şimşek, 2006).

Data collection process

In this study, to access the STEM education papers, it was benefitted from Science Direct, Scopus, Web of Science, Informaworld-Taylor & Francis web-based service providers. The journals indexed in Social Science Citation Index (SSCI) and Educational Resources Information Center (ERIC) was selected. While screening the articles, "STEM", "STEM education", "science and technology", "engineering and mathematics" search terms were used. The screened articles were selected based on the research in science, mathematics and mathematics and science. The selected papers were open access or accessed their full text from the library of Yildiz Technical University. The names of the papers and other properties of them were presented at the end of this research. The study search was terminated June 5, 2015. A total of 51 articles were included in the research and the search was limited to 2000-2015. All of the studies were published in English language. Detailed information (year, author/authors, title, journal name, etc.) was given at the end of the study.

Data analysis

For coding of the articles, it was studied with a mathematics education expert. To provide the reliability, the papers were reviewed by both researchers together and disagreements about the coding were resolved. Reached papers re-reviewed by other mathematics education expert in accordance with these criteria: limited publication years (the papers were published during the years 2010-2015), suitability to the research disciplines (studies in mathematics, science, and mathematics and science), suitability to the research areas (studies in research areas of teaching tool, teaching and learning, learning strategies, gender, interest and motivation, problem solving), suitability of type of participants (elementary school students, high school students, undergraduate students, teachers, adults).
While identifying the research areas, themes determined by Jayarajah, Saat and Abdul Rauf (2014) were utilized. In the phase of data analysis, studies were classified according to their disciplines, fields of research, research methods, and participants. Data were coded using SPSS 20.0. The results were descriptively presented in tables and charts.

RESULTS

The results are organized in five sections:

1. Distribution of the paper s according to publication years,
2. Disciplines (mathematics, science and science and mathematics),
3. Research areas,
4. Types of participants,
5. Methodology (qualitative, quantitative, and mixed).

Distribution of researches in STEM education

Table 1 presents the distributions of articles by year from 2010 through 2015. The total number of articles reviewed is 51. The maximum number of articles is in the year of 2014 and this year is the most productive year. The number of the articles increase from 2012-2014. As can be seen in Table, there are 4 articles in 2010, 3 articles in 2011, 2 articles in 2012, 12 articles in 2013 and reach a peak in 2014. The number of articles which can be reached until June 2015 is 8.

Table 1. Distribution of articles from 2010-2015

Year	Frequency	Percentages
2010	4	7,8
2011	3	5,9
2012	2	3,9

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2013	12	23,5
2014	22	43,1
2015	8	15,7
Total	51	100,0

Distribution of STEM education studies according to disciplines

There are 3 disciplines for this study and researches about STEM Education in these disciplines were examined. Figure 1 describes the distribution of disciplines. Some articles are in both mathematics and science, the highest number of articles published in science discipline (27 researches). This is followed by the science and mathematics (19 researches) and finally mathematics discipline (5 researches).

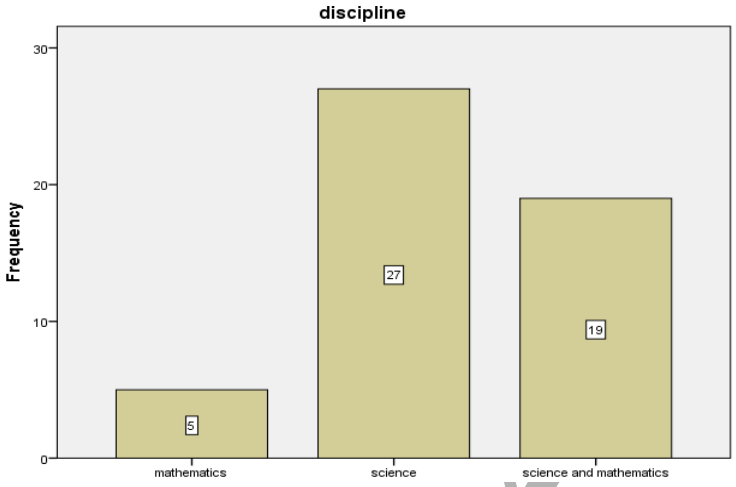


Figure 1. Distribution of STEM education studies according to disciplines

Distribution of research areas of STEM Education studies

In this study, studies in science and mathematics disciplines related to STEM education were examined and classification was made according to research areas. Research areas determined by Jayarajah, Saat and Abdul Rauf (2014) were utilized for this research. Research areas are as follows: teaching tool, teaching and learning, learning strategies, gender, interest and motivation, problem solving and other issues. Table 2 presents the results of the research area distribution.

Table 2. Research areas in STEM Education

Research areas	Frequency	Percentages
Teaching and Learning	23	45,1
Gender	8	15,7
Interest and motivation	8	15,7
Teaching tool	8	15,7
Problem solving	2	3,9
Learning strategies	1	2.0
Other issues	1	2,0
Total	51	100,0

The highest number of research areas is teaching and learning compared to all other issues. Gender, interest and motivation, teaching tool areas each contribute 15 % to the total number of the research. Problem solving (2 studies) and learning strategies (1 study) research areas are given much less emphasis in science and mathematics disciplines in STEM Education studies. Other issues in this research include the social aspects of STEM education.

Distribution of participants in STEM Education studies

There are 5 types of participants that examined in the research articles. These groups are elementary school students, high school students, undergraduate students, teachers, and adults. The following Table 3 shows the types of participants.

Table 3. Types of participants in STEM Education

Participants	Frequency	Percentages

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High school students	20	39,2
Elementary school students	13	25,5
Undergraduate students	12	23,5
Teachers	3	5,9
Adults	3	5,9
Total	51	100,0

According to results of the analysis, a total of 39 % of the articles focuses on high school students. It is clearly seen that 13 papers conducted its study with elementary school students; there are 12 studies carried out with undergraduate students in science and mathematics disciplines. In addition, teachers (3 researches), adults (3 researches) participated STEM Education studies.

Distribution of research methods used in STEM Education studies

Quantitative, qualitative and mixed methods are the main methodological designs for this research. Figure 2 illustrates the distribution of research methodologies in science and mathematics disciplines in STEM Education studies.



Figure 2. Distribution of research methods used in STEM Education

Regarding the research methods used in STEM Education studies, it is seen that the use of quantitative methods is dominant (24 studies), this is followed by qualitative methods (16 studies) and mixed methods (11 studies).

DISCUSSION AND CONCLUSION

This research examined STEM education studies in science and mathematics disciplines between 2010 and 2015. STEM Education is a newly developing research area so researches in last 5 years were discussed in the study. The number of STEM Education researches has increased rapidly and reached a pick in 2014. The total number of studies conducted in 2010, 2011 and 2012 is 9, in 2013 is 12. Studies published in year 2015 were included until June. In this part of the year 8 studies are existed, so it can indicate that the number of the studies will increase throughout the year. The distribution of studies have shown positive trend. Therefore, STEM education field in recent years have gained importance and shown the characteristic of being a popular topic. The results of this study show parallelism with the results of Bell' (2015) research that STEM studies have increased in the last 10 years. This increase can be due to the discourse of important standards, for instance International Technology Education Association, National Research Council. Thus, educators have published international papers in journals about STEM education from different perspectives.

There are many studies dealing with STEM Education, but we restricted our study with researches carried out in science and mathematics disciplines. Other STEM disciplines (engineering and technology) support the studies. In the field of science education STEM Education studies are more than in the field of mathematics education. Related to this result we can say that science discipline is application area of mathematics.

When reviewed papers evaluated, it can be seen that the papers focused on teaching-learning research areas. Studies related to proposing a program that can be used in science education related to the earth sciences, experiments for flying are examples for this research area. There is a similar result in Jayarajah, Saat and Abdul Rauf' (2014) study. Their research results indicate that teaching and learning in science and mathematics is the most common area compared to other issues. Gender studies evaluated in this research are related to comparison of achievement between boys and girls, and approaches woman to STEM occupations. Technology and education are closely related so studies in teaching tool research areas are common.

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The findings related to participants were examined; it was found that the studies are mostly implemented with high school students. This situation may be due to STEM education is more common in high schools. However, studies in primary and secondary levels are increasing. To achieve the goal of STEM education, education should start from the earliest age level. On the other hand, the teachers involved in researches are less. The number of studies conducted with teachers should increase.

A majority of the studies (47 %) use quantitative research method and a total of 16 % employ qualitative research design. The researches which employ mixed method that uses both qualitative and quantitative paradigms are less than other methods for this study and a sum of 21 % of the all researches in STEM Education. Qualitative studies may be more complex and difficult, but they help researchers to learn more information in detail about a situation. Therefore, the number of qualitative and mixed method studies can be increased.

Also, the following suggestions may be recommended:

In this study researches in especially science and mathematics fields were examined, researches in other STEM fields can be evaluated with same content analysis criteria.

Different criteria, for instance, citation numbers, data collection tools, sampling methods, sample size can also be examined in STEM disciplines in a larger time interval.

Appendix

List of articles included in research

No	Properties of article	Year
1	Wilkerson-Jerde, M., Wagh, A., & Wilensky, U. (2015). Balancing curricular and pedagogical needs in computational construction kits: Lessons from the DeltaTick Project. *Science Education*, *99*(3), 465-499.	2015
2	Lamb, R., Akmal, T., & Petrie, K. (2015). Development of a cognition-priming model describing learning in a STEM classroom. *Journal of Research in Science Teaching*, *52*(3), 410-437.	2015
3	Bevan, B., Gutwill, J. P., Petrich, M., & Wilkinson, K. (2015). Learning Through STEM-Rich Tinkering: Findings From a Jointly Negotiated Research Project Taken Up in Practice. *Science Education*, *99*(1), 98-120.	2015
4	Kiemer, K., Gröschner, A., Pehmer, A. K., & Seidel, T. (2015). Effects of a classroom discourse intervention on teachers' practice and students' motivation to learn mathematics and science. *Learning and Instruction*, *35*, 94-103.	2015
5	Hieb, J. L., Lyle, K. B., Ralston, P. A., & Chariker, J. (2015). Predicting performance in a first engineering calculus course: implications for interventions. *International Journal of Mathematical Education in Science and Technology*, *46*(1), 40-55.	2015
6	Itzek-Greulich, H., Flunger, B., Vollmer, C., Nagengast, B., Rehm, M., & Trautwein, U. (2015). Effects of a science center outreach lab on school students' achievement–Are student lab visits needed when they teach what students can learn at school? *Learning and Instruction*, *38*, 43-52.	2015
7	Rau, M. A., Michaelis, J. E., & Fay, N. (2015). Connection making between multiple graphical representations: A multi-methods approach for domain-specific grounding of an intelligent tutoring system for chemistry. *Computers & Education*, *82*, 460-485.	2015
8	Burgin, S. R., McConnell, W. J., & Flowers III, A. M. (2014). 'I Actually Contributed to Their Research': The influence of an abbreviated summer apprenticeship program in science and engineering for diverse high-school learners. *International Journal of Science Education*, (ahead-of-print), 1-35.	2015
9	Pietsch, R. B., Bohland, C. L., & Schmale III, D. G. (2014). To Fly or Not to Fly: Teaching advanced secondary school students about principles of flight in biological systems. *Journal of Biological Education, 49*(1), 53-63.	2014
10	Fakayode, S. O., Pollard, D. A., Snipes, V. T., & Atkinson, A. (2014). Offering a Geoscience Professional Development Program To Promote Science Education and Provide Hands-On Experiences for K–12 Science Educators. *Journal of Chemical Education*, *91*(11), 1882-1886.	2014
11	Evans, M. A., Lopez, M., Maddox, D., Drape, T., & Duke, R. (2014). Interest-Driven Learning Among Middle School Youth in an Out-of-School STEM Studio. *Journal of Science Education and Technology*, *23*(5), 624-640.	2014
12	Bamberger, Y. M. (2014). Encouraging Girls into Science and Technology with Feminine Role Model: Does This Work? *Journal of Science Education and Technology*, *23*(4), 549-561.	2014
13	Fadzil, H. M., & Saat, R. M. (2014). Enhancing STEM education during School Transition: Bridging the gap in science manipulative skills. *Eurasia Journal of Mathematics, Science & Technology Education*, *10*(3), 209-218.	2014

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14	Bokor, J. R., Landis, J. B., & Crippen, K. J. (2014). High School Students' Learning and Perceptions of Phylogenetics of Flowering Plants. *CBE-Life Sciences Education*, *13*(4), 653-665.	2014
15	Legewie, J., & DiPrete, T. A. (2014). The high school environment and the gender gap in science and engineering. *Sociology of Education, 87*(4), 259-280	2014
16	Wilson, Z. S., McGuire, S. Y., Limbach, P. A., Doyle, M. P., Marzilli, L. G., & Warner, I. M. (2014). Diversifying Science, Technology, Engineering, and Mathematics (STEM): An Inquiry into Successful Approaches in Chemistry.*Journal of Chemical Education*, *91*(11), 1860-1866.	2014
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A CREATIVE AND ENTREPRENEURSHIP PROJECT PROMOTION OF PRIMARY SCHOOLS AND HIGH EDUCATION

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ABSTRACT
With the purpose of promoting creativity and entrepreneurship behavior in primary school children and connecting it to entrepreneurship work develop in a High Education Institute with undergraduate students, Produz@ideia arise has a project that makes the link between the two type of levels of education, proposing a multidisciplinary project in multi-level type of education. This project was implemented during a year of work applying a problem-based learning perspective in both level of education and exploring the creativity and analysis implementing the methodology of the "Six Thinking Hats of Bono" with the primary education schools. By putting into action this project we pretended to prove that the empowerment that young children would embrace after the project, being creative, learning to reflect and analyze all perspectives of making things and trying and experiment how to make them, would create on them the access risk in a different way. The way of development that we used, could be audacious, but we expect students of both institutions acquire the necessary taste of not being afraid of taking chances by put into action their own ideas. On the other hand of the education level, in HEI, we tried to promote creativity on students making them to find a way to produce "crazy" ideas and trough that learn to take changes, analyze problems and find solutions and make things happen. Like this this project addresses the fundamental of entrepreneurship education at two levels of education at the same time, making it fun and successful. At the end of the project the entrepreneurship attitudes and behavior were assessed and it was possible to confirm the empowerment and the competence development in analyzing in a problem-based learning view.

INTRODUCTION
As several studies show entrepreneurship behavior is crucial for economic development (e.g. Acs et al., 2004; Baumol, 2002; or even Schumpeter,1934).The entrepreneur behavior values creativity, takes risks, is based on an informal organizational structure concerned in formulating strategies and in identifying opportunities. Therefore, is important to create an educational system capable of collaborating with the society in which it is inserted, which can affect change-technological, social, economic – for its development, causing a greater interaction between school and society (Friedlaender, G., 2004). In this sense, we tried to create a project that did just that and also linked different stages of level of education. In doing so, we proposed to promote entrepreneurship and creativity in early age students that could also stimulate at the same time older students taking the youngsters example on creativity and innovative solutions thinking.
This project, called Produz@ideia, will start with the recognition of a necessity/ problem or getting an exist one that it's difficult to solve, goes through an objective definition and means to achieve a solution, a plan of action has to be developed, the resources have to be analyzed and accessed and it's possible to implement a process and a creation. In this way we propose to follow the thoughts of different scientists that characterize the entrepreneurship behavior and access the importance of innovation and entrepreneur attitude in distinctive, if not all, aspects of life (e.g. Mulet, 2011; Friedlaender, G., 2004; Sadler-Smith et al. 2003; Hayton, George and Zahra, 2002; Drucker, 1985).

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The didactic innovation project we propose, intends to promote creativity and enhance the power of realization of dreams or ideas, while entrepreneurial skills. To be developed by professors of the Polytechnic, naturally drew a design of didactic innovation that makes the bridge between two levels of teaching basic education and high education, encouraging and using the creative potential of the students of basic education and the power of knowledge and technical realization of Polytechnic School students. In this way, Produz@ideia allows working student's entrepreneurial skills and abilities of the two levels of education.

Objectives of this project are therefore to:

- Encourage creativity in children (elementary school) and young (higher education);
- Empower the entrepreneurial attitude;
- Reduce the fear of risk, through collaboration among peers;
- Making dreams come true, making you believe in their potential for creation, always present;
- Involve the institutions of higher education and primary education.

In this paper we propose to present the methodology we applied in the implementation process of this project and the way it was operationalized, so the objectives defined could be achieved.

METHODOLOGY

These project main objectives are to motivate children to be creative and entrepreneurs since we want them to have new ideas with novelty, usefulness and appropriateness to it. In this way of thinking we decide to follow the Problem Based Learning (PBL) model because joins creativity with the process of knowledge acquisition that sustains entrepreneurship and help to develop innovative solutions. PBL stimulus people to restructure information that they already know within a realistic context to gain new knowledge and to elaborate on the new information they have learned (Kilroy, 2014). This model relies in three pillars: Ill-Structured Problem; Student-as-Stakeholder; and the Teacher as (Metacognitive) Coach. In this way it deals with the the "Ill structured problem", that consists of a problem which is described in an ambiguous way, that needs more information research to be more clear and that can be solved in more than one way, that have different possible solutions. When we considered "students as stakeholders" we are saying that they have a significant knowledge and have to make it useful and give it a meaning and select and evaluate their options, monitoring the process towards the solution and at the same time have to defend and give evidence-driven arguments. The role of the teachers as coaches is important to guide students in an ethic perspective of the solutions definition process and help them to develop their self-awareness process of thinking and seeking information (Kilroy, 2014).

Conscientious that we are dealing with children of young age and that might be difficult for them to assume these roles we also follow the "Six Thinking Hats", by Edward Bono, method so they could easily assume the parts as long as they had the hats on. This method, accordingly to Xerxen (2012), has two main objectives:

1. To simplify thinking, by allowing a thinker to deal with one thing at a time;
2. To allow a switch in thinking.

In this way, instead of having to take care of emotions, logic, information, hope and creativity all at the same time, the thinker is able to deal with them separately. Moreover by turning it into role-playing, the concept of the hats makes it possible to request certain types of thinking (Xerxen, 2012). The Six Thinking Hats is tailored so as to stimulate the inner creativity of participants and to help them to discover how to turn seemingly insoluble problems into real opportunities.

With this methodology in mind we defined our implementation plan to purse the project goals.

IMPLEMENTATION

The implementation of Produz@ideia in primary schools has been develop following three different steps:

Step 1 (Primary Schools Students)

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- The authors had went to the two participating schools in the city of Guarda to have short working sessions with primary student classes. While there, they had work for minimum one hour with the PBL and the Six Thinking Hats, promoting the discussion of ideas concerning different areas and their possible solutions. The Six Thinking Hats were seen as a very important part of the work by the children. In their way of thinking it was a completely different process of working. Also from our experience during this year, we feel that their participation need to be encourage to contribute with their valuable opinions. They need to feel the importance of sharing their thoughts and more important than this, the ideas could have a good value, no matter the crazy that they could be. He had ask the children to share their ideas by drawings in the end after the discussion period (Figure 1 and Figure 2)

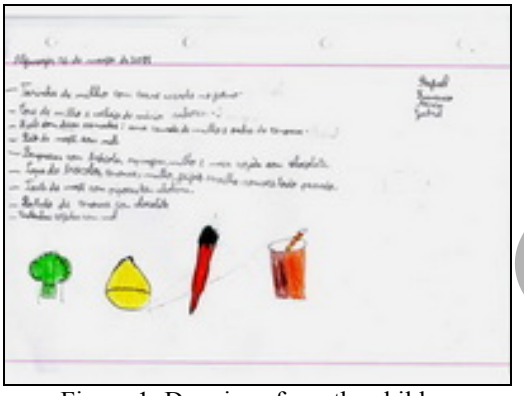


Figure 1: Drawings from the children



Figure 2: Drawings from the children

Step 2 (Young Students)

- After collecting and analyzing the ideas presented by the children, the authors separated them in several areas: food products, engineering and services. Later discussing the logistic aspects we had choose the food products area for a first experience. Then these were presented to young undergraduate students at Polytechnic of this area. They had understood them and study how they could implement them by using their knowledge and creativity. During this process of developing the idea the authors were updated time to time. Before the final meeting the food products were present and explained (Figure 3).



Figure 3: Food products test

Setp 3 (Children and Young Students)

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- In the end of the year there was a final meeting in the Polytechnic facilities, here the ideas dream by the children in the beginning had appear converted into solid projects capable to be seen as final products used in our daily life.



Figure 4: Final event



Figure 5: Final event

These three steps were carry out always with the help of the authors that had supervised all the process, interfering the minimum to keep the ideas from the children and also from the students uncontaminated. This had given the necessary flavor of purity and originality that turn the project in a successful mission.

VALIDATION

The process of validation is still being developed but it is supported by an in-depth interview of the students' teachers so it's possible to observe if the children altered their behavior in the different subjects and activities realized in school in a more creativity and entrepreneur perspective. This interview is not structured so it's possible to orient the conversation to the main subject wanted. The interviewer has to have control of the conversation all the time ad keep focusing the talk to objectives questions that permit to evaluate the required behaviors. There will be some written questions to make sure that all the teachers involved have to answer them but beside these requests, the interview has to be completely free.

DISCUSSION

This year we had gone through the three steps detail previously in the two schools that were selected. In total we had near 50 children involved with 4 teachers and 15 students from our School of Tourism and Hospitality Management.

These type of new and bold projects, like Produz@ideia, always need time to be comprehended by the education system. In our case, the primary schools teachers were very enthusiastic by the participation of their students, referring the interest demonstrated during the year. Also they had state that some students start to be more engage on making questions and declaring their own opinion, not having afraid of saying something wrong. This is very important in the point of view of the curriculum and the necessary skills and competences need to be achieved.

We are confident to say that in generally the goals were achieved, but in particular the capacity of boosting an important dosage of creativity in children (elementary school) and youngsters (HEI) was the keynote of the work done, alongside the empower of the entrepreneurial attitude. With the last two we reduce the fear of risk, through collaboration among peers, not only in the debate of ideas, but also very important, the discussion of the normal curriculum in primary schools and HEI.

Produz@ideia could be one more tool that HEI have to promote the need of changing mentalities in primary students and teachers, but also helping the older HEI students to change their mind set, preparing them to integrate the society by adapting to situations and being creative, being real entrepreneurs in action.

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A MATHEMATICAL MODEL FOR SOLVING TEACHER REASSIGNMENT PROBLEM

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In Turkey, The Ministry of Education re-assigns teachers every year based on their preferences depending on their own personal requests related to health, family and other acceptable issues. First teachers who want to be re-assigned to another school apply to the ministry. Once all applications are collected within a period of time, the ministry re-assigns the teachers based on their scores they collected according the number of years they served. This re-assignment problem is very complex problem and its solution quality may have an effect on the quality of education. If an applicant teacher is not re-assigned to a desired location, he or she may lose his/her motivation towards the teaching quality. Mainly motivated by this thought, this paper proposes a mathematical model to increase solution quality of the problem. The model has been tested on a hypothetical problem. The model provides a better insight to the interested audience both in theory and practice.

Keywords: Education, Teacher, Reassignment, Mathematical model, Turkey

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A META-ANALYSIS ON THE EFFECTIVENESS OF ARGUMENTATION METHOD

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The purpose of this research is to determine the effect of the argumentation method on the Turkish students' academic achievement by meta-analysis. Meta-analysis is the method of statistically combining the quantitative results of many independent studies and drawing a general conclusion from these results. Towards this end, almost all the experimental studies in Turkey have been examined for this research, and 25 of them have been combined by using the method of meta-analysis. As a result of the analyses, the argumentation method has been determined to have a significant and positive effect on the academic achievement (ES=0,997; p<0,005). According to the classification made by [1] the effect size is large. Considering the population of Turkey, this result proves the argumentation method to be more effective than the traditional teaching methods.

Keywords: Academic Achievement, Argumentation, Effect Size Meta-analysis, Science Education

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A NETWORK FOR THE ENHANCEMENT OF DIGITAL COMPETENCE SKILLS

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ABSTRACT
Digital Competence, as the set of knowledge, skills and attitudes that are required when using Information and Communication Technology (ICT) and digital media to perform everyday human activities, have started to be understood as "life skills". Nevertheless, concerning the integration of innovative technology and approaches, many teachers do not possess required competences for the pedagogical use of ICT in teaching and learning. The DigiSkills project, as a Network for the Enhancement of Digital Competence Skills, aims to support teachers of all levels of education to combine ICT skills with pedagogy, to use ICT skills in the curriculum and in the institutional organisation. In the framework of the network, success is based on the development of a large Community of Practice (CoP) which enables sharing of "DigiSkills best practices" from various European countries to show their own scenarios of use of learning tools and methodologies tested in their real settings. Additionally, to support a larger number of teachers, the project has set up the Digital Competence Academy. The paper provides an insight into the convergence of the project objectives with the findings in the recent reports/initiatives worldwide aiming to investigate which digital technologies and how can be used for meeting the 21st century lifelong learning societal needs taking into consideration global as well as local challenges. Furthermore, the paper presents the data analysis and basic findings from one-year long implementation of the DigiSkills tools with teachers' communities that demonstrate the importance of the development of online CoP as the core nodes for teachers' professional development and support.

Keywords: life-long learning, communities of practice, best practices, professional development

INTRODUCTION

Teachers have been constant promoters of innovation in schools. However, the integration of innovative approaches, Information and Communication Technology (ICT) and digital media, numerous teachers do not possess the necessary competences for the pedagogical use of ICT in teaching/learning process. DigiSkills project, as a Network for the Enhancement of Digital Competence Skills co-financed by European Commission under the Framework Lifelong Learning Programme, aims to support teachers of all levels of education to combine Information and Communication (ICT) skills with pedagogy, to use ICT skills in the curriculum and in the institutional organisation. The overall objective of the project is not only to improve school/university/adult learning and teaching practice, but also to raise awareness of the educational community on the need for innovative teaching and learning practices as well as learning to learn skills. The core work of the network lies within the connection of best practices from various European countries to show their own scenarios of use of learning tools and methodologies tested in their own classrooms/institutions. At the heart of the project is the best practice directory, where teachers can upload their own educational scenarios using ICT, as tested in their classrooms. The best practices shared in the directory address a range of subjects and all levels of education, and they are freely available for anyone to use. According to the interim evaluation, 78% of 600 directory users agreed that the proposed best practices had had a significant impact on their professional development. Furthermore, 82% said they would recommend the platform to their colleagues. The sharing of best practices is reinforced with community building, which provides mentoring and encouragement, and fosters group dialogue and peer learning. To support a larger number of teachers, the project has set up the Digital Competence Academy, which will deliver large-scale online professional development courses for teachers in specific areas such as maths, science, technology, rural education, environmental education, and the use of mobile devices in school practices. The academy's modules are organized according to teachers' competence levels, based on the UNESCO ICT Competency Framework for Teachers: basic ICT skills (level 1), skills required for effective introduction of technology enhanced activities in the classroom (level 2), and skills required for the development of technology enhanced learning activities (level 3).

The paper presents the data analysis and basic findings from one-year long implementation of the DigiSkills tools with teachers communities (more than 1000 teachers have been involved in the project activities) that demonstrate the importance of the development of online communities for practice as the core nodes for teachers' professional development and support.

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USING TECHNOLOGY TO SUPPORT LEARNING

Technology can be both a benefit and a disadvantage to learning. If technology is used to engage students, to enhance or extend learning or to enrich the life of a community of practice, then it should be embedded in and closely aligned with current learning theories and models of teaching. Innovative forms of pedagogical practice with technology encourage student-centred approaches, group work and participative learning and promote active learning such as problem solving and creativity. Some practical ideas for supporting active teaching and learning models that fit the criteria for student-centred learning and fall into active learning include: Inquiry-based Learning, Game-based Learning, Learning-by-doing, Problem-based Learning, Team-based Learning, Creative Learning and Experiential Learning (Dawson, Cavanaugh and Ritzhaupt, 2008; Redecker, Ala-Mutka, Bacigalupo, Ferrari and Punie, 2009). Moreover, the new pedagogies require students to create new knowledge and connect it to the world by using the power of digital tools (Fullan and Langworthy, 2014).

On the other hand, considering Bring Your Own Device (BYOD) and the potential of 1:1 computing solutions which have already started in the last years, it is important to recognize that we are only at the beginning of understanding 1:1 pedagogical approaches. There is a need to speed up development and implementation of pedagogical models/approaches for 1:1 computing in education, i.e. a requirement to progressively move the focus away from the devices (technology) to the students/learners and pedagogies, specifically from 1:1 computing to "1:1 learning" (Bocconi, Kampylis and Punie, 2013). Since 1:1 computing refers to the idea of equipping every student with a personal computer (usually a laptop, handheld or tablet), it is not acceptable to identify 1:1 pedagogical approaches to 1:1 computing.

Existing and emerging technologies allow teachers to create pedagogically effective learning activities that support experimental and experience-based learning, promoting and improving motivation and learner involvement. However, it is important to point out that technology is just a means towards pedagogical change (Bocconi, Kampylis and Punie, 2012). Moreover, because effective pedagogical strategies are context-dependent, one solution might not work equally well in a different context, especially when considering large communities of practice. As an alternative for generic pedagogical solutions, best practices in learning could be considered.

Digital Competences

With the 2006 European Recommendation on Key Competences (European Commission, 2006), Digital Competence has been acknowledged as one of the 8 key competences for Lifelong Learning by the European Union. Digital competence can be broadly defined as the confident, critical and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society. Digital competence is a transversal key competence which enables acquiring other key competences (for example language, mathematics, learning to learn, cultural awareness). It is related to many of the so-called 21st Century skills (for example leadership, communication, emotional intelligence, entrepreneurship, global citizenship, problem-solving and team-working) which should be acquired by all citizens, to ensure their active participation in society and the economy (Ferrari, 2012). In the last decade it has become increasingly clear that basic reading, writing and arithmetic, while essential, are not necessarily enough. The importance of non-cognitive skills, usually defined as abilities important for social interaction, is also noticeable (Pearson, 2014). Competences related to the use of ICT and technology in general have started to be understood as "life skills", comparable to literacy and numeracy, therefore becoming "both a requirement and a right" (OECD, 2001).

In 2012 a report called "Digital Competence in Practice: An Analysis of Frameworks" (Ferrari, 2012) is produced under an umbrella of a project on Digital Competence (DIGCOMP) with an objective to contribute to better understand and develop digital competence in Europe. The report looked at 15 different frameworks, with one of the aims of identifying the key components of digital competency in terms of knowledge, skills and attitudes needed to be digitally competent. The following definition was an encompassing definition of digital competence, based on the many definitions found in the different frameworks in the study: "Digital Competence is the set of knowledge, skills, attitudes (thus including abilities, strategies, values and awareness) that are required when using ICT and digital media to perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, 4 creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socialising, consuming and empowerment." (Ferrari, 2012, pg. 3-4). Two years later, the report "Measuring Digital Skills Across the EU: EU wide indicators of Digital Competence" which presents the methodology used for the measurement of digital skills in the Digital Agenda Scoreboard, added that "digital competence is a broad concept, including much more than basic/operational skills in the use of ICT – though these are fundamental to it." (European Commission, 2014).

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In "Supporting Digital Competence" report (Balanskat, Bannister, Hertz, Sigillò and Vuorikari 2013), digital competence development as a major objective are mentioned in a number of initiatives: (i) the initiative Mobile Lernbegleiter im Unterricht (Austria) where an exchange of experiences between different levels of education is also envisaged; (ii) the Equipment for School Net DIA.S. initiative in Cyprus aiming to enhance the digital competence of teachers and students; (iii) the Buki initiative in Georgia targeted the ICT skills level of first graders; (iv) two French initiatives, POP1-POP2 and Un collégien, un ordinateur portable, as well as (v) the Vzdelani21/Education 21 initiative (Czech Republic) address ICT skills also as one of the objectives, aiming additionally to also improve ICT skills of parents.

Consequently, according to aforementioned definitions and initiatives, digital competence is not only knowledge and skills, but incorporates attitudes such as being confident and critical. It is about being competent to use technology in different situations (for example work and leisure) and for different purposes (for example learning, communicating, solving problems, online collaboration, creating and sharing). All essentially underpinned by basic ICT skills.

On the other hand when considering digital competence of teachers, the "ICT in education" survey (European Commission, 2013) found that it was only in seven countries that 30 to 50% of students at grade 4 and/or grade 8 were taught by digitally confident and supportive teachers with high access to ICT and who face low obstacles to use of these tools at school. According to the Opening-Up Education communication of the EC (2013) the use of educational content and OER is constrained by the difficulty in finding adequate resources for each user's specific needs: teachers tend to mainly use resources that have been recommended by other colleagues. Communities of practitioners at EU level have proven to be solid solutions for exchanging good practices and for peer support, as shown by the massive engagement of teachers in the e-Twinning platform, with more than 200.000 registered users and in Open Discovery Space (ODS) with more than 500 active teachers' communities (portal.opendiscoveryspace.eu). In order to ensure that large communities of practice benefit from professional development through online resources and peer learning Europe explores ways to leverage the existing networks and create new ones. Attention will also be devoted to explore the potential of collaborative work in teaching and learning in higher education, currently less developed than in research.

Communities (Networks) of Practice

The term Community of Practice (CoP) is of relatively recent coinage. It is a social networking term developed by Etienne Wenger to describe groups that form among peers for the purpose of sharing knowledge and information about their professional interests and activities (Wenger, 2000). The first applications of CoP have been in teacher training and in providing isolated administrators with access to colleagues. There is a wave of interest in these peer-to-peer professional-development activities (Domingo, Aguado, Mor, Barrera and Riviou, 2015). Studies have shown that sharing past experiences leads to innovative future practices and that community members were more likely to develop a more conscious involvement in an activity (Printy, 2008; Barwick, 2009). Moreover, innovative strategies are strengthened within the CoP framework (Sobrero and Craycraft, 2008) and successfully promulgated amongst other teachers, thus increasing the effectiveness of the learning environment.

The development of Professional Capacity is foreseen as the most powerful of all the change drivers (Fullan, 2013). Change leaders have to become experts at fostering professional capacity within their schools in networks and in the system as a whole. In the past, networks were teachers that came together to share ideas, that might be valuable for the individuals but there were not strategies for system changes. An effective network focuses on students' achievements, requires effective leadership and has adults as specific practices learners. It also combines mutual allegiance and collaborative competition. Mutual commitment is when there is interaction between people inside and outside the school and their commitment to each other increases. This encourages a sense of friendly competition, the willing to do things better and share them with everybody. Future areas of investigation should include how far communities of practice along with online support strategies and blended learning approaches contribute to successful teacher training (Balanskat, Bannister, Hertz, Sigillò and Vuorikari, 2013).

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DigiSkills: a Network for the Enhancement of Digital Competence Skills

The DigiSkills project, as a Network for the Enhancement of Digital Competence Skills, is co-financed by European Commission under the Framework Lifelong Learning Programme / Key Activity 3 – ICT / Multilateral Project (DigiSkills, 2015). The goal of the DigiSkills project is to support teachers of all levels of education to combine Information and Communication (ICT) skills with pedagogy, to use ICT skills in the curriculum and in the institutional organisation. The overall objective of the project is not only to improve school/university/adult learning and teaching practice, but also to raise awareness of the educational community on the need for innovative teaching and learning practices as well as learning to learn skills. The core work of the network lies within the connection of best practices from various European countries to show their own scenarios of use of learning tools and methodologies tested in their own classrooms/institutions. The best practices shared in the directory address a range of subjects and all levels of education and they are freely available for anyone to use.

21ST CENTURY LIFELONG LEARNING COMMUNITY NEEDS

Several initiatives worldwide are aiming at investigating which digital technologies and how can be used for meeting the 21st century lifelong learning societal needs taking into consideration global as well as local challenges, see for example (Spector, 2013).

The US National Science Foundation (NSF) Roadmap for Education Technology report, focused on the role and impact of computing and technology in education, included research recommendations and a vision for education the year 2030 (Woolf, 2010). Eight major challenges for education technology were identified: personalizing education, assessing student learning, supporting social learning, diminishing boundaries, alternative teaching methods, enhancing the role of stakeholders, life-long learning approaches and addressing policy changes.

The New Media Consortium (NMC), a globally-focused not-for-profit consortium (http://www.nmc.org) established the Horizon Project to identify and describe emerging technologies that seemed likely to have a significant impact on a variety of sectors including on teaching, learning and creative inquiry as well. Each year, trends are presented along with new technologies likely to have a short-, medium- and long-term impact on learning and instruction. In the 2011 Horizon Report (Johnson, Smith, Willis, Levine and Haywood, 2011), four critical challenges are identified. First and foremost, digital media literacy is again ranked as the most important challenge, since it continues its rise in importance as a key skill in every discipline and profession. The NMC 2013 Horizon Report cited the following trends (Johnson, Adams Becker, Cummins, Estrada, Freeman and Ludgate, 2013):

- openness: open content, open data, open resources, easy access to data, transparency,
- MOOCs as alternatives to traditional university courses,
- workforce demands for more informal learning experiences,
- new sources of data for personalizing learning and for meaningful performance measurements,
- changing the role of educators due to vast resources available via the Internet and
- changing education paradigms (more online/hybrid/collaborative efforts).

The third source that is addressed with regard to new and emerging technologies is the European Network of Excellence for Technology Enhanced Learning, the STELLAR project, which is developing network of excellence in the area of technology enhanced learning. Consistent with already recognized problems, STELLAR identified a number of ambitious challenges and, in order to address these challenges (which have counterparts in the previous reports), STELLAR adopted the following guiding themes (Gillet, 2012):

- connecting learners: networked learning and learner networks,
- orchestrating learning: roles of teachers, role of assessment, higher order knowledge and skills and
- contextualizing virtual learning environments and instrumentalizing learning contexts: novel experiences and new technologies, mobility of learners, as well as standards for interoperability.

The IEEE technical committee on learning technology curriculum report (Hartley, Kinshuk, Koper, Okamoto and Spector, 2010) is another initiative which has been considered in this context. The IEEE Technical Committee on Learning Technology (TCLT) established a Working Committee to develop specifications for new curricula for advanced learning technologies as a response to the demands and potential of new and emerging technologies. The Working Committee adopted and developed a competency-based approach with regard to curricula and assessments to cover undergraduate, postgraduate and training contexts. Innovative and creative competence domain, as one of the five domains identified by TCLT, specifically recognizes that technologies will continue to change and that there is a need to be flexible and creative in making effective use

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of new technologies. This competency is especially consistent with the NMC Horizon Report challenge pertaining to the changing nature of education systems and the emphasis in the NSF Roadmap on enhancing the role of stakeholders and addressing policy changes. The challenges and issues cited in aforementioned reports are consistent; one of the outcomes thread throughout the report are rich repositories of information which are there and should be utilized.

With more than 13 years of research and publications, already mentioned NMC Horizon Project can be regarded as the world's longest-running exploration of emerging technology trends and uptake in education (Johnson, Adams Becker, Estrada and Freeman, 2015). The NMC Horizon Report could be regarded as an unbiased source of information that helps education leaders, trustees, policy makers and others easily understand the impact of key emerging technologies on education and when they are likely to enter mainstream use. Consequently, it is interesting to see the convergence of the DigiSkills project and its aims to improve digital competences and develop communities of practice with the findings in the recent NMC report (see Figure 1). Namely, in order to maintain currency with emerging technologies and the trends, being literate in the area of digital media is vital. Digital literacy is a multi-faceted skill that covers the ability to find, use, interpret, modify and create a variety of digital media. Falling behind in this area contributes to the digital divide, which is widening just when accessibility and resources are expanding (Spector, 2013).

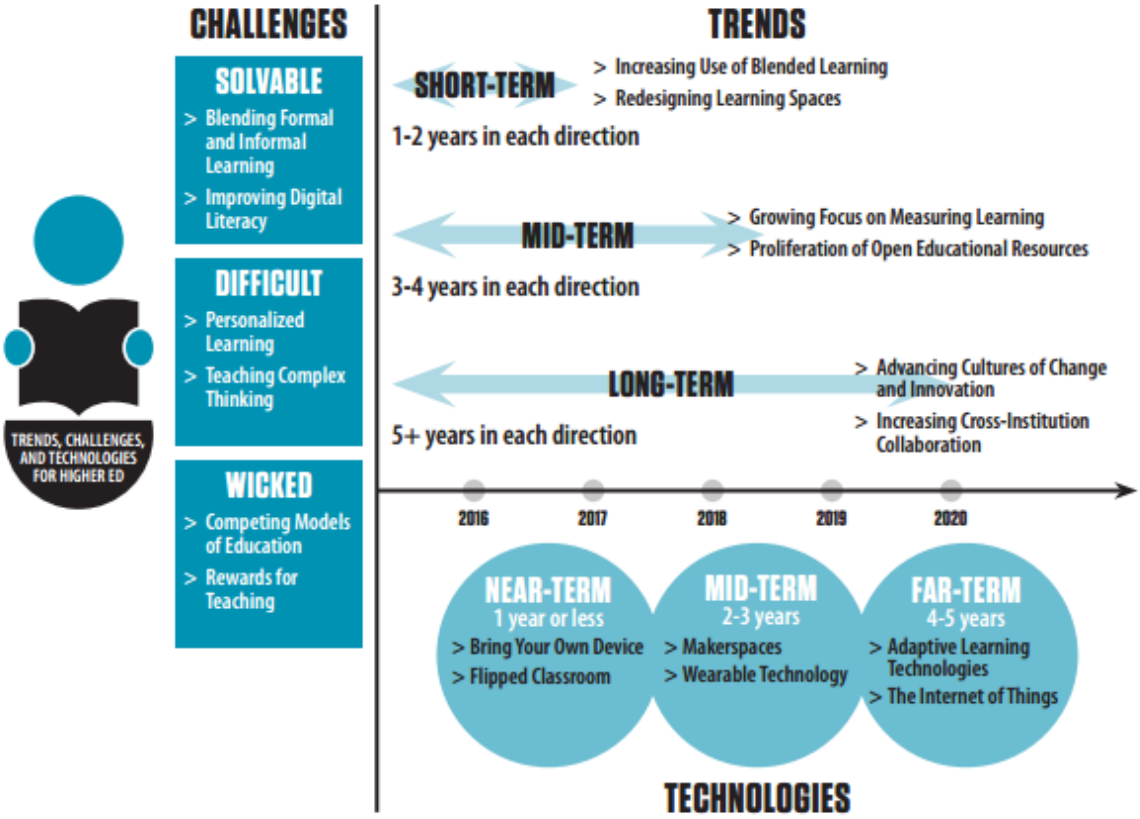


Figure 1: Topics addressed in the NMC Horizon Report: 2015 Higher Education Edition (Johnson, Adams Becker, Estrada and Freeman, 2015).

DATA ANALYSIS FROM THE DIGISKILLS COMMUNITIES

In the framework of the DigiSkills network success is based on the development of a large community of practice that will implement the project in real settings. Participation is the community is regarded as a Professional Development activity in the framework of the project: teachers are introduced in resources based learning, they are getting familiarized with the use of online tools and apps, they are adopting their practices in new teaching models and approaches while they are exchanging experiences and best practices. Recent results from TALIS study (OECD, 2013) demonstrate the potential of such approaches as an alternative way of teachers' professional development programmes. The DigiSkills consortium aims to create conditions for the development of teachers, new ideas, effective participation and new tools and applications to move the community into positive participation in a more equitable digital future. To support this, the project is led by

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interested stakeholders, on the basis of a strong process of creative educational community involvement which plays a critical role.

Communities of Practice

The project provides a platform for sharing best practices in ICT use, as well as an online open course centre, the Digital Competence Academy, where teachers can update their digital skills. Over 1000 teachers are currently participating in DigiSkills activities in different European countries. At the heart of the project is the best practice directory, where teachers can upload their own educational scenarios using ICT, as tested in their classrooms. The best practices shared in the directory address a range of subjects and all levels of education, and they are freely available for anyone to use. Communities of Practice are created with reference to the available Best practices (see Figure 2).

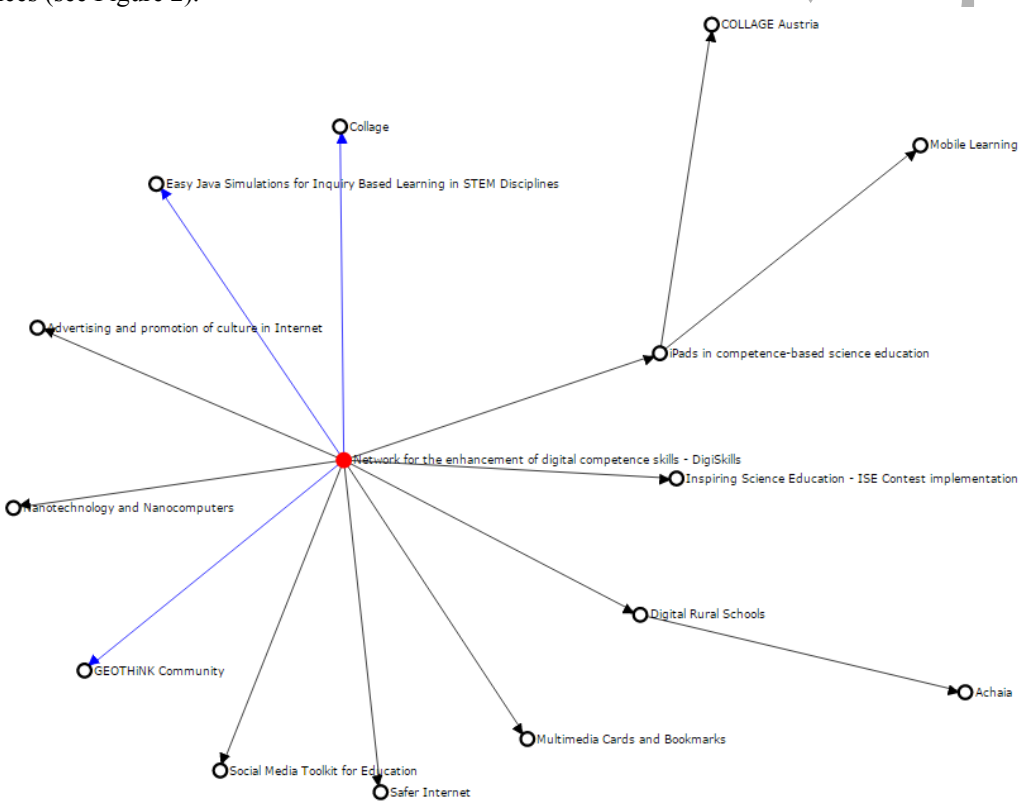


Figure 2: Thematic and National teachers' communities are being developed with reference to the available best practices; the teachers' communities of DigiSkills network involve more than 1500 teachers from different European countries.

The DigiSkills users have created communities in order to share their practices and resources. The consortium has selected a number of best practices that have proven their efficacy in developing the digital competencies of the teachers and the students to act as the starting point of the intervention. Initially DigiSkills communities of users were developed around the best practices (thematic communities) while at a later stage a network of communities (see Figure 2) were organised (for example national communities) to facilitate the implementation of the project in different settings.

Impact Assessment

Consortium has used a series of tools to assess the impact of the proposed methodology. Each teacher's community is monitored and the data collected are analysed. As discussed above each community is considered as a user generated content service. In this way teachers are becoming contributors of resources and at later stage developers of innovative scenarios and educational activities.

Figure 3 presents the analytics of the Easy Java simulations teachers' community. During the period of the operation of the portal 550 teachers were registered, who have contributed to the population of the platform with user generated educational resources, the main outcome of the implementation of innovative projects in their schools. About 200 educational resources were developed by the 550 teachers; 97 of them were extended lesson plans and educational scenarios.

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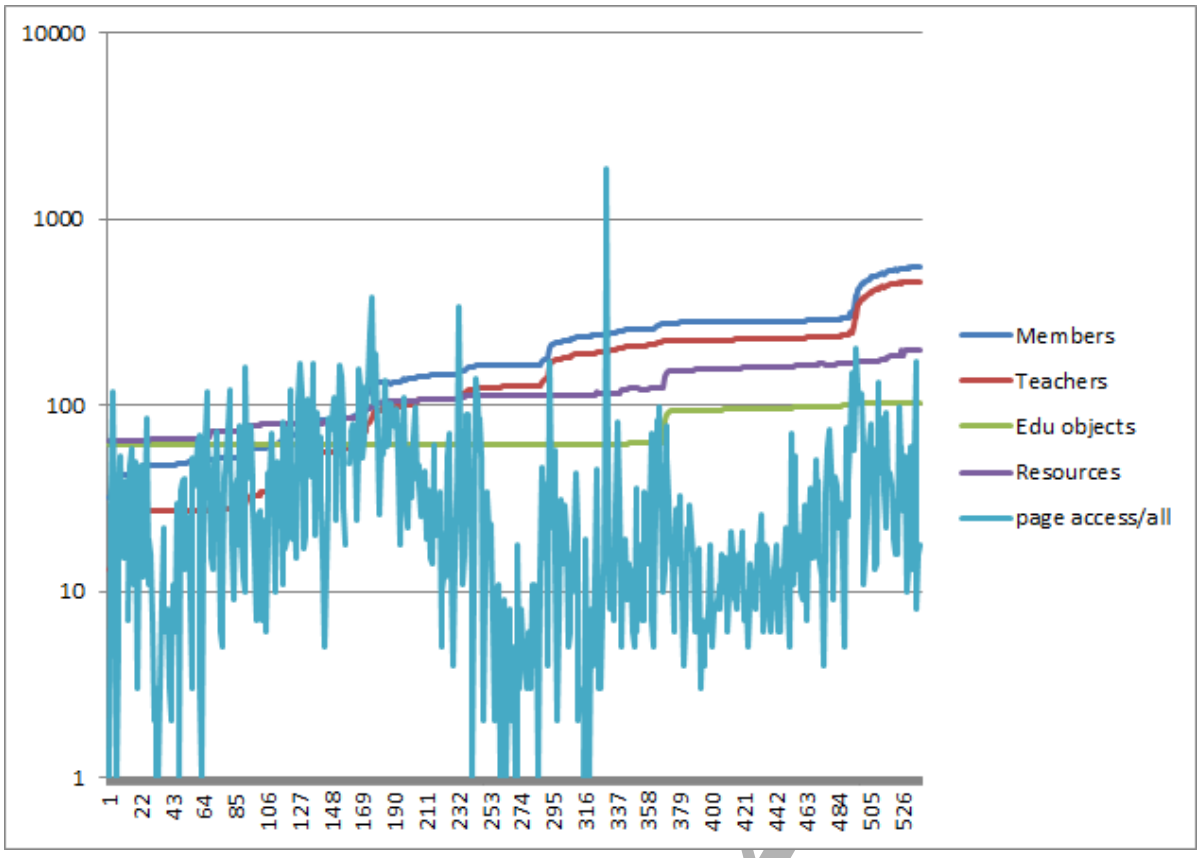


Figure 3: The analytics of one of the most active DigiSkills users' community that focuses on the use of Easy Java Simulations in science lessons (period January 2014-May 2015).

Table 1 presents the integrated numbers from all teachers' communities that were created in the framework of the project; about 600 educational resources were developed by 1500 teachers. There are two important findings from the analysis of the web analytics of the usage of portal:

- Almost 40% of the users have contributed to the portal contents. Usually the majority of the users of educational portals are passive users. They are usually downloading resources and they are not sharing their own materials. The data from the DigiSkills communities demonstrate that the teachers are sharing their own resources (probably as they are start developing a feeling of trust while being members of the DigiSkills communities) at a significant percentage. Furthermore, one out of five DigiSkills users (20%) are contributing more complex educational resources like lesson plans and educational scenarios for direct classroom use.
- The page views of the community is about 80-90 unique page views per day demonstrating the users are coming back again and again searching for resources and materials that their colleagues are sharing through the DigiSkills communities.

Table 1: The number of users and the developed user generated resources for the DigiSkills communities in the period January 2014-May 2015.

Teachers	1500
Educational Resources (User Generated Scenarios)	600 (200)

In the last period of implementation an online questionnaire was applied to the DigiSkills platform users; 760 out of the 1500 registered users provide their feedback. Based on the findings of the online survey that was performed among the DigiSkills registered users over 75% of them agree or fully agree on that the portal offers access to useful resources in the field digital education and eLearning; over 80% of users agree or fully agree that communities are a good environment to exchange best practices; over 80% of users would recommend the platform to their colleagues; 80% would use the tools provided to develop resources and upload their own lessons and materials to the DigiSkills communities. The sharing of best practices is reinforced with community building, which provides mentoring and encouragement, and fosters group dialogue and peer learning. *"We have great educators across Europe but a fragmented situation as far as collaboration between teachers is concerned.*

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At DigiSkills, I can locate content that I find suitable for my work on a single platform. In addition, I can work with colleagues who can help me implement the best practices by providing guidance and support. We can also collaborate in communities to develop content together", says George Papadopoulos, a teacher from the Ellinogermaniki Agogi School in Greece, speaking of his experience with the DigiSkills best practices.

Digital Competence Academy

To support a larger number of teachers, the project has set up the Digital Competence Academy (ODS, 2015), which will deliver large-scale online professional development courses for teachers in specific areas such as maths, science, technology, rural education, environmental education, and the use of mobile devices in school practices. The Digital Competence Academy raises teachers' digital competence by developing skills in using computers to retrieve, assess, store, produce and exchange digital learning resources. To this end trainees are engaged in learning to learn activities through the development of a training scheme that improves the uptake, sharing and reuse of digital learning resources in schools. Through the training teachers participate in a series of activities using digital content in foreign languages to improve their communication skills in foreign languages. The academy's modules are organized according to teachers' competence levels, based on the UNESCO ICT Competency Framework for Teachers (UNESCO and Microsoft, 2011): basic ICT skills (level 1), skills required for effective introduction of technology enhanced activities in the classroom (level 2), and skills required for the development of technology enhanced learning activities (level 3).

Participating teachers are asked to use the framework to assess their competences, after which specific modules or courses are proposed to them according to their competence level. These modules include a series of practical strategies (identified as the "DigiSkills Best Practices") that have proven their efficiency in developing teachers' digital competencies and, more specifically, in supporting teachers to reach ICT competency level 3, thus becoming developers of educational content and authors of their own technology-enhanced educational scenarios.

The data from the Digital Competence Academy registered users demonstrate that they are quite competent in using ICT tools and services in their everyday practice (please refer to Figure 4 and Figure 5).

Figure 4: Digital Competence Academy teachers' competency level in the Understanding ICT in Education and in the use of ICT in the curriculum and in the assessment of the educational approaches used.

CONCLUSION

The DigiSkills approach aimed to integrate resource based learning in real classroom environments through effective community building, networking and support. The process supports the teachers' professional development while the community building approach is considered as the main mechanism to facilitate the development of digital competences to teachers. Through the creative use of the new technologies and the tools offered by the DigiSkills and Open Discovery Space infrastructure, the effective content organisation and the learning processes, teachers were able to generate activities and projects with respect to local school problems. In this way the DigiSkills project aims to address the challenge of the "social appropriation of knowledge" seeking to empower teachers and students through this knowledge and to develop technologies that reflect the school needs.

A strong community of 1500 users was created that developed about 600 education resources expanding the initial pool of about 40 Best Practices that were proposed by the project team. The analysis of the web analytics from the portal and the different sub-communities that were created to facilitate the implementation in local settings demonstrate the users' engagement.

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Figure 5: Digital Competence Academy teachers' competency level in Pedagogy, ICT and in Organisation & Administration.

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A NEW HORIZON IN THE EDUCATION OF MULTILINGUAL AND MULTICULTURAL CHILDREN: A SPEECH THERAPEUTIC STORY AS A CUTTING-EDGE FORM OF SUPPORT IN LINGUISTIC AND EMOTIONAL DEVELOPMENT

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ABSTRACT
Multicultural environments are now a widespread phenomenon, caused mainly by migrations at continental and global levels. They are primarily economically and educationally driven but very often are formed due to private, family reasons. It is family that is the most important basic and primordial milieu for human development. It is therefore crucial for multicultural (and often multilingual) families to implement a coherent and consistent plan for upbringing children – one which respects the coexistence of different traditions, languages, beliefs, and habits in the child's immediate environment. It is also necessary to pay special attention to the emotional (cultural eclecticism, i.e. language, behaviour, or appearance different than that of peers, may trigger problems with adaptation to kindergarten or school environment) and linguistic (children may experience difficulties in the parallel language acquisition in terms of vocabulary and grammar, often articulation of sounds too) development of children. A speech therapeutic story – a tool applied in the logopaedic prevention and therapy – may also be used with multilingual and multicultural children. It is a new support proposal for upbringing and educating such children, both in terms of building their identity and helping them improve their languages. By identifying with the story's main character, the child copies appropriate behaviour mechanisms (in emotionally difficult situations) and language patterns (applicable in the languages spoken in the family).

Keywords: bilingualism, multiculturalism, multilingualism, multicultural education, family cultural *eclecticism*, multicultural family, speech therapeutic story, fairy-tale therapy, therapeutic story, bibliotherapy, emotional support, speech therapy, logopaedic prevention, therapy of speech impediments and language disorders

A speech therapeutic story is a new solution used in logopaedic prevention and therapy, which provides the child with a parallel, two-dimensional support in linguistic and emotional development (Bełtkiewicz; 2013). Emotions are closely related to linguistic communication. The relationship between the emotional sphere and linguistic activity is bilateral: speech impediments and disorders cause fear of speaking which mainly stems from fear of being incomprehensible and rejected by the listener, while negative emotions trigger tension that often makes it impossible to speak freely.
Speech therapeutic stories may present various logopaedic issues. As of today, there are stories which address dyslalia, stutter, premature loss of teeth in children, and short sublingual frenulum. The latest story concerns a different issue – children multilingualism and multiculturalism, since such circumstances often require instruction in pronunciation and as well as emotional support.

Multilingualism & multiculturalism as an inspiring integration

Multicultural environments are now a widespread phenomenon, caused mainly by migrations at continental and global levels. Globalization leads to the intensification of international relations in various areas such as education, entertainment, or work. Therefore, multicultural milieus are formed in educational institutions, workplaces, and families (Bełtkiewicz; 2015). Family is the first, primary, and crucial environment for a developing human being. It is the "oldest institution of social life" (Milerski and Śliwerski; 2000), which equips a person with values, patterns of behaviour, knowledge of the world, and cultural symbols. Thus, a multicultural family has a special mission – "to pursue a balanced and compromise-based model of upbringing which will familiarize the offspring with the traditions, customs, language, and beliefs coexisting in a family environment" (Bełtkiewicz, 2015).

- **Different cultures**

Multiculturalism should be based on respect for the elements of different cultures which coexist in the community. What is important is respect which "conveys a message of symmetry and reciprocity" (Koźmińska and Olszewska; 2007). Multicultural families are marked by "the flow of cultural elements or entire cultural complexes or configurations between different cultures" (Sztompka; 2002) which is referred to as cultural diffusion. This phenomenon has different degrees of intensity and is particularly noticeable in families where spouses come from different cultures, often extremely disparate ones. Sometimes, however, that coexistence is

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disturbed. There is a cultural dissonance, i.e. a kind of "conflict of cultural content (...) imposed on the individual by various cultures he is simultaneously subject to" (Sztompka; 2002). Conflict situations where people disrespect other cultures, undermine beliefs, and ignore traditions are educationally unfavourable. It is also unacceptable to force the child to make unambiguous choices. In multicultural families, children have the right to know the descent, traditions, and beliefs of both parents, provided it occurs in the atmosphere of mutual consent, harmony, and respect. Such knowledge is the foundation of one's identity.

- **Different languages**

The culture of a given community – most often of a nation – together with its other products is represented by language. As a result, the multiculturalism of a family usually entails multilingualism, particularly in children. Raising a child in a multilingual family (typically bilingual) in which parents represent different nationalities, cultures, and languages is a widely considered issue (Bełtkiewicz; 2015). In such families, the superiority of one language over the other is determined by a number of additional factors such as place of residence, which parent usually takes care of the child, the mother's and father's language of communication, closer relations with relatives on the mother's or father's side, etc. Researchers and practitioners are not unanimous about such circumstances, and it is difficult to take the one and only right approach, as each family situation is very individual and different. It is undeniable, however, that a child in a multilingual family should be taken very good care of. From the earliest stages of life, such a child is "immersed" in the coexisting languages. It is necessary to organize the linguistic material and to spontaneously direct the child's utterances. Apart from cultures, the child has the right to learn how to speak the coexisting languages. It is crucial to facilitate this process for the child by providing him with a clear taxonomy of phonetic, phonological, semantic, and syntactic systems of these languages.

- **Different environments**

Apart from the family or home milieu, a child from a multilingual, multicultural family also lives in other environments. Kindergarten and school are additional formalized groups with which the child integrates through regular contacts and cooperation. While for the family, the child's "eclecticism" is something obvious and natural, the educational environment, especially if it is culturally and linguistically homogeneous, may approach the multilingual, multicultural child with a certain degree of curiosity or even mistrust. Being different in terms of behaviour, appearance, beliefs, or language still triggers intolerance, suspicion, and even hostility in many people. The child, who is accepted and loved by the family, may be rejected by kindergarten or school peers. During this period, it is necessary to provide the child with emotional support and to teach him the mechanisms of coping with negative emotions and fear. It is highly recommended to conduct classes to give the child the opportunity to integrate with other children during which the uniform group will get to know the new peer slightly better, while the multicultural, multilingual child will feel accepted by his kindergarten or school community. For this purpose, fairy-tale therapy or drama can be used.

Emotion & language – a speech therapeutic story

The above-mentioned fairy tale therapy is "a therapeutic method which uses a literary text and a text specially designed by therapists for patients who struggle with specific problems" (Molicka; 2011). Speech therapeutic stories are used both as a form of prevention of potential emotionally difficult situations and as a remedy or a therapeutic measure in a problematic situation that has already arisen. Speech therapeutic stories are based on this idea, focusing on children's logopaedic problems that concern both disturbed language communication and the associated negative emotions. It is worth noting that the child might feel the fear on multiple stages: from the moment he/she becomes aware of his/her linguistic imperfection when compared to a peer group to diagnosis and speech therapy after which parents often expect fast and long-lasting results.
Speech therapeutic stories combine the plot of a therapeutic fairy tale which motivates, inspires positive attitude, raises self-esteem, restores faith in success, and reduces fear with a series of logopaedic exercises in order to train and stimulate a specific skill or competence or to eradicate a specific disorder or impediment. These stories are used successfully at the stage of pre-school and early school education (age 3-10). They can be presented in a traditional way, i.e. a therapist reads out or tells a story, using props and hand puppets, or in a more modern way – with multimedia, which facilitate the child's interaction with the fairy-tale world and contribute to the proper reception and imitation, especially when it comes to the moves and arrangements of speech organs presented through animation (Bełtkiewicz; 2014).

- **Protagonists and organic characters**

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The effectiveness of fairy tale therapy is based on the child's identification with the main character, which makes the child imitate and adopt certain proper activities, solutions, attitudes, and behaviours. The protagonist's actions should be rational and possible to implement by the child in his life.
A speech therapeutic story presents not only the activities of a child character (it may be a human, flower, tree, animal, or an abstract creature) but also the activities of an organic character (Bełtkiewicz; 2013), who usually personifies a speech organ to be improved by the child (typically the tongue – the most mobile articulator, whose reduced performance causes a lot of defects and disorders).
Identification can take place on two planes of analogy: in one stage or in two stages.

1st degree analogy

Example: The child compares himself to a little animated tree named Little Willow, while the tongue in the mouth is compared to a little owl, also animated, which lives in a tree hollow and makes it possible for the tree to communicate (single analogy plane, one stage).



Fig. 1. A print screen of a speech therapeutic story titled "Zima – przeszkoda u Wierzbki" ("Winter –Little Willow and its obstacle"), Drabina Rozwoju Foundation, The Aktywne Łącza Multimedia Expert System, www.aktywnelacza.com

/1/ The owl is painting the walls of the hollow – the child (the little listener) is massaging his cheeks with the tongue from the inside – exercises to improve the work of the tongue after frenulectomy.

2nd degree analogy

Example: The child is compared to a little girl named Rózia, who imagines that her tongue is a dinosaur named GADajek, which lives in a cave (the mouth) (double analogy plane, two stages).





Fig. 2. and 3. A print screen of a speech therapeutic story titled "Rrromek i Rrradek" ("Rrromek and Rrradek"), DoDo4Story Publishing House

/1/ GADajek, a figment of Rózia's (and the child listener's) imagination, is painting the cave walls.
/2/ Rózia (and the child listener) is exercising the tongue by massaging the cheeks from the inside with the tip of the tongue – exercises to improve the tongue; preparation before training the "r" sound.

The choice between a single- or double-stage analogy should be dictated by the child's age and imaginative abilities. It is worth emphasizing that some profound developmental disorders prevent the child from discovering the analogy between the character's adventures and his own experiences on his own and thereby make the use of the presented solutions impossible.

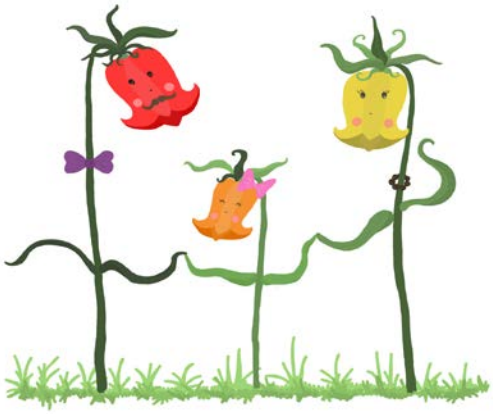
- **Auxiliary characters**

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Other extremely important speech therapeutic story characters include advisers and helpers who support the main character in self-improvement and persistent work. Their presence is intended to accustom the child to a speech therapist (often also to an orthodontist, surgeon, or a dentist, since logopaedic problems are frequently linked to irregularities in the oral cavity and the need for a surgery and/or medical consultations). Systematic practice always ends in success, further reinforced by presenting relatives and friends with the positive results and by sharing the child's new skill with other people in need of the same assistance.

"Little Orange Lily" – colourful bilingualism

As mentioned earlier, a speech therapeutic story may relate to various child logopaedic problems, including difficulties with pronunciation in the situation of bilingualism (especially the sounds that are written with the same letter but differ in pronunciation).



One example is the story called „Little Orange Lily," where the main character Paulinka comes from a bilingual, bicultural (two-colour) family. She is an unusual little flower who can speak thanks to Little Bumblebee buzzing at the bottom of the calyx (analogy with the tongue). Her mother Żaneta is a yellow lily, while her father Cyryl is a red lily, hence Paulinka's unique colour (the combination of her parents' colours). The parents come from different lands and speak different languages – yellow and red (though when dad moved to mum's land, where the family currently lives, he also learned to speak the yellow language correctly).

Fig. 4. Presentation of the main character and her environment, the illustration for the speech therapeutic story titled "Pomarańczowa Lilijka" ("Little Orange Lily"), Biblioterapeuta (1/2015)



Little Orange Lily is required to speak correctly in the yellow language at school and at home and in the red language when talking to her father. In particular, Paulinka is struggling to distinguish between the pronunciation of the "r" sound, which in her mother's language sounds like the Polish alveolar "r", while in the father's language like the French dorsal/uvular "r".

Paulinka receives help from her aunt Brygida (also from a bilingual, bicultural family – red-and-black), who is a relative from the father's side, a teacher, and a translator.

Fig. 5. The appearance of the advisor-character, the illustration for the speech therapeutic story titled "Pomarańczowa Lilijka" ("Little Orange Lily"), Biblioterapeuta (1/2015)



The aunt explains the difference, presents the place of articulation for both sounds, and recommends exercises.

Examples:

Little Bumblebee is licking off the pollen from behind the upper petals.
With the mouth wide open, the child is "brushing" his upper teeth from the inside with the tip of the tongue.

Fig. 6. Articulatory motor exercises – front of the oral cavity, the illustration for the speech therapeutic story titled "Pomarańczowa Lilijka" ("Little Orange Lily"), Biblioterapeuta (1/2015)

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Lying flat, Little Bumblebee withdraws to the bottom of the calyx by moving his rump back. With a slightly open mouth, the child tries to move the tongue as far back as possible.

Fig. 7. Articulatory motor exercises – back of the oral cavity, the illustration for the speech therapeutic story titled "Pomarańczowa Lilijka" ("Little Orange Lily"), Biblioterapeuta (1/2015)



Little Orange Lily learns to differentiate the sounds and masters the articulation of 'r' in both languages.

Paulinka's baby brother is born, who – while learning how to speak – may experience similar difficulties like his big sister. Luckily, Paulinka comes to the rescue by demonstrating the outcome of the exercises – her new skills.

Fig. 8. Success, presentation of the results, helping her little brother, the illustration for the speech therapeutic story titled "Pomarańczowa Lilijka" ("Little Orange Lily"), Biblioterapeuta (1/2015)

This speech therapeutic story has been used successfully when working with Polish-French children in order to develop the correct pronunciation of the 'r' sound and help them integrate with peers. A family tree with indications of the impact of languages, cultures, and places in the child's family is often created in order to strengthen the child's identity.

The solution has garnered favourable opinions among linguists, cultural experts, and teachers. Justyna Budzik wrote: ">>Little Orange Lily<< is a valuable text, which will not only encourage bilingual children to do logopaedic exercises but also will guide them on how to find the way to integration with peers (...) and use their cultural distinctiveness as an asset" (Budzik, 2015). Magdalena Cebula emphasized the phonetic aspect: "The difference between the Polish hard and strong [r] and the French soft and voiced [ʀ] stems from different places of articulation (...) Exercises to help identify and pronounce correctly the two sounds are all the more important that [r] is one of the most difficult speech sounds (...) The situation becomes even more complicated in the case of children from bilingual families. Different production of this sound in the second language used by the child may lead to a mental block which will prevent the child from using this language. Phonetic stories, such as >>Little Orange Lily<< may be a great help" (Cebula; 2015). Werona Król-Gierat pointed out that "The construction of the story, which enables the child to identify with the main character – a lily named Paulinka, who has petals of a different colour and lives in the world of two systems of communication – can be a wonderful tool to support the linguistic and affective development of children who are experiencing dilemmas of identity or adaptation difficulties" (Król-Gierat; 2015). Adam Krzyk noticed that "The publication (...) is a valuable text, especially in the Europe of today – still during the process of uniting, where multiculturalism (and the associated developmental difficulties which are an increasingly common research field for psycholinguists) should not be perceived as a distant phenomenon but as part of the reality around us" (Krzyk; 2015).

SUMMARY

Multilingualism and multiculturalism is a universal phenomenon. Such families need to pay close attention to the child's development and implement a coherent, compromise-based, and harmonious upbringing model. In addition, children from multilingual and multicultural families require special care from teachers, psychologists, and speech therapists in terms of emotional and linguistic development. A speech therapeutic story fully caters for the contemporary needs, as its universal concept can be transferred to different languages in order to motivate children to play and at the same time improve their speech and emotional self-control. A speech therapeutic story significantly improves the child's language communication and his well-being.

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EMBODIMENT: A NEW PERSPECTIVE FOR THE TEACHING AND LEARNING

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ABSTRACT

Purpose of this study is to investigate and analyze the Embodiment potential for teaching and learning. Embodiment is a interesting and innovative topic that new pedagogical models, as Enactivism, Neurodidactic, Bio-education assume. These models, born from the contribution of neuroscientific research to education science, look at learning from a new perspective and believe that all knowledge, including those that involve a higher degree of abstraction, is embodied and derived from the processing of body experiences. According to theory of Embodiment there is no split between mind and body; the body in action is the main device through which, realizing experiences, we develop and produce learning; all learning is embodied in actions located in a given environment and sensory and motor processes are fundamentally inseparable. This means that in classroom practice abstraction and generalizations can produce effective learning only if they were built from the experience of the world body. The action, that becomes a real learning experience, can be directly accomplished by the learner but can also be observed by the teacher. The discovery of mirror neurons, adjacent to motor neurons, showed that areas of the brain responsible for movement already begin to take action when we see someone make a certain gesture.

Embodiment can help revolutionize teaching and learning suggesting a new methodology for the transmission of knowledge directed to make learning more effective and based on the testimony from the teacher of concrete and direct experience what must be learned.

INTRUDUCTION

The increasing complexity of contemporary society imposes to the figures in the educational agencies to identify tools to capture the attention of children and young people, to get them involved in school life through a new kind of school. In the school practice, we realize that they are facing a real educational emergency for the difficulties that the school meets in the effective transmission of the culture and education of the new generations. It highlights the growing need to overcome the traditional teaching building new learning environments designed to ensure the development of skills needed to integrate into society. This objective can be effectively achieved through the active involvement of young people in forms of learning that act specifically on motivation and emotions. Neurobiological research and the phenomena of learning can provide important answers to the need for a new teaching.

Research into the functioning of the human brain, particularly during the past decade, has greatly enhanced our understanding of cognitive behaviours which are fundamental to education: learning, memory, intelligence, emotion (Byrnes, J.P., & Fox, N.A.,1998)

The most recent neurological studies have shown how mental processes are the product of the organization and function of the nervous system. This organization and functionality are built within the exchange relations that the nervous system has with the environment. This emphasizes the role of the contributions of cultural diversification and differentiation biological identity and mental health of each individual subject. The brain structures and mental processes, in fact, occur characterized by an extreme variety and changeability, a variety and changeability that individuals differ not only among themselves, but also the individual at different times of their lives. The variety of brain organization from one subject to another, and modifiability of the cerebral structures of the individual subject is closely linked to the learning process.

The brain has been shaped by evolution to adapt and re-adapt to an ever-changing world. In other words, the brain exists to learn, remember, and apply what has been learned. Learning and memory are dependent upon modifications of the brain's chemistry and architecture in a process called "neural plasticity." Neural plasticity reflects the ability of neurons to change both their structure and relationships to one another in reaction to experience (Buonomano & Merzenich, 1998; Trojan & Pokorny, 1999). We know that animals raised in enriched and more challenging environments have larger brains, longer neurons, and more synapses (Diamond et al., 1964; Guzowski et al., 2001; Kempermann et al., 1998; Kolb & Whishaw, 1998). We also know that when adult humans engage in exploration, education, and challenging jobs, their brains become more complex, robust, and resistant to age-related diseases (Kessler et al., 2003; Scarmeas et al., 2006). Teachers use their personalities, interpersonal skills, and teaching methods to create enriched physical, conceptual, and social environments that stimulate neural plasticity, enhance brain development, and optimize learning.

Brains grow best in the context of supportive relationships, low levels of stress, and through the creative use of stories. While teachers may focus on what they are teaching, evolutionary history and current neuroscience suggest that it is who they are and the emotional environment in the classroom they are able to create that are the fundamental regulators of neuroplasticity. Secure relationships not only trigger brain growth, but also serve

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emotional regulation that enhances learning. A low level of stress and arousal—where the learner is attentive and motivated to learn—maximizes the biochemical processes that drive neuroplasticity. The activation of both emotional and cognitive circuits allows executive brain systems to coordinate both right and left hemispheres in support of learning, affect regulation, and emotional intelligence (Ahissar, 1992).
It is becoming increasingly evident that facial expressions, physical contact, and eye gaze connect us in constant communication exchanges with those around us. It is within this interpersonal matrix that our brains are built, rebuilt, and regulated. A teacher's supportive encouragement properly balanced with an appropriate level of challenge activates dopamine, serotonin, norepinephrine, and endorphin production at levels conducive to learning (Cazolino, 2013). Through these and other biochemical processes, teacher-student attunement creates states of mind and brain that make students better able to incorporate, recall, and use new information.

NEUROSCIENCE AND PEDAGOGY IN ITALIAN PANORAMA

In the Italian pedagogy and didactic panorama some lines of research based on neuroscientific knowledge learning are born.
Eliana Frauenfelder introduced the issue of Bio-education in the final decades of the last century. It highlights the need for studies in education to have a reference to the biological processes that have an impact on the learning mode, and on the results of it (Frauenfelder, 1994). Bio-educational research, originated from Eliana Frauenfelder's studies on learning as "the multiplicative converging centre, to which the contributions of all those disciplines whose competence is always intertwined with a specii cally pedagogical one can be brought back" (Frauenfelder, Santoianni, 2002). Specifically, bio-education paved the way to the scientific establishment of the principle educability, creating "an alliance" between biology and pedagogy "as a result of sharing some degrees of epistemological compatibility and of partial reflection" (de Mennato, 2006).
The research team of the University of Salerno, led by Maurizio Sibilio, is investigating, analogically and biologically, the possible didactical use of simplexity's properties and principles shown by the physiologist of perception, Alain Berthoz.. Simplexity is a property of living organisms: "life has found solutions to simplify complexity. Nor does it evoke the utterly remarkable ability of living creatures to create borders delimiting closed spaces, such as the cell and the body itself. These solutions are indeed simplifying principles that reduce the number or the complexity of processes.They make it possible to rapidly analyze information or situations, taking into account past experience and anticipating the future-which helps to grasp intention-all the while respecting the complexity of reality" (Berthoz, 2011, X-XI).
Pier Cesare Rivoltella and his research team (2012) at CREMIT, University of Milan, showed the importance of picking the effects of cognitive neurosciences in the educational context to develop innovative and sustainable didactics on the learning. He speaks of Neurodidactic to point out the contribution in the analysis of the processes that governs learning production and the strategies that they require.
Very close to this line is the Enactivism that starting from Varela's studies, it analyses complex systems, showing the circularity of action and knowledge and the brain-body-artifact-world sequence. Pier Giuseppe Rossi research team (2011) is analysing the fall out of Varela's systemic method in the didactic field.
These researches have many elements of tangency including the approach based on action and the important tenet that cognition is embodied. In this vision, they argue that all aspects of cognition are shaped by aspects of the body. The aspects of cognition include high level mental constructs (such as concepts and categories) and human performance on various cognitive tasks (such as reasoning or judgment). The aspects of the body include the motor system, the perceptual system, the body's interactions with the environment (situatedness) and the ontological assumptions about the world that are built into the body and the brain.

THE EMBODIED COGNITION THEORY

Barsalou (2008) proposed the theory of embodied cognition, indicating that the nature of the human mind can be largely determined by the form of the human body. Barsalou argued that embodied cognition is all aspects of cognition that are shaped by surroundings, simulation, situated action, and aspects of the body. Embodied cognition is an essential research topic in social and cognitive psychology, covering issues such as social interaction and decision-making (Borghi and Cimatti, 2010). The aspects of the body include the motor system, the perceptual system, the body's interactions with the environment and the ontological assumptions about the world that are built into the body and the brain (Wilson, 2002). Much research concerning embodied cognition emphasizes the importance of body interactions with the environment. For example, Macedonia, Muller, and Friederici (2011) demonstrated that gestures accompanying speech have an impact on memory for verbal information in the speakers' mother tongue and foreign language learning. That is, meaningful and iconic gestures could help learners retain the verbal learning material.
The embodied cognition perspective encompasses a diverse set of theories that are based on the idea that human cognitive and linguistic processes are rooted in perceptual and physical interactions of the human body with the world (Barsalou, 2008; Wilson, 2002). According to this perspective, cognitive and linguistic structures and processes—including basic ways of thinking, representations of knowledge, and methods of organizing and

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expressing information—are influenced and constrained by the particularities of human perceptual systems and human bodies. Put simply, cognition is shaped by the possibilities and limitations of the human body.
By using the term embodied we mean to highlight two points: first that cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context (Varela, 1992).

MIRROR NEURONS AND LEARNING

The action, that becomes a real learning experience, can be directly accomplished by the learner but can also be observed by the teacher. The discovery of mirror neurons, adjacent to motor neurons, showed that areas of the brain responsible for movement already begin to take action when we see someone make a certain gesture.
In the early 1990s, mirror neurons were discovered by a group of scientists from the University of Parma in Italy, lead by Giacomo Rizzalotti. First observed in a monkey's ventral premotor cortex, they were soon found to be present in human brains as well. Mirror neurons' defining functional characteristic is that they are activated when a motor act is performed and also when it is witnessed. Mirror neurons enable us to understand, interpret and imitate observed actions and to predict their results intuitively. They inform us about other peoples' mental and physical condition and can change our own by mirroring our counterpart's (Bauer 2009). Mirror neurons are responsible for imitation, empathy, and the development of language in humans. Connected directly to both the visual and auditory cortex, they translate observed (external) behavior into experienced (internal)
neural firings in the premotor cortex. In other words, for the mirror neurons, there is no difference between observation and execution.
From birth, mirror neurons enable children to communicate with their environment by imitating actions they witness. Although imitation is not an essential part of communication anymore when speech is acquired, mirror neurons allow us to keep imitating facial expressions, sentiments and postures subconsciously throughout life, thus facilitating interpersonal relationships (Bauer 2009:54). Nevertheless, mirror neurons have so far received little attention in educational theory. As teaching always involves interpersonal dealings, however, they play an important role in teacher-student-relations and students' behavior in classroom.
Mirror neurons may cause humans to experience internal representations of the body states they observe as if they were doing similar actions or experiencing similar emotions or sensations as another human they observe (Buccino et al., 2004).

CONCLUSIONS

The claim about embodiment in cognition represents a crucial step toward the development of a new trend of research in cognitive sciences, where the cognitive process is investigated without abstracting from the conditions in which it takes place.
Much of Western education is distinctly disembodied with students being asked to sit still and the teacher is often rooted behind a lectern or glued to the keyboard to move the PowerPoint presentation forward. The body/mind distinction is clearly expressed in what we expect from schools and universities in that they appeal to minds but often disregard bodies. The "embodied experiences of being and doing" (Matthews, 1998, p.327) are so far still a fairly under-researched area in educational research. The field of teaching and learning seems to be dominated by cognitive theories that ignore or at least neglect the bodily experiences of teaching and learning.
The statement that "the body matters" for cognition brings forth relevant consequences for the conception of the body and the mind and contains indications for research on the loop between perception, cognition, and action.
The statement that "the body matters" for cognition is indeed quite widespread in circles that oppose the classical computationalist-representationalist approach to cognition.
This claim can be understood as a statement relative to the role played by the physical structure of the body in cognitive, perceptual, and motor performances and acquisitions. However, the conception of the body as simply a physical entity is only one step toward a theory of the co-determination of the organism and the world that is proposed by Varela. As a medium of the interaction with the world, Varela conceives the body as a structured set of behavioral repertories, of motor and perceptual capabilities and activities. Embodiment goes beyond the physical structure of the organism since it is principally characterized by the sensorimotor structure.
Nemirovsky (2009) claims that the processes of thinking and understanding are constituted by perceptuo-motor activities, e.g. bodily actions, gestures, manipulation of materials or artefacts, acts of drawing, even eye motions, gazes, tones of voice, and facial expressions.
Researchers who work within the embodied cognition perspective make a variety of specific claims (see Barsalou, 2008, and Wilson, 2002, for reviews). Chief among them is the claim that cognition is based in perception and action. This holds true even for offline cognition—the cognitive activities that occur in the absence of relevant environmental input. Many cognitive tasks are accomplished by bringing sensory and motor resources to bear, even when the task referents themselves are far removed in space and time (Wilson, 2002). Examples include the use of mental imagery (Shepard & Metzler, 1971), the simulation of actions during

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language comprehension (Glenberg & Kaschak, 2002), and the construction of mental models during reasoning (Johnson-Laird, 1983) and reading comprehension (Glenberg, 1999).
A related set of claims is that cognition occurs in real-world environments, is used for practical ends, and exploits the possibility of interacting with and manipulating external props (Nathan, 2008). These connections to the physical environment can serve to ground novel or abstract ideas or information in the physical world. Grounding describes a mapping between an abstraction and a more concrete, familiar referent, such as an object or event, that facilitates meaning making (Nathan, 2010).
Findings in the cognitive neurosciences can be interpreted to suggest possible implications for learning, cognitive development and pedagogy in educational settings. As cognitive neuroscience advances our understanding of the very basics of learning, so there is need for educationists to appropriate this research with regards to implications and applications for teaching in educational settings, especially school classrooms (Geake, 2000)
In fact, the most important innovation comes in a better understanding of how the brains of students and teachers function, the process through which they learn and become engaged. Only by increasing our knowledge of this process can we really keep improving the way we teach. That means taking in new insights in psychology, behavioral economics, cognitive sciences and neuroscience to tailor both the content and the format of what is taught.
A student who is not motivated and will not engage in any successful learning process is likely to miss a lot. And the same goes with teachers. Recent work in the neuroscience of motivated cognition and its interplay with skills inform us on how we can more effectively motivate teachers and students.
Our knowledge of how the brain memorizes new information is crucial in the design of lessons. Investigating the mechanisms of memory consolidation is an exciting topic of research in cognitive neuroscience that should be fully integrated in designing teaching content and strategies.
But training the brain without thinking about the rest of the body would be a big mistake. Embodied cognition, the idea that the mind is not only connected to the body but that the body influences the mind, must be central to designing teaching content.
The way our entire body reacts in the classroom, and the effect that has on how our brain learns is key. For instance, posture, movements and gestures matter a lot more than most people think in the learning of a foreign language, as they do on the dynamics of bonding between students and the teacher.
we are just at the beginning of attempting to apply neuroscience to education, it is hard to deny that the evolution and development of the brain is a potential treasure trove of information about where we have come from, what we are capable of, and how we learn. However, this knowledge must be well understood, integrated with what we know about social and emotional development, and made culturally relevant.
The knowledge of the processes that are activated with learning can be important for those who work a training action to ensure educational projects that consider learners as individuals who, in their individuality and specificity, requiring understanding and integrating affective and relational.
From a neurobiological perspective, the position of the teacher is very similar to that of the parent in building a child's brain. Both can enhance a child's emotional regulation by providing a safe haven that supports the learning process. This "holding environment" optimizes neuroplasticity, allowing for new learning (Kegan, 2000). Among the many possible implications of this finding for the classroom is the fact that teacher-student attunement isn't a "nice addition" to the learning experience, but a core requirement.
Keep in mind these findings and their neuro-psycho-physiological bases of notevole may be important for an educator to direct, manage, analyze the different situations of learning and teaching.
The pedagogy can and should benefit from the neuobiological discoveries, assuming the task of understanding and enhancing the developmental ability of the brain - mind in this way you can plan a training strategy that uses the environment to allow for maximum development potential and better mental health.
The embodiment theory can help revolutionize teaching and learning suggesting a new methodology for the transmission of knowledge directed to make learning more effective and based on the testimony from the teacher of concrete and direct experience what must be learned.

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A NEW PROBLEM IN THE ACCESSION OF TURKEY TO THE EUROPEAN UNION: MEDITERRANEAN SECURITY AND ILLEGAL IMMIGRATION

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A new problem in the Accession of Turkey to the European Union: Mediterranean Security and Illegal Immigrations

A major obstacle on Turkey's full membership of the European Union has been overcome, after Turkey obtained the status of candidate country in December 1999 in Helsinki, the capital of Finland.

Then it was followed by the start of the negotiations in October 2005.

While negotiation process continues, illegal immigrations of 3rd country nationals to the EU and the realization of this through Turkey and the Mediterranean Sea, especially in the increasing extent in the last 8-10 years, led the emergence of a new problem in Turkey-EU relations.

Keywords: European Union, Turkey, Mediterranean Sea, immigrant,negotiations

INTE 2015

A NEW SCIENCE APPROACH TO REALISM: TEACHING PRE-MODERN OTTOMAN-TURKISH LITERATURE ON HUMAN BASICS

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Through the long 19th century and Republican era, Turkish scholars and literati discussed and argued the criteria of teaching literature (especially pre-modern Ottoman-Turkish literatures) to express their understandings of modern Turkish identity and modernity as well. The aim of this presentation is to suggest an alternative approach to teaching pre-modern Turkish "literatures" by using 18th century philosopher Giambattista Vico's thoughts regarding human consciousness. This research draws upon the analysis of well-known 15th century gazel ("döne döne") of Necati Beg in order to understand Men's relationship with their worlds, social and natural. The goal is to show that this new approach of "realism" should be tried out.

Keywords: Giambattista Vico, "New Science", pre-modern literatures, Ottoman-Turkish literature, human conciousness, realism, modernity.

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A PEDAGOGICAL ANALYSIS OF AHMED ADNAN SAYGUN'S İNCİ'S BOOK

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ABSTRACT
This study aims to analyze of the work İnci's Book, composed by Turkish composer Ahmed Adnan Saygun for solo piano in 1934, with a pedagogical perspective. Firstly, to emphasize the importance of the study, the paper provides information about the developments in the field of music in the early years of the Republic of Turkey, first generation composers, called "The Turkish Five", including Ahmed Adnan Saygun, as well as Ahmed Adnan Saygun's life and works. The work, İnci's Book, is analyzed using the content analysis method. The findings obtained as a result of the analysis are expressed in frequencies and percentages. İnci's Book includes seven pieces. At the end of the study, it is found that the pieces which included in İnci's Book are appropriate for different levels of piano education.

Keywords: Ahmed Adnan Saygun, İnci's Book, piano pedagogy, pedagogical analysis, piano education, Turkish Five.

INTRODUCTION

Culture and education of the Republic of Turkey, founded in 1923, has been nationalistic. Educational reforms, having been developed towards this direction, were initiated by virtue of the Law on the Unification of Education (Tevhid-i Tedrisat), enacted in 1924. It was thanks to this law that the principles of secular education and teaching were unified, and the curriculums were prepared accordingly. Music lesson was included in the curriculums (Say, 2003). Musical education was proceeded to the Republican era with a limited, but also definite background, which had been maintained throughout the Ottoman Empire era. Not only the musical education in the Republican era was depended to this background, but it was further based on the respective thoughts and opinions of Mustafa Kemal Atatürk in particular (Uçan, 2005). While intending to found a state based on the concept of Turkish nation after the fall of the Ottoman Empire, Mustafa Kemal Atatürk further aimed to create the inventive art of the new state. As being the branch of art, which has affected the peoples in the fastest way throughout history, music was ranked the first among the reforms of Atatürk. It was prescribed to create a music, which was originated from Turkish folk music, but was also giving voice to a contemporary and universal language (İlyasoğlu, 2007).

Atatürk's view on Turkish national music may be summarized as follows: "Turkish society is in a great, fast, and deeply-rooted change. Ottoman music is not inspiring enough to give voice to these great changes that Turkish Republic has been undergoing. The criterion for the change of a nation is to grasp, and comprehend the change in music. What we need is a new music. This music is to be a polyphonic music, originating from our folk music. It is essential to collect the grand phrases and pronunciations, which express the fine emotions and thoughts of the nation, as soon as possible, and to refine them according to the latest general music rules. It is only by this way that Turkish national music may be elevated, and claim its place in the universal music (Uçan, 2005). Institutionalism gained ground rapidly in parallel with the new cultural policies. Having Darülelhan (House of Melodies) reopened in Istanbul in 1923 together with the western music department, Musiki Muallim Mektebi (School of Music Teachers) was opened in Ankara in 1924 in order to bring up music teachers for secondary education. Having Muzıka-i Hümayun (Royal Band) brought from Istanbul to Ankara in 1924, and was renamed as "Riyaset-i Cumhur Musiki Heyeti" (presently known as Presidential Symphony Orchestra). Darülelhan was turned into Conservatory in 1926, and started rendering western music education only thereafter (presently known as State Conservatory of Istanbul University). During this period, music ceased to be a mere means of joy, and advanced towards the domain of creativity based on free thinking (Say, 2003).

Youngsters were started to be sent to European countries in order to undergo music education as of the year 1924 by virtue of Atatürk's directive. After having been undergone music education in various European countries, Ekrem Zeki Ün, Ulvi Cemal Erkin, Necil Kazım Akses, Hasan Ferid Alnar, and Ahmed Adnan Saygun returned to Turkey, and together with Cemal Reşit Rey, having been undergone music education in Europe by different means, and returned back to Darülelhan as music teacher in 1923, they altogether formed the first composer generation of the Republican era (Refiğ, 1997).

In 1926, teachers in Darülelhan were sent to Anatolia, and did their parts of surveys, and having collected and arranged the folksongs, and turned them into a reference guide. During this period, Ministry of National Education started to send skillful music students to the musical centers abroad. In the year 1935, Paul Hindemith was invited to Ankara for the purpose of reorganizing not only the musical education institutions, but also the

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musical life in Turkey as well. Thanks to his mediation, such experts, named Ernst Praetorius, Carl Ebert, and Eduard Zuckmayer also came to Ankara. Ankara State Conservatory was established in the year 1936. Bela Bartôk came to Turkey in the same year, and he carried out ethno-musicological studies with Turkish composers namely as Ahmed Adnan Saygun, Ulvi Cemal Erkin, and Necil Kazım Akses (İlyasoğlu, 2007).

Turkish Five

The first generation in the Contemporary Turkish music, known as "Turkish Five" was composed of composers who had been listening to the traditional Turkish music during their childhood, then got to know polyphonic music by way of education, and all of whom applied the knowledge they had attained in the European countries they had been in their own works. Turkish Five is composed of Cemal Reşit Rey (1904–1985), Hasan Ferid Alnar (1906–1978), Ulvi Cemal Erkin (1906–1972), Ahmed Adnan Saygun (1907–1991), and Necil Kazım Akses (1908–1999). These composers contributed in all dimensions to the music art in the Republican Turkey to gain its identity in terms of global criteria. They served as educator, incorporator of musical institution, instrument master, and maestro. Turkish Five did not carry out collective studies under the roof of a certain institution. The common aim in their individual activities was to make compositions in the western form and technique based on the modal, melodic, and rhythmic structure of Turkish music (İlyasoğlu, 2007).

The element of folklore was adopted as a new dimension of music in the 20th century music. Colors and rhythmic texture of the folk music brought a new dimension in the new music (İlyasoğlu, 2007). Turkish folk melodies and the modal character of Turkish music, as well as its structure within *aksak* (halting) rhythms started to draw the attention of the musicians. Introductory studies of the first generation of Turkish composers involved the conversion of not only the melodies and rhythms of Turkish folk music in monophonic structure, but also the modal structure and mystic atmosphere of the classical Turkish music directly into polyphony, and attainment of a system getting closer to European music forms. Collection and notation of folk melodies, and their examination and assessment, too, altogether constituted a significant source (İlyasoğlu, 1989). While clearly conveying the traditional elements, the first generation of composers was under the influence of the musical movements from the foreign countries where they had been taught (İlyasoğlu, 2007).

First polyphonic works, having pursued Atatürk's views with regard to national music, emerged mostly in the form of the polyphonic play of the folk melodies in the major composing techniques. Unique works were composed by way of applying folk melodies and the traditional elements of the modal music therein. Among these introductory works, in which French impressionist writing technique was used, may be listed as Cemal Reşit Rey's "*On iki Anadolu Türküsü*" (1926) and "*Enstantaneler*" (1931), Ulvi Cemal Erkin's "*Beş Damla*" (1931) ve "*Köçekçeler*" (1943), Ahmed Adnan Saygun's "*İnci'nin Kitabı*" (1934), and Necil Kazım Akses' "*Minyatürler*" (1936) (Tunçdemir, 2007).

Works of Contemporary Turkish Music, which have not only been derived from the values of traditional Turkish music, but also benefited from the accumulation of the international music, reveal the unique perceptions of their composers. The applicable sound system in this sort of works is not traditional, but of international validity; the structure is not monophonic, but polyphonic; sense of composition is not local-regional-denominational, but national and universal with its dimensions comprising those aforementioned. In these works, metrics, forms, and modal series of Turkish music have been applied in a contemporary perception (Sun, 2007).

Life of Ahmed Adnan Saygun

Ahmed Adnan Saygun receieved his first musical training in İzmir, studying privately with İsmail Zühtü. At 13 years old he became the piano student of Rosati. In 1922 he became a student of Macar Tevfik Bey, and in the meantime he studied harmony and counterpoint on his own. During the years 124-1925 Saygun taught music in primary schools in İzmir and in 1926 he transferred to the Lycêe of İzmir. Earning the scholarship of the Turkish Ministry of Education in 1928, he went to Paris to study music. In Scola Cantorum he studied harmony and counterpoint under Madame Eugêne Borrel , organ music under Edouard Souberbielle and Gregorian chant under Amedêe Gastoue. Returning home in 1931, Saygun was appointed to teach theory and counterpoint in the School for Music Instructors, in Ankara. In 1934 he conducted the Presidential orchestra for a year and beginning with 1936, for three years he taught theory at the Conservatory of İstanbul. In the same year, the celebrated Hungarian composer Bela Bartok visited Turkey and Saygun joined him in a tour of Anatolia. They collected many folk songs from Adana, and transferred them into conventional musical notation (İlyasoğlu, 2007).

In 1939 he was appointed inspector of the public culture centers, which were established during the early Republican era. As an inspector, Saygun traveled widely throughout Turkey, learning a great deal about the local rhythmical and melodic structure of the music of different districts. In 1940 he founded the Voice and String Union, where he organized the choral music of different epochs as well as Turkish compositions. In 1955 he

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became one of the founders of the Folkloric Research Institute in Ankara. Between the years 1946-1972, Saygun taught composition at the Ankara State Conservatory. He also taught the structure of modal music and served as the head of department. Among his administrative positions we may note that he worked in the Ministry of Education as a member of the Administrative Board of TRT (1972-1978). Until his death he continued to teach ethnomusicology and composition at the Istanbul State Conservatory of Mimar Sinan University. In 1947 he was elected to the International Folk Music Council as an executive member. He was honored with the Palmes Academique Medal (France, 1949); Frederich Schiller Medal (Germany, 1955); Stella Della Solidarita (Italy, 1958); Jean Sibelius Composition Medal of the Harriet Cohen International Music Award (England, 1958); Bela Bartok Diploma (Hungary, 1981); Pro Cultura Hungarica Prize (Hungary, 1986). In 1948 he received the İnönü Award; in 1971 he was named a state Artist of Turkish Republic; in 1978 Ege University and Anadolu University gave him honorary doctorates; in 1981 he received the Atatürk Art Prize; in 1984 he was awarded the Grand Prize by the Ministry of Culture and Art; he was honored by the Osman Hamdi Award of Mimar Sinan University on its centennial anniversary, and Sevda Cenap And Foundation's Gold Honor Medal of 1990 (İlyasoğlu, 2007).

Works of Ahmed Adnan Saygun

Saygun did a great deal of research in the field of ethnomusicology and his studies on pre-modal and modal music have illuminated polyphonic compositions in Turkey. He carried out studies comparing traditional Turkish modes with other modal music such as Persian and Greek. His compositions are in a modal structure. He has carried out research into Anatolian folk music, Asian songs, and songs from Urals, as well as Hungarian and Finnish folk songs, examining their pentatonic structure and other musical characteristics (İlyasoğlu, 2007).

One of his main principles was taken from Atatürk's aim of achieving an international outlook in music, which is at the same time national. He believed that art may develop without breaking away from its roots. He wrote two operas in 1934, the first examples of polyphonic opera in Turkey. His later vocal works reflect the tribulations of those in search of truth. He was very much concerned with the correct usage of the Turkish language in all of his vocal works. He was inspired by folk tales as much as folk songs. He used Islamic hymns and also themes from epics. His conception of modal harmonization influenced the technique of the following generations (İlyasoğlu, 2007).

The copyright of some of his works is held by SACEM, while some of them belong to Southern Music Publishing Co., New York and some to Peer Musikverlag, Hamburg. His works are preserved by Bilkent University (İlyasoğlu, 2007).

Piano Works of Ahmed Adnan Saygun

The works having been composed by Ahmed Adnan Saygun for the piano are listed chronologically as follows (İlyasoğlu, 2007):

- Op. 2 Suite (1931)
- Op. 10/a İnci's Book (1934)
- Op. 15 Sonatina (1938)
- Op. 25 From Anatolia (1945)
- Op. 42 Small Pieces (1950-1952)
- Op. 38 Ten Etudes on Aksak Rhythms (1964)
- Op. 45 Twelve Preludes on Aksak Rhythms (1967)
- Op. 47 Fifteen Pieces on Aksak Rhythms (1971)
- Op. 58 Ten Sketches on Aksak Rhythms (1976)
- Op. 56 Ballade (for two pianos) (1975)
- Op. 73 Poem (for three pianos) (1986)
- Op. 76 Piano Sonata (1990)

İnci's Book

İnci's Book composed in 1934 for Saygun's friend Prof. Veli Saltık's daughter who is named "İnci". The composer dedicated the work to his teacher Madame Eugêne Borrel. The work includes seven pieces: (1) İnci, (2) Afacan Kedi (Playful Kitten), (3) Masal (A Tale) , (4) Kocaman Bebek (The Giant Doll), (5) Oyun (A Joke), (6) Ninni (Lullaby), (7) Rüya (A Dream). İnci's Book describes various images in the life of a child from her/his eyes such as Debussy's *Children's Corner*. The work recalls Bartok's *For Children* and *Mikrokosmos* because of consists easy pieces for children. *Piano Quarterly Newsletter* (1953) chose İnci's Book as one of the top works published for young pianists. *Notes* (1952) mentioned that this work has high musicality and appropriate for

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children (Aracı, 2007). İnci's Book has been published by the "Jorj. D. Papajorjiu" in İstanbul, "Southern Music Publishing Co. Inc." in the United States of America (1952) and "Müzik Eğitimi" in Ankara (2011).

İnci's Book is a modal work which includes pentatonic scale and Baroque composing techniques (diminution, imitation, inversion). Pedagogical factors affected to compose of the work. Saygun composed most of the pieces in two parts. Left hand parts are written in treble clef at three pieces of the work (1, 2, and 3). Each piece takes between half a minute and two minutes. Also each piece has attractive titles (Aracı, 2007). İnci's Book is appropriate for first and second grades of piano education according to Gökbudak's (2013) eight graded approach. At the same time it is appropriate for third and fourth grades of piano education according to Pamir's (1987) eleven graded approach. According to *The Piano Teachers' Newsletter* (Eastern New Mexico University, 1956; Aracı, 2007) difficulty of the work is as follows: (1) Early Advanced, (2) Intermediate, (3) Late intermediate, (4) Intermediate, (5) Intermediate, (6) Easy, (7) Early Intermediate. Ninni (Lullaby) is among the most frequently performed works in the music departments in Turkey (Aydıner, 2008).

In the first piece, *Inci*, the piano student practices to play right hand melody over a left hand formed of successive eighth notes. In *Playful Kitten*, the student studies finger turns. In the slow and mysterious third piece, *Tale*, the use of symmetrical and asymmetrical metric structures along with more complicated rhythmic patterns is introduced to the student. *The Giant Doll* begins with both hands playing the same melody and is good for synchronization of both hands. It also introduces use of a larger range in the left hand. In *A Joke*, frequent meter changes between duple, triple and quadruple meters and use of moving melodic lines in both right and left hands are noteworthy. In *Lullaby,* the left hand part is beneficial for working on finger turns and octave stretches. *Dream* also provides a good left hand exercise with its broken chords larger than an octave. In *Inci's Book*, Turkish folkloric elements are not as noticeable as in the previously discussed compositions, but, A. A. Saygun uses pentatonic scales which are strongly rooted in Turkish folk songs, thus giving a different flavor to each composition. With their different but appealing sound, these short pieces are certainly good additions to the repertory of the younger pianist (Serdaroğlu, 2011).

METHOD

Ahmed Adnan Saygun's work named *İnci's Book* comprises the target population of this study. This work is consisted of seven pieces. Content analysis was made in this study, in which general screening model was applied. Categorical type of content analysis was preferred as being suitable to the purpose of this study. Categorical analysis in general means to be the division of a specific message into units at first, and having these units grouped in categories in accordance with predetermined criteria thereafter. In the categorical analysis, frequency of the categories is determined. The intensity and significance of a specific element may thereby be understood (Tavşancıl & Aslan, 2001). In accordance with the purpose of this study, Ahmed Adnan Saygun's work named *İnci's Book* is analyzed by way of splitting it into eight categories, namely as *technique, meter, note value, tempo, harmonic/polyphonic structure, dynamic, character, difficulty level*.

FINDINGS

In this section, Ahmed Adnan Saygun's work named *İnci's Book* is analyzed by way of splitting it into eight categories, namely as *technique, meter, note value, tempo, harmonic/polyphonic structure, dynamic, character, difficulty level.* The data regarding these categories were sorted out in consideration of the features being possessed by each and every song contained in the respective work, and presented in tables. The attained data were assessed in view of piano pedagogy.

Table 1: Analysis of the Playing and PedalTechniques in Ahmed Adnan Saygun's work named *İnci's Book*

TECHNIQUE		**THE PIECES CONTAINING THEM**	**f**	**%**
Playing Technique	Legato	1, 2, 3, 4, 5, 6, 7	7	100
	Broken Chord	7	1	14

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Pedal Technique	Damper pedal	7	1	14

Reviewing the table with regard to the techniques in the work named *İnci's Book*, the pieces within the work involve *legato* technique by 100%. In view of the table with regard to the other techniques involved in the work named *İnci's Book*, the pieces within the said work involve *broken chord* by 14%, *damper pedal* by 14%. It may thereby be said that, this work may to a large extent be effective on bringing in the *legato* technique in the piano education.

Table 2: Analysis of the Meters in Ahmed Adnan Saygun's work named *İnci's Book*

METER			**THE PIECES CONTAINING THEM**	**f**	**%**
TIME SIGNATURES	**Simple Meter**	2/4	4, 5	2	28
		3/4	3, 5, 7	3	43
		4/4	1, 5, 6, 7	4	57
		2/2	2	1	14
	Aksak Meter	5/8	3	1	14
	Metric Change		3 (3/4→5/8→3/4→5/8) 5 (3/4→4/4→3/4→4/4→ 3/4→2/4→3/4→4/4) 7 (4/4→3/4→4/4)	3	43

In view of the table with regard to the number of meters consisted in the work named *İnci's Book*, the pieces within the work seem to involve the following number of meters: *2/4* by 28%, *3/4* by 43%, *4/4* by 57%, *2/2* by 14% and *5/8* by 14%. Metric change by 43% is also seen in Table 2; while the same change proceeds in the form of 3/4→5/8→3/4→5/8 in the Piece#3, in the form of 3/4→4/4→3/4→4/4→3/4→2/4→3/4→4/4 in the Piece#5 and the same proceeds in the form of 4/4→3/4→4/4 in the Piece#7. It may further be said according to this table that, the pieces within the work named *İnci's Book* are written in numbers of simple meters different from each other, *4/4* is the most frequent meter in the work and also may be beneficial particularly in the introduction of aksak meters (5/8) in the piano education.

Table 3: Analysis of the Note Values in Ahmed Adnan Saygun's work named *İnci's Book*

NOTE VALUE	**THE PIECES CONTAINING THEM**	**f**	**%**
semibreve	1, 2, 5, 7	4	57
minim	1, 2, 3, 4, 5, 6, 7	7	100
crotchet	1, 2, 3, 4, 5, 6, 7	7	100
quaver	1, 2, 4, 5, 6, 7	6	86
semiquaver	3, 4, 7	3	43
dotted minim	7	1	14
dotted crotchet	3, 4, 5, 6, 7	5	71
dotted crotchet	3, 4, 7	3	43

In view of the table with regard to the note values consisted in the work named *İnci's Book*, the pieces within the work seem to involve the following note values: *minim* by 100%, *crotchet* by 100%, *quaver* by 86%, *dotted crotchet* by 71%, *semibreve* 57%, *semiquaver* 43%, *dotted crotchet 43%* and *dotted minim* by 14%. It may thereby be said that, the most frequently used note values are minim, crotchet, quaver and dotted crotchet in this work.

Table 4: Analysis of the Tempo in Ahmed Adnan Saygun's work named *İnci's Book*

TEMPO (according to the metronome markings)		**THE PIECES CONTAINING THEM**	**f**	**%**
Speed	Slow	3, 6, 7	3	43
	Moderately	1	1	14
	Fast	2, 4, 5	3	43

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Change of tempo	Ritardando	1, 4, 7	3	43
	Rallentando	3	1	14

In view of the table with regard to the tempo (according to the metronome markings) and changes in tempo involved in the work named *İnci's Book*, the pieces within the said work involve the slow tempo by 43%, moderately tempo by 14%, fast tempo by 43%, while they involve tempo changes of by *ritardando* 43%, *rallentando* by 14%.

Table 5: Analysis of the Harmonic and Polyphonic Structures in Ahmed Adnan Saygun's work named *İnci's Book*

HARMONIC/POLYPHONIC STRUCTURE	THE PIECES CONTAINING THEM	f	%
Modal	1, 2, 3, 4, 5, 6, 7	7	100
Homophonic	1, 3, 4, 7	4	57
Polyphonic	2, 5, 6	3	43

In view of the table with regard to the harmonic and polyphonic structures involved in the work named *İnci's Book*, the pieces within the said work seem to be of *modal* structure by 100%, and of *homophonic structure* by 57%, and *polyphonic structure* by 43% as well. When they are used in the contemporary music according to the sound system of equal intervals, the modes being accepted as original modes are named as artificial modes generated from the original (Yöre, 2012). Accordingly the harmonic structure of the work named *İnci's Book* written for the piano is characterized as modal.

Table 6: Analysis of the Dynamics in Ahmed Adnan Saygun's work named *İnci's Book*

DYNAMIC	THE PIECES CONTAINING THEM	f	%
Piano pianissimo	3	1	14
Pianissimo	1, 3, 4, 6, 7	5	71
Piano	1, 2, 3, 4, 6, 7	6	86
Mezzoforte	7	1	14
Forte	2, 4, 7	3	43
Fortissimo	4	1	14
Crescendo	2, 3, 7	3	43
Decrescendo	3, 7	2	28
Diminuendo	3	1	14
Accent	4, 7	2	28

Reviewing the table with regard to the dynamic, in the work named *İnci's Book*, the pieces within the work are seemed to involve *piano* by 86%, *pianissimo* 71%, *forte* by 43%, *crescendo* 43%, *decrescendo* 28%, *accent* 28%, *piano pianissimo* by 14%, *mezzoforte* 43%, *fortissimo* by 14%, *diminuendo* by 14%. In view of this table, in which the dynamics appertained to the work named *İnci's Book* seem to involve a wide range from *piano pianissimo* to *fortissimo*, it may be said that, this work may be helpful in order to bring the dynamics in the piano education.

Table 7: Analysis of the Characters in Ahmed Adnan Saygun's work named *İnci's Book*

CHARACTER	THE PIECES CONTAINING THEM	f	%
Calme	1, 7	2	28
Giocoso	2	1	14
Misterioso	3	1	14
Animato	4, 5	2	28
Tranquillo	6	1	14

Reviewing the table with regard to the character, in the work named *İnci's Book*, the pieces within the work are seemed to involve *calme* by 28%, animato 28%, *giocoso* by 14%, *misterioso* 14%, *tranquillo* 28%. In view of

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this table, it may be said that, this work may be helpful in order to bring the various musical characters in the piano education.

Table 8: Analysis of the Difficulty Levels in Ahmed Adnan Saygun's work named *İnci's Book*

DIFFICULTY LEVEL	THE PIECES CONTAINING THEM	f	%
Easy	5, 6	2	28
Moderate	1, 2, 3, 4, 7	5	71
Difficult	-	-	-

Reviewing the table with regard to the difficulty level, in the work named *İnci's Book*, the pieces within the work are seemed to beginner level by 28% and intermediate level 71%. In view of this table, it may be said that, the pieces which included in İnci's Book are appropriate for beginner and intermediate levels of piano education.

CONCLUSION

Ahmed Adnan Saygun's work named *İnci's Book* is pedagogically analyzed by way of splitting it into eight categories, namely as *technique, meter, note value, tempo, harmonic/polyphonic structure, dynamic, character, difficulty level.* The following conclusions have been attained from the aforementioned analyses: İnci's Book may to a large extent be effective on bringing in the legato technique in the piano education. The pieces within the work named *İnci's Book* are written in numbers of simple meters different from each other. The most frequently used note values are minim, crotchet, quaver and dotted crotchet in this work. İnci's Book is a modal structured work. The work is helpful in order to bring the various dynamics and various musical characters in the piano education. it is found that the pieces which included in İnci's Book are appropriate for different levels of piano education.

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A PRACTICAL MODEL FOR INFORMATION SECURITY AWARENESS TRAINING: SECURE INFORMATION PROJECT

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ABSTRACT
Educational technology is constantly evolving and innovating brings out a field. The development of open societies adapt to change are developed using methods and tools in education and training should be world conditions. Theoretical knowledge of educational technology in this context, the gap between information security and application development by eliminating individual and effective methods for teaching her ways, has taken on the task of finding environments. Nowadays, increasing the importance of entering into our lives every day technology, the location is solidified in computer aided environment. Therefore students "technologies in the context of open innovation, computer-aided talent, knowledge, skills and behavioral development" should be teaching the doctrine. However, the provision of this information consolidation and security today has become very difficult. Information from illegally seized, in all aspects of society, particularly in education is harmed. In this study, continuous self-renewal of how and to what extent to use technological tools, such as computer and information security of these tools include the factors in computer-aided education. In our country where the use of computers spread rapidly, both in education and will lose computer outdated in no time, so computer-aided education that affect the way in our lives and be examined in terms of information security, this training is an important issue.

Keywords: *C*omputer; information security; education; technology; development.

INTRODUCTION

Information security today is one of the rapidly growing importance of the subject. Rapid development and increasing their estimates on the technology of computer ownership rate led to an increase in direct proportion to the information at the same time. Although this facilitates the rapid development of computers and technology in human life also brings with it certain risks. Unconscious on the use of computers and people to share their personal information curiosity information security is one of the most common issues.
More information has experienced a rapid technological transformation and evolution can be stored on smaller devices, portable, it has become can be replicated. Application software and the processing of information with the developments in the broadband side, it has become transformed into a more practical value. All this will facilitate people's lives technological developments improper use on the other hand, the weakness of the risk perception of individuals, a number of drawbacks in the face unaware of the threat to information security, carries malicious use, and a number of compensable information security risks in the body (Şahinaslan, Kandemir :2009).

The dizzying developments in computer and communications technology, and especially the people with the effect of the catalyst on the Internet, work, communicate and meet all kinds of daily necessities is constantly format conversion (Nagurney, Dong, Mokhtarian :2002); (Fallows : 2004). In today's society people with computers at an early age are met; at home and at school, an intensive need for entertainment on the computer for homework in need are benefiting (Subrahmanyam, Kraut, Greenfield, Gross : 2000). Especially after 1979, he was born and "Generation Y" called cut, both located at the forefront in terms of new technology they use both in terms of population. This generation and today's children and young people; The general technology, in particular computer and Internet interaction and communication is one of the most wanted parts the actors (Montgomery, Gottlieb-Robles, Larson:2004); (Lenhart, Madden, Hitlin :2005).

Information technology and raw materials of these technologies, the importance of information input and output, which is not fully understood. Knowledge and understanding of what is happening is not enough to have potential as an important and what; information technology and should not be shown on the importance of information security (Şağıroğlu: 2001); (Canbek, Şağıroğlu, 2006).

Data, Information and Self-knowledge

It is a fact that we live in an era marked by the presence of knowledge. From this perspective, our time to define the knowledge, the raw material in the value of gold, grasp and examine issues related to knowledge, humanity is the most important key to shaping our development for the future in the process from the beginning (Canbek; 2005). Today, information came to the fore as it may seem, in fact knowledge; While yesterday's and today's switches, also in shaping the future has always switch roles.

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The following remarks about the nature of the information collected, the value and size of the information may be useful to illustrate once again (Housman: 2000).

Information;
• Gap and occupies the time.
• Noise can not move without removing.
• energy required for the movement.
• Life and is required for any regular activity.
• Both immaterial form is both cumbersome materials.
• It has weight. A gigabyte is less than the weight of a fingerprint.
• There may be moving or frozen in time.
• A question was satisfactory, perhaps disturbing is the answer.
• It has become solid, freeze and solidify (storage).
• It has become fluid flows (communication).
• move information in one place, the universe rumbles and roars truth.
• Unlike information can be in multiple places at the same time Article.
• handshake, nod, glance or internal tug.
• shines in sea.

To scroll through the information age can be likened to rise to a higher level using the steps of a ladder (Schuler: 2003). Figure 1 reality (reality) and wisdom (wisdom) is shown between the rungs of the ladder, data (data), knowledge (information), Knowledge of (knowledge) to the step. In most cases, each step will be omitted individually omitted. Moving up the amount of things we have decreased the value increases. Still moving up, the more difficult step to the next step or whether more effort. So, while the staircase give the bottom rung and easier sharing of information or people or workers, while more open sharing of data and information they receive, the same can not be said for the sharing of Knowledge when higher quit (Tiwana:2002).



Fig.1. Information on steps that must be overcome to achieve wisdom from reality (Canbek, Şağıroğlu).

In general, these methods brought about by science, data from the present reality by measuring, with the knowledge and understanding of the data and the proof is achieved Knowledge information (http://www.theorsociety.com/about/topic/projects/notorious/2_2_Data_Info.htm). Knowledge before reaching wisdom requires a thought containing synthesis. These thoughts, ideas is combined in such a way that it is greater than the sum of all parts reach (Courtney :2005).

Another observation is at the bottom rung of the ladder, more and need a programmable algorithmic approach be heard, higher steps is to have a structure that can not be non-algorithmic and programming (Montano, : 2004). Data and information transmission, information technology can be used, in addition Knowledge also enters into the human factor in business [17]. Benefited from management science to transform reality into a Knowledge .
Information and Knowledge concepts or steps, our country is often confused with each other (Grover, Davenport, : 2001). For this reason, defined in detail in the following paragraphs and related concepts it is explained.

The data; English is used as the equivalent "data", Latin for "datum" the word (plural form of "data" and "daring

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to give" the past tense of the verb, so "the thing") comes. Latin for "data" (Dedo until) the concept of BC In a study of Euclid is reported that 300 years later (http://www.britannica.com/eb/article?tocId=2176). In our language "the thing" in terms of "data" it is used as. Data in terms of information technology, on a case known yet established contact with each other or in short, found in digital media and carrying signals and / or bits can be defined as strings.
Information; It is a modified so as to express a specific meaning data. At this stage, the data and its associated threads, are combined to produce the information. Processed data as the information that can be expressed by Shannon "a source reduces the uncertainty that exists about a subject" is defined as. In short, suitable for all transactions made on the data (based on logic conversion, relationships, formulas, assumptions, simplifications, etc.) output can be expressed as information.

Knowledge; or in the form of experience or learning the facts obtained in the form of introspection, correct or knowledge, to be aware and understanding.

Brought together data, although information processed by Knowledge occur is a concept above the sum of the information used. Could create a force that can provide added value or to become a tool, more attentive and processed information, is the real value Knowledge. Knowledge is what it is (know-what), why is (know-why), how is (know-how) and who you are (know-who) know the form consists of four classes. What is know is the sum of the actual and the class that is closest to the information. Know why, scientific Knowledge described the principles underlying the technological development and the law. How to know that there is an ability to do something. Know who, who does what, and who knows what can be summarized as know how to do (OECD, Knowledge Management in the Learning Society, Paris, 14-15, 2000).

Wisdom (wisdom), imagination, foresight, and the most advanced level of abstraction and with the ability to see beyond the horizon is the essence of a person's experience acquired during his career in private business field (Awad, Ghaziri, 2004). Wise also has a reliable judiciary and is defined as to grasp how to use the Knowledge to decide (Kirrane, 1999).

Data, information, and concepts such as Knowledge wisdom that the fundamental building blocks of information technology should not be overlooked. This perspective will help to keep the importance of knowledge and information and computer security is always a priority position. Although the concept referred related information, where the information technology and Knowledge considered not in terms of management of these concepts also under thousands of years of civilization or humanity it should also be remembered. Every civilization in history who understand the importance of knowledge, in order to protect her, have developed different security methods (Canbek, Şağıroğlu, 2006); (Canbek, Şağıroğlu, 2005); (Apaydın, S.M.F. 2014).

Today, knowledge is being produced, storage, protection, use, sharing, dissemination, interaction and increase speed with dizzying speed information processing and communications technology has brought about a state (Canbek, Şağıroğlu: Bilgi, Bilgi Güvenliği ve Süreçleri Üzerine Bir İnceleme).

INFORMATİON AND COMPUTER SECURİTY
The storage of data or information in electronic media and in its entirety the structure during transport, to protect from unauthorized access, can be expressed in all Information Security-building efforts of a secure computing platform. To ensure the functionality of the platform should be identified and appropriate security policies must be implemented. These policies, examining the activities, monitoring of access, evaluation by keeping records of changes can be reduced so as to limit the deletion of some use. Information security more broadly, to address security issues in detail "safety engineering" is seen as a child of the field.

Information and computer security, counter party, those who considered malicious (pirates or hackers) and they are attacked. The existing information and to overcome computer security systems or dodge, to inflict weakness people to inflict harm, directly or indirectly, damaging the system, to aksattır the functioning of the system, stop, the attempt made on computer systems with malicious purposes, such as to collapse or break down are called attacks or episodes. The attackers, they perform attacks with very different techniques to achieve their goals. Knowledge of attack types, determination of accurate analysis and necessary measures for the security of information is of great importance (Canbek, Şağıroğlu: Bilgi, Bilgi Güvenliği ve Süreçleri Üzerine Bir İnceleme).

Information Security Threats
Threats to information security are detailed below. In addition, threats and information security, as shown in

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Figure 2 can be grouped under the following headings.
• Malicious Software; viruses, keyloggers, trojan horses, spyware, spam, sniffer, phishing, botnets, exploits etc.
• Natural Disasters; earthquake, flood, fire, lightning, etc. disasters and physical damage they can create.
• Social Media and Engineering.

• Password Security, Open, and Physical Security.
• Hackers and Access to Information; Pirates and threats to access to information.



Fig.2. Information Security Threats [1].

Security Policies
Privacy (confidentiality), integrity (integrity), availability (availability), authentication (authentication) and inability to deny (non-repudiation) are the most basic principles of information security. Apart from this responsibility (accountability), access control (access control), credibility (reliability) and security (safety) are the elements that support the information security factors. Performed by information security, but all of these elements can be fully ensured. As can be seen from Figure 3, the lack of one or more of these principles may cause deterioration in safety aspects. These principles should never be forgotten that the complementary elements.

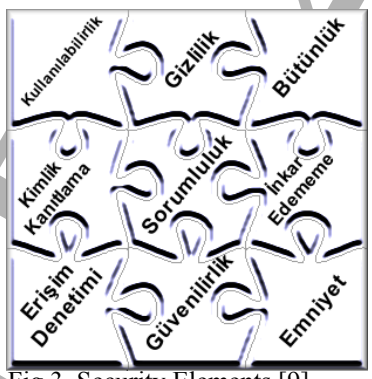


Fig.3. Security Elements [9].

Safety Processes
Information security is the security system will be established within the framework of the infrastructure and policies to protect the correct way to determine and evaluate the requested information security management must be done correctly and in a complete manner. Security management, information and determining the factors that negatively affect the computer security is the process of measuring and reducing to a minimum. An example is shown in Figure 4 of the security process. In this way, four different attack "1" - "4" is shown. As it can be clearly seen from the figure, "1" number one attack, which prevented the immediate prevention stage; "2", "3" and "4" No. attacks could be avoided at this stage. Preventing these attacks that come through the process "2" attacks, are detected in the detection phase, while disposal; "3" and "4" on the number of attacks, managed to pass in the detection phase. In response phase is the last stage designed with specified tolerance, "3" of attacks while avoiding; all stages last ditch "4" No. attacks, passing all security matters, has damaged the system (Canbek, Şağıroğlu: Bilgi, Bilgi Güvenliği ve Süreçleri Üzerine Bir İnceleme).

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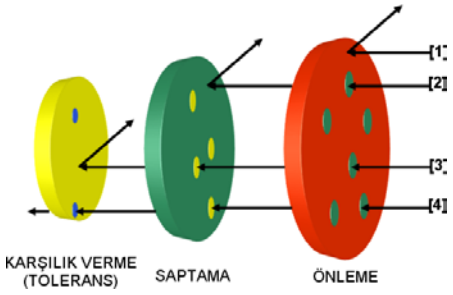


Fig.4. Security Processes and Responses to attack [9].

CONCLUSİON

Human knowledge is considered to be the weakest link in the security process. However, people can get rid of this weakness with information security awareness training may be the most important aspect of information security processes and awareness-raising activities. These activities can bring many benefits, such as in corporate base will benefit an individual basis. Information security awareness and training programs, institutions should be extended until the end of the bottom up, from the top management and users should be provided. Institutions and individuals protect the information valuable asset in hand, to ensure the integrity and reliability should unite around an information security policy or rules to achieve the necessary should also be informed first of these rules is their guidance. On the other hand should also have information on what kind of information can be faced with current security risks and threats. The most basic and effective method for individuals will be able to create this awareness is passed through an awareness training program.

Institutions wishing to provide awareness training and can enter into the search need information about the contents of what they offer.

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A STRATEGIC PLANNING REPORT FOR HIGHER EDUCATION IN NORTH CYPRUS

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A Strategic Planning Report for Higher Education in North Cyprus

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Recently, Higher Education Planning, Evaluation, Accrediation and Coordination Council (YODAK) in North Cyprus has prepared a strategic planning report which is aimed as a preliminary study for an extensive strategic planning for higher education in North Cyprus. For this purpose, through a qualitative study, stakeholders of higher education (representatives of nongovermental organisations, ministries, members of parliament, etc) were interviewed in order to obtain ideas about the needs to improve higher education system of North Cyprus. The ideas obtained from the interviews shaped the content of first draft of the strategic planning report. The data were categorized under themes and analyzed through content analysis technique. The results showed that higher education system should seriously be improved in certain areas.

Keywords: A Strategic Planning

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A STUDIO EXPERIENCE ON PARAMETRIC MODELLING APPROACHES

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ABSTRACT
As an outcome of digital age, parametric modeling is being used in various stages from conceptual design to building application processes. In today's world, we have so many buildings designed with parametric modeling. Naturally these changes in architectural design practices have also been influencing architectural education or forcing the formation of digital innovations in this field. The use of parametrical modeling techniques are generally studied at Master or PhD levels. And the education of these techniques has been ignored at the undergraduate level. However, it is important and necessary to adapt new design approaches, to create awareness and to experience these techniques with plenty of exercises in the early ages of the students. In this context, at Karabük University it has been decided to prepare a studio practice as a starting model about parametric modeling approaches like BIM (Building Information Modeling) and CAD (Computer Aided Design) modeling software have been used to teach our students. Revit Architecture (as a BIM tool) and the plug-ins has been used for creating conceptual mass models and modules. The content of the studio is concerned with form-finding, creation of shell structures, patterns of façade modules and adapting the created models into an architectural context. In this paper, the experiences and results of the studio are introduced. Accordingly, position of parametric modeling in the education field, the future studies about it and contributions of the used software in the studio are debated.

Keywords: Parametric modeling, conceptual mass, Computer in Design.

INTRODUCTION

In recent years, new developments and opportunities have been emerged increasingly in Information Technology (IT) and demonstrated their effects in architectural field. IT has become a part of design process with their abilities of contributing creativity and being powerful, fast and understandable presentation tool. Also they have brought new concepts in this field. Those concepts are listed as animating, topological, isomorphic, metamorphic, parametric and evolutionary architecture (Kolarevic, 2000). Especially by support of these technologies and concepts, new unique designs have increased that difficult to generate by traditional methods.

For example, parametric modeling, one of the very early applications of these digital design approaches, brings a new idea in the practice (Woodbury et al, 2006). This idea is to relate parts together and thus to define a system that exists with their mutual workings. Clearly, it follows an approach which is similar to bottom-up processes. Its results by a small change in the system are able to have much more effects than it is expected. Its approaches and applications have been used in industrial design fields (like automotive, naval etc...) for many years, but they haven't been evaluated effectively in the other design studies like architecture due to its cost and complexity until recently. However, nowadays, as it is noted above, this approach has changed rapidly in both the practice and educational processes of architecture. The special buildings like Gehry's Ginger and Fred Dancing House, Cook and Fournier's Kunsthaus Graz, Franken's "Dynaform" BMW exhibition pavilion, Otto's Olympic Stadium, Foster's British Museum, and etc…, which appear quite different from the others, illustrates just some of these applications.

This current situation opens a new door into design and assigns new tasks to architects, students and researchers.

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Those consist of understanding potentials and characteristics of these tools; trying to adapt them into their designs; creating new methods and strategies to help themselves. This paper attempts to answer this question - when and where to start using these technologies in architectural design processes in education?

In this study, we demonstrate the experiences on using digital design strategies which are uncommon at undergraduate education. Primarily we have focused on parametric design because it was simpler, more widespread and practical. The first studies are about understanding parametric design and what innovations parametric design brings to architectural design. Then those innovations have been examined with sample implementations in studio. Finally obtained results have been evaluated in terms of applying to architectural education.

WHAT IS PARAMETRIC DESIGN

Parametric design concept usually draws attention as phenomena which are supported by Building Information Modeling (BIM). Also this concept responds to a quite common content and requirements in architecture. About this concept, Kolarevic's definition would be much more explanatory:

"Parametric design focuses on design parameters rather than form and geometry. It is aimed at giving parameters different values and achieving different objects or configurations. With this method, mutual relationships among the objects can be made and the behavior of those objects can be defined under the various modification studies. Definition, decision and reconfiguration of geometric relationships are an explicit feature of its configuration ability."

Key concepts which are pointed out in parametric design can be explained as follow (Hudson, 2008):

Knowledge is used for reducing complexity of the problem; determining the key parameters composed of multiple variables; and managing these parameters to possess valid ranges which can be formed according to type of task.

Analysis is fragmentation of design problems into their parts for developing design goals elaborately in parametric design. Analytic definition can lead to conceive structural and behavioral variables. Analyses define specifications of the problem.

Synthesis and Evaluation: method of "Propose-Critique-Modify" is the most commonly used in the solution of parametric design problems. This method is usually evaluated in the form of "decomposition solution re-composition". In this method, a proposal is made and tested by functional requirements. Then, failures are determined by evaluating the results. According to the failures problem is re-structured by new variables, parameters or constraints.

Representation is used both textually and graphically in a parametric model.

As its current applications are examined, it is observed that parametric modeling is usually used for form-finding and optimization problems at the building finishes and shell structures with the collaboration of architecture and engineering fields (Woodbury et al., 2006). It is evaluated both technically and visually in these processes. It involves a well-defined problem with its goals and technical aspects, a model as mathematical representations of the system, and also an algorithm as a tool of generating solution spaces.

PARAMETRIC DESIGN AND ARCHITECTURAL PROCESSES

Architectural design processes are usually known as ill-defined problems due to its feature of having intuitive approaches and many different components, disciplines and stages. Naturally, it is difficult to bring the process into a unique parametric model. So parametric modeling is suitable for particular stages of the process. Also it is useful to evaluate it partially and independently. Furthermore, beside architectural knowledge in the process, architects need additional information due to improvements in digital design. Woodbury (2010) especially explained these terms about parametric modeling:

Understanding data flows: There is a data flow from independent objects to dependent objects. Designers use those dependencies while creating the models they want. Those dependencies imply relationships concerned with geometry and design rules.

Dividing and managing: Generally designers use hierarchy of closure in their works. There is an iteration system by the means of interactions between parts. With this dividing and managing strategy, design is dismantled in pieces by requirement of controllability. Those pieces are individually designed and recombined together for overall work.

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Abstract thinking: Abstraction in design can differ in some situations. This represents not only a general concept that is understandable in many ways but also an indefinite concept that open to various explanations. In parametric modeling abstraction can be done by the method of intensifying and multiplying objects or nodes.

Mathematical thinking: Both parametric and traditional CAD systems include mathematical properties. When using these tools as designers, we naturally manage a mathematical truth in our designs. The difference between two systems is that designers "use" mathematic instead of "creating" it in traditional manner. When using math implies to start a mathematical reality, creating it means to generate theories with inferences. These properties have similarities with design process. So mathematics is researched in in the design implementations like Palladio and Gaudi's works. Mathematics is actively evaluated in parametric modeling and digital design. In parametric modeling, it can take part as a design strategy by using various theories and structures.

Algorithmic thinking: Processing and being well-defined are essential in an algorithm. Processing defines a method which develops step by step. "Fuzzy logic" states are dominated in design processes which require designers' interventions. Parametric systems have similar scripting language with traditional processes. They use processes like adding, removing, copying and modifying. As a result of these processes, they support the combination of algorithms and design processes by constraints, updating and graphical objects.

In Parametric modeling designers need scripting for solution of design problems. However, designers don't need to have ability of advanced programming language that programmers use. It is enough that designers have basic knowledge as long as they intervene their projects. This basic knowledge can be easily provided by short-time educational practices.

Parametric modeling seems to reduce the difficulties in form-finding strategies of architectural designs (Woodbury et al., 2006). By the way of modeling external data affecting designs and designs' response it presents an adaptive design space which can be a difficult task to obtain by opportunities of current conventional CAD tools. So, its use has become a necessity for designers in spite of its all small challenges to get used to its new terms.

Complex buildings can be created by simple configurations including copying, modifying and combining processes. Dealing with more mathematical structures and geometries creates opportunities of combining them with parametrical functions in new contexts. Also it provides to discover newer forms. In figure1, there are some models inspired by Foster's "Swiss Re" building as an example of changing configurations with the parameters like adjusting values of contours, points and heights or rates of twisting, frequencies and amplitude (Carlson, 2009).

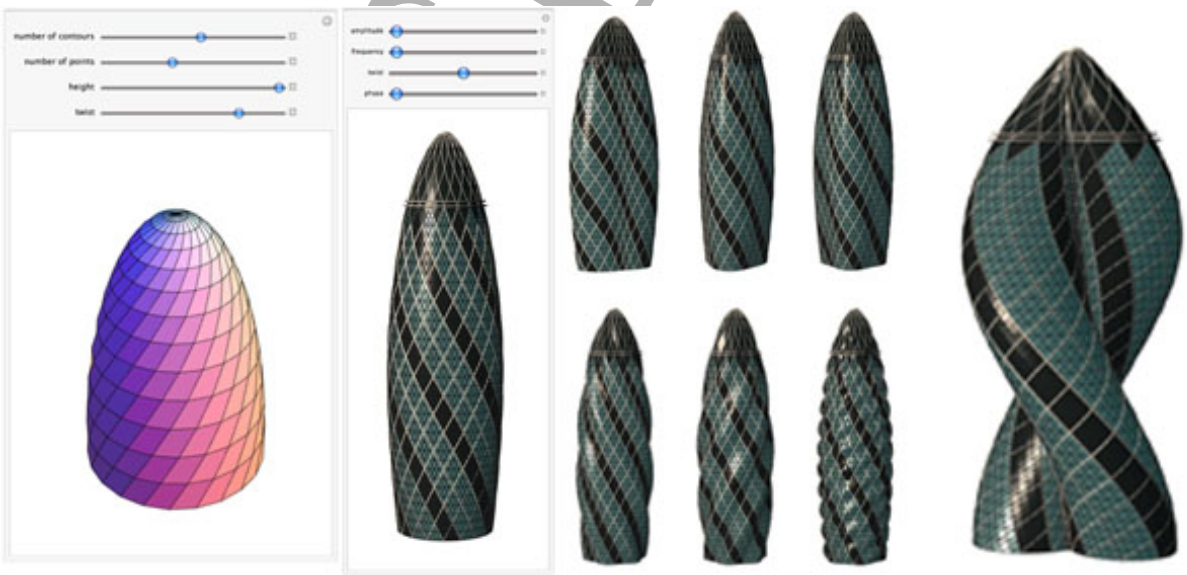


Fig. 1: Form alternatives of "Swiss Re" by using parametric modeling techniques (Carlson, 2009).

As another example of parametric modeling, a theoretical study on designs of tall buildings can be given (Park et al., 2004). This study was prepared with the aims of defining relations between design criteria and building form, exploring geometries and transformations for building forms, generating alternative forms and developing design methodologies. In the study, the parameters were composed of the criteria like total gross area, total building

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height, total number of floors, and aspect ratio. They were interrelated with each other. The geometric forms were based on the shapes of top and base floors which were different from each other and placed on the symmetry axis. Their vertical variations were defined by non-conventional transformations like setbacks, section morph, twist, and curvilinear. They were modeled in the framework of architectural and structural constraints. With this method many alternative form samples were produced as a basic model in pre-design stages (figure 2).

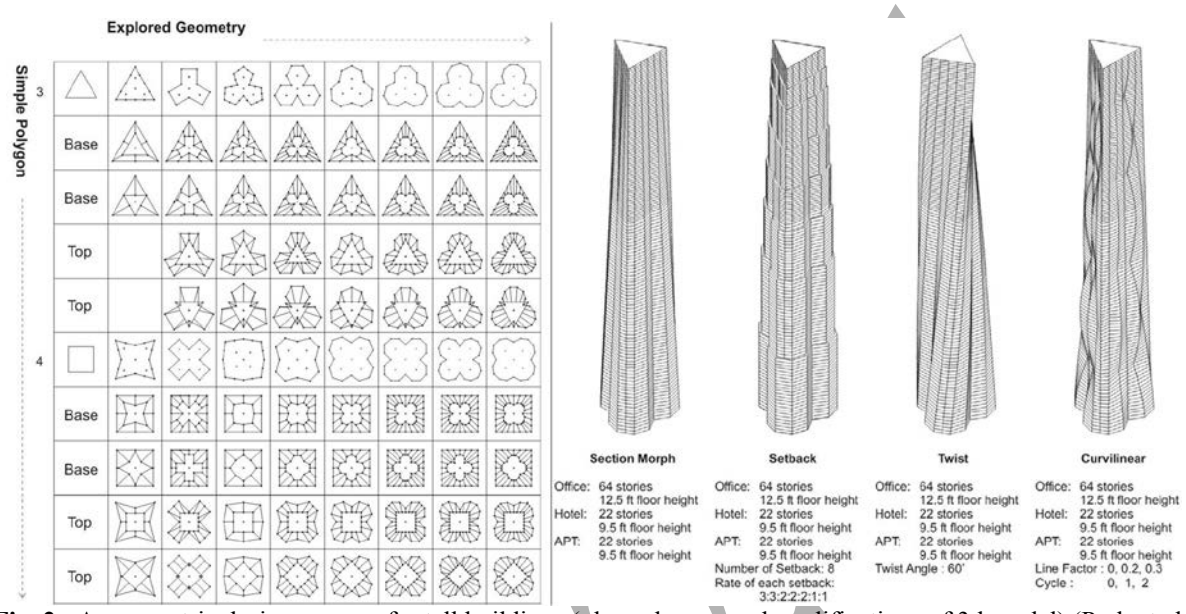


Fig. 2: A parametric design process for tall buildings (plan schemes and modifications of 3d model) (Park et al., 2004)

Depending on the effects of the developing digital tools, the generation of similar samples with simple configurations has now become applicable more easily in educational processes.

METHODOLOGY

This study is composed of educational implementations which are made in design-support course named "Computer in Design III" in 2014-2015 Fall Semesters. Course's process of education comprises two main sections. In the first section, basic education has been given to all students during 11 weeks (Fig 2). This duration is defined as phase of learning software (Revit Architecture) for general use (its properties of architectural presentation) and getting used to its language. At the end of first phase, determination of the students who are able to use the software effectively and to improve their experiences to higher level have been done. Those students have been observed separately among others in the second phase.

SYLLABUS OF COMPUTER IN DESIGN COURSE

WEEK	SUBJECT	WEEK	SUBJECT
1st	Introduction; CAD and BIM programs and interface of Revit Architecture	9th	Revit (BIM) practices (Conceptual Masses)
2nd	Learning drawing commands of Revit Architecture (walls, floors, etc...)	10th	Advanced Revit (BIM) practices (Rendering/Animation)
3rd	Learning drawing commands of Revit Architecture (walls, floors, stairs, etc...)	11th	Advanced Revit (BIM) practices (Rendering/Animation)
4th	Learning drawing commands of Revit Architecture (roof modeling techniques)	12th	Introduction of Parametric Design and Gigabidea Paretivism Toolbox, and practices
5th	Revit (BIM) practices (Site nodeling)	13th	Practices of Parametric Design (Understanding procedural approaches with rules)
6th	Basic Presentation techniques in Revit Architecture (2D and 3D models)	14th	Developing new ideas and practices
7th	Midterm Exam	15th	Presentations and Discussions of the developed models
8th	Revit (BIM) practices (Family designing)		Final Exam

Fig. 2: The working program in the course.

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Second section took 4 weeks and parametric modeling processes have been endeavored. At first the concepts, creative processes and general information have been given about digital applications under today's circumstances. With this method, theoretical awareness has been raised. Then advanced features of Autodesk Revit Architecture and Gigabidea Parevitism plugin for Revit have been introduced and sample applications have been practiced. Some exercises have been done by students to gain experience about this software and plugin. In these exercises form creating methods offered by software, cross-sections designated by students and parametric components with engaged basic mathematical formulas (sine, cosine curves etc.) have been used. When students start to discover plugins capability, they were asked to design models that they imagine. Same time it was demanded from them to transform their models into architectural concepts (scale, bridge, cladding systems, ramps, shell structures, exhibition pavilion etc.). In last week, evaluation of architectural concepts, improvability and students feedback have been done. Also those studies have been supported with homework and additional applications.

Parevitizm Toolbox is a plugin prepared for Revit Architecture Software. This plugin multiplies a cross-section model (object) according to parametric index numbers and applies the specific parameters which are defined for each unit within the certain rules. In other words, it operates "indexing value" which is used in the formulations of moving, rotating, copying and formal modifications for a two or three dimensional Revit object. It has user-friendly features for learning. Modification formulas and definitions of the designed Revit object (cross-section) are organized by basic modules and interfaces of Revit Architecture except for the plugin. To summarize, the object, whose properties can be changed formally by its index value, is modeled in the main software. Then it is multiplied by the plugin. In the implementations, the massive solid models are created with the generated two dimensional cross-sections at the end of multiplication processes. Also rhythmic and modular patterns can be obtained by three dimensional cross-sections. The resulting samples have architectural potentials to use or evaluate at the different scales of the designs.

In the studio implementations, the students' interest has been, especially, on the visual effects of the applied mathematical formulas in the form of the designed models. Depending on minor and simple interventions in the parameters, the created original geometric changes, which are difficult to obtain with traditional ways, have been influential on it. Thus students have investigated variations to be made by mathematical functions through trials. Furthermore, application steps of parametric modelling in software have needed much more users' attention at the starting stages. So students have faced with some difficulties of learning and loss of time. Nevertheless, they have introduced with new vocabularies and syntaxes (scripting, formulating, interactivity, dynamic forms, generation and etc…), beside their basic architectural knowledge.

Students have unconsciously combined parametric modeling processes with Schön's (1985) "Reflection in Action" protocol which is a typical traditional design method. In this protocol, a design process is fragmented with frame steps which can be interpreted, developed, or reconfigured by a designer. Similarly they have also used parametric modeling in specific stages of the design. According to the conditions, they have renewed their models by feedbacks on the design rules. Thus, they have actively maintained their architectural positions as the managers of the process.

25 students took Computer in Design course. 15 out of 25 students effectively participated in parametric modeling processes. The selected five works presented in this paper. After the initial exercises, these students developed their models in the scope of an architectural subject like bridge, bus station, pavilion, conceptual tall building and interior design of café. When some of the subjects were individually selected by students, the others were suggested by the instructors. Moreover, the subjects were usually decided before the creation of the conceptual models. However, in some works, the created models were adapted into architectural subjects. Finally, students usually tried to select different cross-sections (geometries) from the others in the study (Table 1).

Evaluating the created models in architectural concepts (form-finding, sense of space, human scale, structure etc.) has provided the students to use parametric modeling more consciously. Naturally, it has increased their interests on the parametric modelling practices. The students have changed the digital values of the formulas to reach demanded visuals and the architectural needs. Additionally, they have made manual modifications on the form of their models in some cases. The design criteria and 3d visualizations of the created models have shown in Table 2.

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Table 1: Basic schemes, conceptual models and actions of the students' studies.

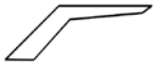
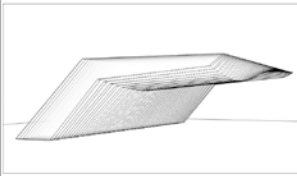
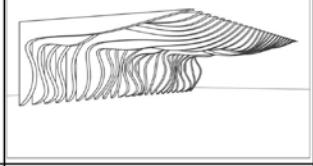
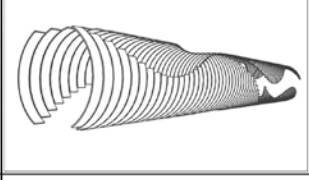
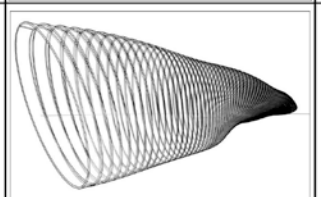
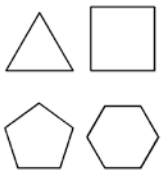
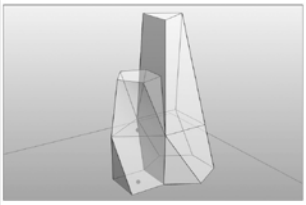
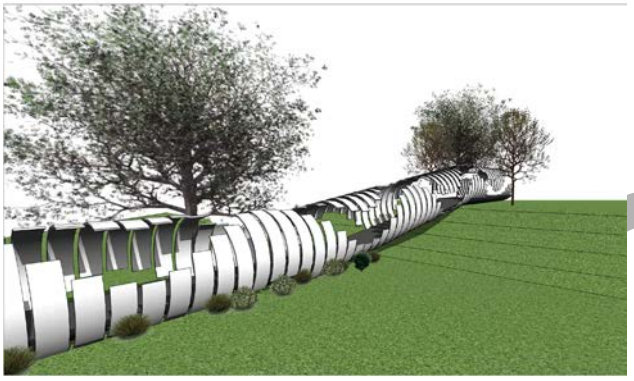
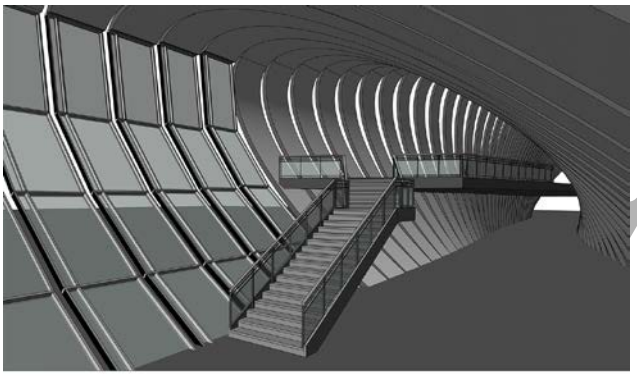
	Profile	Conceptual Mass Model	Actions
Student Work Nr.1			-Creating Profile -Engaging formulas with profile -Multiplying -Changing cross-section
Student Work Nr.2			-Creating Profile -Engaging formulas with profile -Multiplying -Changing cross-section
Student Work Nr.3			-Creating Profile -Engaging formulas with profile -Multiplying -Rotating -Changing elevantion of z plane
Student Work Nr.4			-Creating Profile -Engaging formulas with profile -Multiplying -Rotating
Student Work Nr.5			-Creating Profiles -Engaging formulas with profiles -Shape changing -Form combining

Table 2: Architectural interpretations of students' works

3D VISUALIZATIONS	DESIGN CRITERIA
 Student Work No. 1 Bus Stop	-Form doesn't block people movement and also protects them from natural conditions such as rain, snow and sunlight. -While designing conceptual mass form of the cross-section structural requirements have been considered. -Design criteria were based on human scale.

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Table 2 (Continued): Architectural interpretations of students' works

 Student Work No. 2 Restaurant	-This project made to prevent monotony and to increase attractiveness of the interior. -The Created system components were placed manually to interior wall faces. -The actual building's cubic shape is perceived as an amorphous form.
 Student Work No. 3 Covered Walkway	-This covered walkway project made as a bridge to pass a gutter and reach to a higher level. -Openings on the model provide nice scenery to people who are passing by. -The model itself gives visually rich and structurally safe perception.
 Student Work No. 4 Multi Purpose Building	-Usage of the form was based on area needs. -Rotation of ellipse cross section gave enough height for second floor after a specific index value -With this method mass form was able to use effectively.
 Student Work No. 5 Modern Office Building	-Different geometric shapes were used in different levels to prevent repetition of ground floor plan. -This dynamic form's complex floor and façade calculations now can be solved due to parametric design. -From every other angle this model will be perceived differently

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CONCLUSIONS

This paper contains basic attempts about how to achieve an integration between current architectural trends and undergraduate education. This is concerned with an expanding the content of the undergraduate curriculum rather than developing a new educational method in architecture. In this context, the prepared studio practice includes the subjects such as education of the mathematics in design, digital design approaches, parametric modeling techniques and their integration of design process that the students never encountered until this time. Over the results of these studies and students' gains, it is considered that new routes about the future works can be decided. At the end of the study, these obtained gains and the actions which may be applied in future are summarized as follow:

- It has been confirmed that elaborative details about mathematics and geometry, which are also base of architecture, are highlighted by parametric modeling. Thus, it has been seen that students' visual memories are noticeably increased. It is thought that this condition satisfies an important need for basic architectural education.
- It has been observed that use of parametric modeling accelerates the interaction of architecture with the other disciplines (mathematics, biology, physique). This situation helps students to understand and conceive complex-related structure of architecture more easily.
- Parametric modeling requires logical idea, definition of relationships among components and detailed configuration of a problem. In other words, the students gain ability of multidimensional thinking by using these solution tools for a problem. The positive feedbacks in the practices have supported this thesis.
- It has been demonstrated that efficiency of parametric modeling approaches must be increased by dividing a design process into certain stages and using different parametric models in these stages by changing design rules due to complex nature of architectural design process. It is also considered that its integration with traditional processes is necessary for transition phases to digital design in education.
- In spite of learning difficulties at the starting phase, at the end of the process, creation of the forms that are very hard to imagine and model opens new horizons. The students also pointed out that these processes are worth learning.
- Learning parametric modeling in the undergraduate education provides usage of basic mathematical knowledge which is gained during the educational carrier continuously. This approach supplies designers to have an advantage about adapting new processes easily.
- For overcoming difficulties of learning parametric modeling and getting familiar to its processes, the numbers of supportive courses and studios should be increased. Otherwise the contents of the computer courses should be reviewed.

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INTE 2015

A STUDY ON SPEAKING ANXIETY IN FOREIGN LANGUAGE CLASSES

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Anxiety has been one of the most important issues of language learning and teaching for years. However, researchers still have been defending wide range of claims on how anxiety affects language learning, handling the issue in recognition of cognitive, psychological, social, and hereditary perspectives (Horwitz, Horwitz, and Cope, 1986; Young, 1991; MacIntyre, 1995; Cheng, 2001; Pappamihiel, 2001; Wörde, 2003; Katalin, 2006; Zheng, 2008; Andrade & Williams, 2009). This study aimed to investigate the reasons for students' general foreign language anxiety and speaking anxiety in EFL settings. The study was conducted with 24, 12th grade students at a high school in Kozan, Turkey. The data was established with Foreign Language Classroom Anxiety Scale (FLCAS) and a semi-structured interview. The teacher's reflections on the issue based on her own experiences supported the qualitative aspect of the study. The present study gives various perspectives on understanding the reasons for general and speaking anxiety of EFL students.

Keywords: Anxiety and EFL, Speaking Anxiety, Reasons For Speaking Anxiety

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A STUDY ON THE DEGREE OF SPECIAL EDUCATION TEACHER'S COMMUNITY SPIRIT

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ABSTRACT
This study aims to investigate the community spirit of special education teachers who have both direct and indirect effect all over the educations fields and society and how they think of their school community members. Thus, this study selected 58 special education teachers from special schools in Busan, Ulsan and Gyeongnam Provide as research subjects, and carried out a survey on their community spirit.

The results of this survey can be summarized as follows; Out of the 6 kinds of domains, the survey respondents perceived 'Harmony and Unity' most. As a result of analyzing the perception degree of their community spirit by variables, it was found that female teachers showed a higher degree of perception towards 'Intimacy and Sense of Belonging' than male teachers, but toward the other sub-domains, male teachers showed higher degrees of perception than female teachers, but there was no statistically significant difference between them. As a result of analyzing the research subjects' community spirit by their teaching career years, it was found that special education teachers with over 20 years of teaching career showed relatively high levels of perception toward all the sub-domains, but there was no statistically significant difference between them and the others.

Overall, even though there was no statistically difference found between the different groups, but male teachers and special education teachers with more years of teaching career showed more interest in interacting with their school community members and higher degrees of community spirit than female teachers and special education teachers with less years of teaching career.

Keywords: special education, community education,

INTRODUCTION

Today, regardless of the type and degree of disability, there is a generalized value and philosophy in integrated education that states that disabled students with special education needs must be educated in a integrated environment, and one of the largest movements for special education is the effort to provide integrated education for all special needs students. Integrated education strives for a community oriented life where all people exist together.

In order for the successful administration of integrated education with such a community oriented characteristic, while the efficient support and establishment of administrative and financial support systems, the improvement of the structure and organization of the school, and the improvement in the contents, methodology and evaluation of education etc. are important, above all the cooperation and working together of special education and regular education teachers, and the cooperation and mutual understanding between the special education teachers and staff and the students' parents, and the cooperation and working together between the students etc., are the most important and have the most influence on the success of integrated education(Kang et al., 2005) . And special education teachers, who have the most anticipated role among the above, are teachers that are responsible for special education programs within regular schools who must cooperate and communicate with regular school teachers and have the immense responsibility of administering their classes(Jung, 2013).

Also according to the specialized education syllabi of the special needs students, as mentioned above, in additional to regular teachers, education services and related services are provided together as a whole by special education teachers, psychologists, social enterprisers, linguists, consultants, and physical therapists etc., and the special education teachers become part of a cooperating interdisciplinary team that is primarily responsible for the education of special needs students. These special education teachers must have the ability to discover students with special needs, the ability to conduct various education specific to education needs according to the student's stage of life, for example, integrated education, career and vocations education, lifelong education, and the ability for the support of related and necessary services, and the ability to establish cooperative relationships

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with professionals of organizations etc(Kim, 2008). Therefore special education teachers must be able to establish cooperative relationships between a variety of people in the community.
To achieve the objectives of the research above, the research issues to examine are as follows.
First, what is the community perception of special education teachers?
Second, is there a difference in the community perception(gender, duration and type of special education experience) of special education teachers that is dependent on personal factors?

METHOD

Special education teachers were randomly cluster selected from the Busan and South Gyeongsang Province for one month in April of 2015, under pre-agreement, to conduct this research. To develop the research survey, the perception of community test survey of Woo Nam-Hee and Lee Yun-Sup(1998) and the measurement survey for educators by Choi Jin-Young(2010) were modified for the survey of special education teachers, and the survey was conducted according to the 5 point Likert scale. Out of a total of 70 surveys, 58 were collected and analyzed.

Table 1: community spirit based on gender

Division	Total (N=58)	Male(N=30)		Female(N=28)		t	p
		M	SD	M	SD		
intimacy and belonging	3.81	3.75	.90	3.88	.70	-.59	.11
harmony and unity	4.23	4.28	.56	4.17	.44	.83	.49
voluntary and express	3.55	3.63	.75	3.45	.70	.86	.66
Regarding the goal and achievements of the group as my own	3.82	3.89	.64	3.72	.54	.83	.52
Avant-garde, exclusive collectivism	3.85	3.91	.44	3.76	.50	1.07	.41
Autonomy and co-consciousness	4.07	4.16	.52	3.95	.57	1.21	.58
Total	3.71	3.75	.61	3.64	.51	.51	.44

Table 2: community spirit of the teaching career

	Division	N	M	SD	F	Scheffe
intimacy and belonging	less than 5 years(a)	12	4.40	.54	3.73*	a>d
	less than 5 to 10 years(b)	14	3.66	.67		
	less than 10 to 20 years(c)	25	3.82	.81		
	less than 20 to 30 years(d)	7	3.20	.95		
harmony and unity	less than 5 years(a)	12	4.60	.38	3.76*	a>d
	less than 5 to 10 years(b)	14	4.18	.39		
	less than 10 to 20 years(c)	25	4.23	.54		
	less than 20 to 30 years(d)	7	3.82	.50		
voluntary and express	less than 5 years(a)	12	3.82	.40	1.45	
	less than 5 to 10 years(b)	14	3.43	.78		
	less than 10 to 20 years(c)	25	3.63	.73		
	less than 20 to 30 years(d)	7	3.14	.91		
Regarding the goal and achievements of the group as my own	less than 5 years(a)	12	4.10	.56	2.45	
	less than 5 to 10 years(b)	14	3.74	.61		
	less than 10 to 20 years(c)	25	3.89	.50		

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	less than 20 to 30 years(d)	7	3.34	.78		
Avant-garde, exclusive collectivism	less than 5 years(a)	12	4.02	.44	1.97	
	less than 5 to 10 years(b)	14	3.86	.42		
	less than 10 to 20 years(c)	25	3.87	.48		
	less than 20 to 30 years(d)	7	3.49	.45		
Autonomy and co-consciousness	less than 5 years(a)	12	4.10	.58	1.51	
	less than 5 to 10 years(b)	14	3.92	.47		
	less than 10 to 20 years(c)	25	4.22	.53		
	less than 20 to 30 years(d)	7	3.80	.61		
Total	less than 5 years(a)	12	4.12	.40	3.52*	a>d
	less than 5 to 10 years(b)	14	3.59	.47		
	less than 10 to 20 years(c)	25	3.71	.53		
	less than 20 to 30 years(d)	7	3.31	.75		

*p<.05

CONCLUSIONS

As a result of analyzing the research subjects' community spirit by their teaching career years, it was found that special education teachers with over 20 years of teaching career showed relatively high levels of perception toward all the sub-domains, but there was no statistically significant difference between them and the others.

Overall, even though there was no statistically difference found between the different groups, but male teachers and special education teachers with more years of teaching career showed more interest in interacting with their school community members and higher degrees of community spirit than female teachers and special education teachers with less years of teaching career.

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INTE 2015

A TRAINING OF LEARNING SKILLS FOR ADOLESCENTS WITH ADHD (LEJA) – EMPIRICALLY BASED CONCEPTUALIZATION AND FINDINGS OF EFFICACY

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Adolescents with ADHD do not only suffer from the main symptoms of ADHD which are attentional problems, impulsivity and restlessness/hyperactivity. They also have to cope with biological and most of all normative developmental tasks in the context of autonomy development. There is a lack of empirically validated specific programs to treat the adolescent ADHD-Subgroup. To close this gap, "LeJA" (Lerntraining für Jugendliche mit ADHS) – a learning skills training for adolescents with ADHD – has been developed on the basis of empirical evaluation studies. Goals of the training are an increase of effective learning behavior and supporting the adolescents in coping with normative developmental tasks. The trainings conceptualization and results of an empirical evaluation of "LeJA" in a large scale study in pre-post-follow-up multi-trait-multi-method-design will be presented. Large to very large Effects were found in comparison with waiting-list controls for ADHD-Symptoms and Teacher-rated learning behavior. These effects become medium effects if controlled for hope and expectancy of change and unspecific therapeutic effects (therapeutic relationship). Conclusion: LeJA is specifically efficacious, although to a medium degree.

Keywords: ADHD; adolescents; training

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A TURKISH INTELLECTUAL TOWARDS MODERNIZATION: HASIM NAHIT ERBIL AND HIS THOUGHTS ON TEACHING APPROACH

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Hasim Nahit Erbil (1880-1962), who is one of the most important figures of the Turkish history of thought in the Twentieth Century, sought various remedies for the liberation of the Ottomans, and he revealed various thoughts that are specific to the Turkish history of modernization. Beginning from the establishment of the Ottoman government, he treated the collapse reasons of the State with such topics as religion, military, racial, civilized, material, and the effect of other tribes. Hasim Nahit, who discussed the position of individual in the Ottoman State, attracted attention to the relationship of individual with family discipline, religion, and autocracy, and he fixed some determinations on the fields of education and teaching.

As Hasim Nahit considered that it should be taken the modern European technique in the subject of the issues, he went to benefit from Kazanlı Musa Carullah Begiev, who he sees him as "Mujaddid/Renovator" of Islam in the Turkish education system in the axis of scientific developments. Hasim Nahit, who attached special importance to the matter of Princes' education in the Reign, benefitted from the French in history education in primary schools, and he attached great importance to the subject of training and educating of individual and nation according to the changing world conditions and civilizational understanding in the periods of the Second Constitutional Monarch and Republic. Particularly, he discussed the freedom of ideas and learning, referring to the educational institutions. As Hasim Nahit, who drew attention to the importance of philosophy schools highlighting the mental thought instead of minded heads, attached a particular importance to young people, he put his finger on the function of producing "new ideas" and making researches.

In this paper, it was treated the various thoughts of Hasim Nahit, who draws attention to the importance of learning of knowledge in a true way in various sectors of the Turkish society from the Ottomans to the Republic and in different branches of science in addition to the significance of the development of the country.

Keywords: Hasim Nahit, Turkish Education, Modernization, History of Thought

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ABOUT THE CONCEPT OF PARTICLE: AN INTRODUCTION

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In this work we consider some important aspects characterizing the concept of particle at physical level. Starting by a possible definition, we deal with classical and quantum aspects of particles, as the reality and the dimensionality. We considering then theoretical developments related to the gravitational interaction about the notion of particle in quantum field theory (QFT) and how the concept of "point-like particle" changes in consideration to the recent theories of unification of forces in physics. The scientific rigorous but non-technical treatment followed in the paper allows the use of such material also as element of completion of the physical knowledges in the secondary school and as a pedagogical introduction to this interesting concept.

Keywords: Classical Physics; Quantum Physics; Reality; Quantum Field Theory; Unified Theories; Pedagogy; Philosophy of Science.

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ON THE PROBLEM OF MORAL PRINCIPLE AND MORAL VALUE

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ABSTRACT
In addition to evaluating the possibility for a universal morality in terms of moral principles; moral values, which are another problematic area of morality should be considered. This study includes an evaluation of ideas discussed by numerous philosophers and schools of philosophy on the universality and relativity of morality and values from the first age to the present time, within the context of moral education and development of the humans. Within the scope of axiological, deontological and theological moral act definitions, the concepts of good, virtue, justice, freedom and responsibility – being the very basis of moral principles – will be discussed within the scope of metaphysical moral context from ancient times up to now from different perspectives due to their essences.

INTRODUCTION

The concept of morals has existed in every age in the history of mankind and differed. There have been distant and even converse moral sentiments in the context of evaluating values, which value is preferred to which value and the variability of spiritual perceptions and needs both among societies, cultures and classes in the same century and in different centuries. Etymologically, the origin of the word “ahlak” (morals) derives from Arabian. The word “ahlak” is the plural version of the word *hulk* in Arabian which specifies a behaviour that a person conducts as it is required by their nature (Gündüz, 2010). The word ahlak (moral) which is derived from the word *ethos* in Greek that means character in Western languages and from the word *hulk* in Arabian that means “nature”, “temperament”, “character” in Turkish (Cevizci, 2006; Cevizci, 2008) has a similarity with the word "ethic" used in antiquity. The word “ethic” derives from “ethos” in Greek and the word “moral” derives from “mos” in Latin. Both “ethos” and “mos” signify custom, tradition, mores, habit, sensitivity that one is used to, etc (Özlem, 2004; Pieper, 1994). The significance of the concepts of morals/customs is more similar to habit, convention, and traditions (Pieper, 1994).

Source and Nature of Morals

The source of morals has been shaped with the presence of mankind whereas the nature of morals was born and has been shaped with human relationships and mutual rights and laws. This shaping has been different between ages and between societies living in the same age. However, morals did not lose any of its reason to exist, preserved its essentialness and kept similar action/significance fields always alive as courses of action. For instance, doing a kindness has always been an action without provision as required by the nature of morals and doing a kindness has always had significance for mankind. The fact that moral principles and rules have been specified before us or developed and changed by us should not harm the moral acceptance and togetherness – so that a common understanding could be reached and desired moral acceptance and togetherness could be kept alive. Source of morals and the values that feed them, apart from religion and God as its master, construct morals without showing any status favouritism among majority. This is because morals are related to the fact that people adopt/make others adopt the moral rules and principles and reflect them in their actions most appropriately, not related to their statuses. Therefore, no matter what our status is, living according to the best and most extensive moral principles and rules for a harmonious and fair life that is desired by everyone matches up with the most desirable moral understanding. In addition, as the presence and nature of morals could not be obtained with any financial power, it is inevitable that every willing conscience would reach it (Güngör, 2008).

The Subjectivity and Objectivity of Values

It is obvious that sophists, who were the first representatives of relativism in the history of philosophy, exhibited a subjective philosophical attitude as it will be understood from the statement, “Man is the measure of all things”, a saying by Protagoras.
On the problem of values, the sophists considered that humans qualify and attribute on the value, that is, they make sense of the object or phenomenon. Despite the fact that they did not directly discuss and deal with the

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problem of values, their relativist understanding prescribes them as the first defenders of relativity of values. Sophists, regarding the distinction between the natural one, *physei,* and the unnatural/artificial one, *thesei*, advocated that values primarily equality and justice are adherent to the field of *thesei*, in other words, the human and social field. In this respect, because the values are determined unnaturally/artificially by humans instead of a universal bindingness like the natural laws, they are reduced to level of a thought that does not apply to everyone all the time. Thus, this portrays the multiplicity of values in the social life and the actually experienced relativism in terms of values from the perspective of sophists. (Özlem, 2002; Yalçın, 2002)

Universal Moral Principles

The Principle of Good

Just like it includes the meaning of being useful and profitable in Turkish, the word "good" includes meanings of wealth and goods in its Latin root derivating the word "bonum". This etymological examination shows that being good creates a materialistic usefulness in its base (Hançerlioğlu, 1993). The concept or perception of good in the perception of humanity can be defined as a moral principle and value whose conformity with its essence is worrying, but which is assured since it will fit into its place among the moral maturities – making good an assuring principle and value ultimately as well. This concept or perception of "good" does not refer to someone else's good, but to the pure "good" making everyone unexceptionally satisfied or "good" which is the opposite of the concept "bad" that creates unpleasant condition for everyone. The desirability of good for everyone is related to the fact that everyone wants the good not just for themselves, but for everyone.

The Principle of Virtue

The coinage of the term virtue comes from the Greek word of *arete*, meaning the every beings' implementation of their own authentic function in the best way (Cevizci, 2005). According to Socrates, who used the word for the people and the activities of people, virtue is the competence giving one a potential to realize what is authentic and suitable for them and a potential to realize themselves. The principle of virtue represents the highest values from the moral perspective since many values being on the foreground, desired by everyone, praised, being good, just, tolerating, modest and etc. are each a virtue. Just like these concepts, other valuable concepts prescribe the people to do something good, the society to take their own interests on the foreground, and to act in a temperate manner. Habits strengthen the permanent placement of virtue in the human character and this finds possibility as required by human nature. Aristoteles, the most significant representative of the morality of virtue in the history of thought, defines the moral virtues as being between two binaries such as justice, bravery, temperance, etc (Cevizci, 2005). For Aristoteles, virtue is the medium between very much and very little (Hançerlioğlu, 1993).

The Principle of Justice

The concept of justice in subject is concerned with being subject to a philosophical questioning. The fact that everyone lives what they deserve shows that while some commit unjust acts, others are exposed to injustice. Just like the other moral principles, the principle of justice as a universal problem carries the sense of justice for everyone for the sake of being universal. Hence, the share people will get from justice may not be the same in terms of the needs and potential of people. Within the context of the principle of justice, for this reason, the needs and potential of others should be considered as in other moral values.

The Principle of Freedom

Freedom, generally, is an individual act by his/her own will, the ability to implement such acts in line with his/her own desires without being blocked by an external pressure or obstacle. Just like the other principles, it is inevitable that the principle of moral freedom confronts with a limitation that acknowledges other freedoms, while being nonrestrictive at the same time. The possibility of the moral principles applying for all the people for the sake of humanity, these being adopted and comprehended sufficiently can, of course, be provided through the principle or consciousness of freedom before all the virtues or principles. An obligation whose request solely depends on the human and for which he/she is responsible is a must for the moral conduct.

The Principle of Responsibility

One of the moral principles is the responsibility. It is asked for everyone to give an account for what they are responsible for. Responsibility is the subject not being independent from the consequence of their act, and the

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state to actualize their free will. Here, the individual is free, and even this is the moral freedom. Moral responsibility arises out of the consequence of this free act.

Deontological Moral Theories

Deontological moral theory, which is the moral obligation theory, is not a pleasure and happiness target for the "highest good" within the context of certain norms and principles according to the logic of "*what must be done*" based on the trueness and falseness of the moral action. It is the moral choice that the action is good and intention is suitable to the obligation; not a good or happy result. Therefore, deontological moral theories adopt actions that are suitable to the obligation and contradict with consequentialist moral theories. Within deontological moral theory; in line with norms and principles that have been specified for a desired universal order, obligation-based moral behaviour includes a sense of responsibility before conducting the action. Accordingly, an act conducted by every person within the framework of certain rules independently of the consequence of the act, performing the moral action obligatorily as required by the obligation considering the action 'just' reveals our moral liability. In other words, under any conditions and in any situation, "…only the righteousness of the moral action or its suitability to the obligation" (Cevizci, 2006) is emphasized and the obligation's liability and responsibility are performed. Liability and responsibility arise for the awareness of the obligation within the framework of moral norms and it is also revealed that as a voluntary being, a person performs an independent action. "Autonomy or freedom as the highest norm of principles and moral judgements that determine all kinds of will" (Pieper, 1994) dictates its acceptance and deontological theories may only aspire its purpose, in other words, everybody's conduct suitable to obligation.

Kant states that what is moral cannot depend on the consequence of the action or cannot pursue a purpose or happiness, as this is possible in moral norms and acceptances that are binding for everyone. "…he specifies that it would be wrong to attribute the base of ethics to a goal such as "happiness" which is never agreed by all. In other words, despite the fact that it is called "happiness", there is no "highest good" that everyone would agree on." (Özlem, 2004) Achieving happiness no matter what, reaching a maximum number in terms of pleasure and benefit that is not equal for everyone is not principally acceptable. In the Critique of Pure Reason, it is stated that a general goal order is essential for morality and a general sense of morality cannot be created by single persons according to their desires in the name of happiness, this can only be possible when everyone performs "what must be done" (Cevizci, 2010). "…the concept of happiness is so obscure that no matter how everyone wishes to achieve it, no one can tell for certain and with absolute consistency what they actually wish for and what they want." (Kant, 1982)

Moral values can only be found in the principle of willpower by leaving goals that may affect actions aside. The principle of willpower is respect to rules. When an action is directly right, it has an absolute value if it is required by the respect to rules (Akarsu, 1999).

Axiological Moral Theories

Axiological moral theory, the moral value theory, is a conception that, while being considerably close to the "theological ethics, is a different understanding, not only in terms of how good the consequences of a moral action are, but also in terms of putting forward being morally correct because of the value they contain or materialize as an essential" (Cevizci, 2005) .In axiological morality, the good and value concepts are on the foreground. It shows resemblance with the theological morality theory in the context of the problem of " … which values are of the basis, which thing or experiences are per say valuable or desirable in itself or alone" (Cevizci, 2008). Nonetheless, it does have no desire to expect for a consequence, that is, a purpose such as a theological morality during the course of an act or operation of any instrument. Therefore, the act itself is valuable, good and desirable in itself or alone in the context of means-ends relationship. In this context, a distinction is made between the values of moral or ethical values and instrumental values as well. Moral and instrumental values are different in theological and deontological moral theories. In theological morality, it is that whatever the targeted consequence maybe, it is good and including happiness, whereas the act is the instrument bringing it to the target. The instrument can be the norms in deontological morality; however, the actual thing is the moral values. These are that everyone, being autonomous beings, actualizes the norms in line with the assignment for everyone and maximizes this.

Teleological Moral Theories

Teleological moral theories are also moral value theories like axiological moral theories. "Erek (telos)" in Greek (Akarsu, 1998) means purpose or goal. The notion "teleological" refers to an attitude and significance intended for the consequence of the act in teleology. What is important in this moral theory is that the consequence

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provides the person with benefit or the action becomes moral as it provides benefit for the person without considering the morality of the action. In this context, teleological moral theory is "the normative sense of ethics which claims that what determines the value of the moral action is the consequence of the act and it is the reverse notion of deontological ethics in this respect" (Cevizci, 2010). As we specified earlier, in deontological moral theory, the action that is 'just' and 'suitable to obligation' for everyone within the frame of certain norms according to the sense of obligation is performed through the conduct of moral order and moral action rules. Unlike the teleological morality, an autonomous being should not ignore 'the principle of obligation' in the name of morality even if the consequence is unfavourable. However, teleological morality is based on the opinion that the morality of the action depends on the needs such as goodness, benefit, pleasure, happiness, etc. that are met by the consequence.

Deontological theories here only use deontic notions and focus only on the moral action's righteousness or its suitability to obligation. Secondly, deontological theories argue that certain acts should be performed as they are truly or essentially true or depend on principles; whereas, teleological theories claim that certain things or types of acts should be performed by considering their consequences (Cevizci, 2010).

Moral Value

Moral values, along with the other values, constitute a part of the value system of human; in other words, each value type is in an organic relationship with each other as being the part of the same whole (Çınar, 2013). The problem of moral value includes subjectivity and the objectivity of values, their structure, whether they carry meanings in an essentialist or an existential manner, and also the types of value valuing, valuation, evaluation, etc. and their discussion in many different contexts. In fact, all of these arguments have a morality in itself, either in a subjective or an objective manner since, most of the time, value being the topic of discussion is of its correlation between the orientation to itself or if by any chance, the person if they bear an essentialist existence with a choice, that is, a need or a desire to choose among numerous values ultimately. These choices, besides being on which value to choose over which other or on which value having a priority, show that a person – along with interest and needs – is in an attitude toward an evaluation on the good and bad, pleasing and satisfying among the others. Therefore, moral value has just been discussed not only on the concepts of being good and bad, but also on different concepts since the value is sought in happiness, beauty, pleasure, interest, etc. Nevertheless, most of the concepts such as pleasure, happiness, interests, beauty, etc. are formed based on the concepts of good and bad. All the "highest level of good", to "escape from pain", to be close to "aesthetic value", "to act in line with what is assigned" – are assessed as being close to the "good" and abstaining from "bad".

CONCLUSION

The problem of moral values includes several discussions related to values within various contexts such as the subjectivity and objectivity of values, structure of values, if they have an essential presence or they gain significance with the existence of man, in addition to value types such as evaluation, appraisal, assessment, etc. In fact, all these discussions have a certain morality within the frame of subjective and objective approaches within themselves. Most of the time when value is a subject of discussion, the tendency shown to this value or if it has an essential presence, its call to this essential presence is, after all, related to a selection made among many other values, in other words, related to a need or a desire.

As values are open to be discovered by people, it is inevitable that people make choices within this encompassing. In this case, the only possibility to set man free is the decision to accord to what these values demand from him or not. When man tends towards or agrees to what values demand from him, he starts his action in the context of the value that he has agreed which introduced him to a certain determination (Özlem, 2007).

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AKILLI KENT: ÖĞRETEN KENTLERDEN ÖĞRENEN KENTLİLERE

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ÖZET
"Akıllı Kent" uygulaması, kentsel hizmetlere ve kente ilişkin bilgilere zaman ve mekândan azade erişim altyapısının oluşturulması üzerine kurgulanan bir projedir. Bu uygulama, farklı ve geniş tabanlı uygulama bileşenlerini içeren, yoğun bilgi ve teknoloji kullanım esası üzerine tesis edilmesi öngörülen bir projedir. Kentsel alanın teknolojik sitemler bağlamında planlanıp yeniden düzenlemesini öngören bu uygulama, kent kullanım ve hizmet alım biçimini yeniden üretmiştir. Bu uygulama, öğreten ve öğrenen rolleriyle kent ve kent yerleşikleri arasında yeni bir ilişki biçimini geliştirmiştir. Üretilen bu yeni ilişki biçiminde göreli olarak kentlilerden bir kısmının kentsel alanı kullanma ve kentsel hizmetlerden yararlanma konusunda sorun yaşaması muhtemel görünmektedir.

Anahtar Kelimeler: Akıllı Kent, Bilişim Sistemleri, Kent Yönetimi, Kentsel Uyum Sorunu.

ABSTRACT
"Smart City" applications is a project built on the creation of urban services and information access infrastructure independent of time and space for the city. This applications contains diverse and broad-based application components is a project envisaged to be established on the basis of extensive knowledge and use of technology. The urban planning and providing for the reorganization of these applications in the context of technological systems and services received was regenerate urban use format. Who teach and learn the roles with this application, it has developed a new form of relationship between residents of the city and the city. Using some of the citizens of areas produced a relatively new form of relationship and it seems likely to have problems in using urban services.

Keywords: Smart City, Information Systems, Urban Governance, Urban Integration Problem.

GİRİŞ

"Akıllı Kent" uygulaması, son yıllarda adından sıkça söz ettiren ve teknolojik gelişmeler ekseninde birçok dünya kentinde uygulama alanı bulan kentsel üretim, büyüme ve ulaşım gibi nitelikli hizmetlere, zaman ve mekândan azade erişim altyapısının oluşturulması üzerine kurgulanan bir projedir. Küresel dünyanın rekabet halindeki kentleri küresel yarışta var olabilmek, varlığını bir adım daha öteye taşıyabilmek adına yapısal dokularını yenilemek durumundadır. Bu kentler, her alanda güçlü ve başarılı olmak için değişimi, yeniliği, bilim ve teknolojideki son gelişmelerden yararlanmayı zorunlu görmektedir, görmelidirler de. Bilimsel ve teknolojik gelişmeler ekseninde kamusal işlem ve hizmetlerin niteliği ile kentsel alanın alt ve üst fiziki donanımı/dokusu değişmektedir. Gündelik hayatı kolaylaştıran, ancak kentsel alan kullanım biçimini de yeniden üreten kentsel donatılar, bu süreçte kent kullanıcıların yaşam biçimini ve kentle olan ilişkilerini de yeniden üretmiştir. Bu bağlamda kent ve kent yerleşikleri arasında öğreten ve öğrenen rolleriyle yeni bir ilişki biçiminin gelişti söylenebilir. Bu çalışmada "Akıllı Kent" uygulamasının ne olduğu ve uygulanabilirliği ile bu bağlamda oluşan yeni bir kent tezahürü/tahayyülü irdelenmiş ve ardından söz konusu uygulamanın yeniden ürettiği kentsel yapı ve yaşam biçimi ile kentlilerin kentle bütünleşme sorunu, kuramsal bir düzlemde tartışmaya açılmıştır.

"AKILLI KENT" KAVRAMI VE UYGULAMASI ÜZERİNE

Kentlerde, özellikle metropol kentlerde yapısal anlamda gerçekleştirilen her yeni uygulamanın özünde artış eğilimindeki nüfus yoğunluğu ve göreli olarak bu yoğunluğun tetiklediği ulaşım, enerji, su, sağlık, denetimsiz yapılaşma, çevre ve güvenlik gibi kent işlevlerine ilişkin sorunlar bulunur. Bu sorunlar, kentsel alanda yaşam kalitesini aşağı çeken unsurlardır. "Akıllı Kent" uygulaması, kentlerde yaşanan söz konusu bu sorunları çözme, gündelik kentsel pratikleri kolaylaştırma, zamanı daha verimli kullanma amacıyla geliştirilen ve bileşim sistemleri üzerine temellendirilen bir kent planlama ve düzenleme uygulamasıdır. Kentsel alan ya da mekân, sınırları belli olan, toplumsal ve fiziksel süreçleri içinde barındıran bir muhtevayı içerir. Nüfus baskısının hızla arttığı sınırlı bir mekânda topografyanın izin verdiği ölçüde yatay anlamda kentsel genişleme söz konusu olur. Ne var ki, sınırlı (toprak/arazi) mekan, kentsel hizmetlerde yüksek maliyet, kent ekonomisinin işlevselliği ve yapı sektöründe bilgi teknolojisinin yoğun kullanımı dikey genişlemeyi daha ussal bir seçenek haline getirmiştir. Bu anlamda gelişmiş dünya ülkelerinin rekabet halindeki metropol kentlerinde yükselen devasa kuleler (yüksek teknoloji donanımlı çok katlı yapılar), duble yollar, köprüler, araç ve yayalara ilişkin alt ve üst

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geçitler/bağlantılar/İstasyonlar/park alanları modern kentlerin başlıca simgeleri ve dikey kentsel genişlemenin kristalleşmiş modern yapı örnekleri olarak belirmiştir.

Günümüzde kentlerin yaşadıkları sorunları çözmeyi ve kentlilerin yaşam kalitesini artırmayı amaçlayan "Akıllı Kent" uygulaması, kavramsal olarak "Smart City" kavramından çevrilerek Türkçeye kazandırılmıştır (Kalkınma Bakanlığı, 2013). Son yıllarda kentsel alanda bir planlama ve tasarım uygulaması olarak belirginlik kazanan "Akıllı Kent (Smart City)" kavramı, bir kentin birçok alanda gösterdiği kabiliyet olarak tanımlanmıştır (Giffinger, 2007). 1990'lı yılların başında "Yeni Kentleşme Hareketi (New Urbanism)" ile başlayan Sürdürülebilir Kentler (Sustainable Cities), Ekolojik Kentler (Ecological Cities/Green Cities), Akıllı Büyüme (Smart Growth), Yavaş Kentler (Slow Cities), Düşük Karbon Kentler (Low Carbon Cities), Yaşanabilir Kentler (Liveable Cities), Dijital Kentler (Digital Cities) ve Akıllı Kent Girişimleri (Smart Cities Initiatives) ile devam eden planlama ve tasarım örnekleri benzer kaygılarla benzer çözümler üreten planlama yaklaşımlarıdır (Sınmaz, 2013: 77). Son yıllarda gelişen söz konusu bu planlama yaklaşımları ile "Akıllı Kent" uygulamaları, bir bütün olarak akıllı bir yerleşmenin nitel ve nicel dokusunu yeniden tanımlayan kentsel düzenlemeleri oluşturmuştur.

Bir kentin akıllı bir yerleşme olarak tanımlanabilmesi için bir takım ölçütlere sahip olması gerektiği belirtilir. Viyana Teknik Üniversitesi Bölge Bilimi'nde yapılan bir araştırmada geleneksel ve neo-klasik kentsel büyüme ve kalkınma kuramları ışığında "akıllı ekonomi, akıllı hareketlilik, akıllı çevre, akıllı toplum, akıllı yaşam ve akıllı yönetişim" biçiminde akıllı bir yerleşmeye ilişkin yedi ölçüt belirlenmiştir (Akgün, 2012: 7). Bir başka çalışmada akıllı bir kentin bileşenleri güvenilir enerji ve su tedariki, kent ve kentler arası verimli ulaşım, verimli kamusal yönetim, kamusal verilere yedi gün/yirmi dört saat kesintisiz erişim, yüksek kalitede entelektüel sosyal sermaye, yarışmacı üretici ve açık yerel ekonomi olarak sıralanmıştır (Lugaric, 2015). "Akıllı Kent" uygulaması, özünde kentlerin doğa ve insan için azami verimlilik sağlayacak biçimde yeniden düzenlenip örgütlenmesini içeren; insan ve sosyal sermayeye yatırım yapmayı önceleyen; modern ulaşım ve iletişime ilişkin teknolojik altyapı oluşturmayı hedefleyen; sürdürülebilir ekonomik büyüme ve yüksek yaşam kalitesi ile doğal kaynakların ussal yönetimini ve katılımcı yönetişim anlayışını yerleşik uygulama haline getirmeyi ve bu bağlamda kent gelişimine kapsayıcı ve nitelikli bir bakış açısı kazandırmayı hedefleyen bir uygulama olarak ifade edilmiştir (Akgün, 2012: 7; Sınmaz, 2013: 77).

"Akıllı Kent" uygulaması, bilgi/bilişim sistemleri üzerine kurgulanmıştır. Bileşim sistemleri, bir organizasyonda karar verme sürecini destekleyen, bilginin yayınlanmasını sağlayan, verileri toplayan, istendiğinde geri sunan ve işleyen genel bir sistem olarak tanımlanır (Laudon, 2015: 16). Bir organizasyonda bilişim sistemlerinin kurumsal, yönetsel ve teknolojik bilgi boyutları bulunmaktadır. Kent özelinde bileşim sistemleri, farklı hizmet alanlarında kentlerde uygulanmakta olan parçalı otomasyon sitemlerinin bir ağ biçiminde düzenlenip koordine edildiği bir üst örüntü/yönetim odağı biçiminde tanımlanabilir. Bu bağlamda bileşim sistemlerinin üzerinde temellendiği otomasyon sistemleri, kentsel gelişme ekseninde dereceli olarak kent yaşamına giren ve gündelik yaşam üzerinde belirleyici olan akıllı şebekelerden oluşmaktadır. Otomasyon sistemleri endüstriyel, tarımsal, yönetsel ve bilimsel işlerin yürütülmesinde insan müdahalesinin bir ölçüde veya tamamen ortadan kaldırılması, yani işlemin otomatikleşme haliyle ilgilidir. Bu yönüyle otomasyon algılayıcılar, koşullayıcılar, yükselteçler, düzenleyiciler, bilgi kaynakları ve nihayet bilgisayarlı donanım veya bilgisayarın bizzat kendisi olarak belirir (Otomasyon, 2015). Günümüzde fabrika üretim sistemleri ya da otomasyon sitemleri; akıllı elektrik dağıtım şebekesi ve aydınlatma otomasyon sistemleri; trafik akışını kolaylaştıran otomasyon sistemleri; yangın söndüren otomasyon sistemi; deprem için uyarı ve güvenlik otomasyon sistemi; akıllı ulaştırma sistemleri; barınma ve çalışma amaçlı binalardaki enerji verimliliğinin artırılması amacıyla teknoloji destekli akıllı şebekeler/sistemler gündelik yaşamın neredeyse tüm evrelerinde yerini almış durumdadır (Otomasyon Sistemleri, 2015; Kalkınma Bakanlığı, 2013: 89-90). Buna göre bir işin insan ile makine arasında paylaşılması biçiminde de tanımlanan (Otomasyon Sistemleri, 2015) otomasyon sistemleri, bir bütün olarak aynı zamanda "Akıllı Kent" uygulamasına içkindir. Çünkü kentsel alanda bilgi ve teknoloji üzerine tesis edilen bu uygulamaların hepsi kent yerleşiklerin gündelik yaşam pratiklerini değiştiren, yaşam biçimini belirleyen ve yeniden üreten akıllı sistemler olarak toplumsal süreçte yerini sağlamlaştırmaktadır.

Özellikle metropol kentlerde farklı alanlarda birbirinden bağımsız olarak uygulama alanı bulan ve bilgiye dayalı teknolojik gelişmeler ekseninde çeşitlenip yaygınlık kazanan otomasyon sistemleri, günümüzde "Akıllı Kent" uygulaması bağlamında kent hatta bölge ölçeğinde entegre edilmek istenmektedir. Böylece kent yönetimleri için kamusal alana içkin bilgilerin paylaşımı ve bu bilgilere/hizmetlere erişim ile kamusal hizmet uygulamasını parçacıl bir yapıdan kurtarmak ve bunları bir merkezden yönetmek ve kontrol etmek mümkün olacaktır. Bir anlamda kent yönetimleri için bu uygulamanın, bir organizasyonda kullanılan bileşim sistemleriyle eşdeğer olduğunu söylemek mümkündür. Çünkü bir organizasyonda uygulanan bilgi ya da bilişim sistemleri bilginin erişilmesi, toplanması, saklanması, işlenmesi ve dağıtılmasıyla ilgili teknolojiler ile sistem üzerindeki bilgilerin tümünü içerir, tanımlar (Laudon, 2015: 30). Dolayısıyla bu uygulamayı da bileşim sistemlerinin kent ölçeğinde uygulanması biçiminde düşünmek olası görünmektedir. Kalkınma Bakanlığı tarafından yapılan bir çalışmaya göre Türkiye'de "Akıllı Kent" çözümleri, özellikle ülke nüfusunun göreli olarak %20'sini barındıran İstanbul ile

kısmi olarak diğer büyük kentler olan Konya, İzmir, Kocaeli, Eskişehir, Antalya, Ankara, Bursa, Gaziantep ve Manisa'da sadece kentsel hizmetler, ulaşım ve su hizmetleri alanında uygulanmaya başlanmıştır (Kalkınma Bakanlığı, 2013: 10; Akgül, 2015: 5). Ayrıca kent bilgi sistemleri ve coğrafi bilgi sistemleri, ülkemizde bu uygulamayı destekleyip pekiştiren ilk kapsamlı girişimler olarak gösterilebilir. Kent bilgi sistemleri, kente ve kentlerde yaşayan vatandaşlara ait bilgilerin toplanmasına ve yönetilmesine; coğrafi bilgi sistemleri ise mekâna ve konuma dayalı karar verme süreçlerinde coğrafi verilerin toplanmasına, işlenmesine, yönetilmesine ve analiz edilmesine olanak tanır (Kalkınma Bakanlığı, 2013: 9; Akgül, 2015: 1). Hali hazırda bazı kentlerde uygulanmakta olan kent ve coğrafi bilgi sistemleri, "Akıllı Kent" uygulaması gibi kapsamlı bir projenin hayata geçirilmesine ilişkin kurulacak sistemin temel altyapını oluşturacak önemli parçalar olması dolayısıyla bu uygulama kapsamında kritik bir öneme sahip olduğu söylenebilir.

"AKILLI KENT" UYGULAMASI ÜZERİNDEN YENİ BİR KENT TAHAYYÜLÜNE DOĞRU

Bilgi ve iletişim teknolojilerinde gerçekleşen gelişmeler üzerinden kentsel sorunlara ilişkin geliştirilen çözüm seçenekleri, kentsel alanın kullanım biçiminde ve kentsel hizmet alım biçiminde farklılıklar yaratmıştır. Kent ölçeğinde oluşturulması tasarlanan bileşim sistemleri üzerinden kentsel dokuya sirayet eden otomasyon sistemleri, klasik "kent" anlayışını dönüştürmeye, kent kullanım biçimini değiştirmeye başlamış ve kentsel alanın yeniden planlanıp düzenlenmesini gerektirmiştir. Bu uygulama her türlü yönetsel, kurumsal, ekonomik, konumsal, sosyo-kültürel, fiziki ve coğrafi bilgilere erişimi, bir veri tabanı üzerinden internet bağlantısıyla erişilir kılmayı amaçlamaktadır. Söz konusu kamusal bilgi ve hizmetlere internet bağlantısıyla bir veri tabanı üzerinden erişimin zaman ve mekândan azade biçimde gerçekleşmesi uygulamanın en çarpıcı yönünü oluşturmaktadır. Bu uygulamayla toplu taşıma (otobüs/metro/tramvay) sistemleri, zaman ve güzergâh esasına göre koordineli bir biçimde düzenlenebilmekte ve toplu taşıma sistemleri arasında aktarma yapmak mümkün olmaktadır. Kentin sokak haritası üzerinden toplu taşıma sistemlerinin tüm hatlarını, güzergâhlarını, indir-bindir duraklarını ve hatlar arasında aktarma istasyonları ile kent dışı bağlantı güzergâhlarını bir bütün olarak görmek mümkün olmaktadır. Özellikle ana arterler "yaya yolu-koşu parkuru", "bisiklet-kaykay-paten-ginger", "otobüs-taksi gibi toplu taşıma araçları", "otomobil gibi diğer taşıtlar" biçiminde kullanım amacına göre şeritlere bölmek mümkün olmaktadır. Toplu taşıma sisteminde yolcunun rahat, güvenli ve seri geçişini sağlayacak gerekli otomasyon (yürüyen merdiven, asansör, kart okuyucu turnike, bilet satış makineleri) sistemlerini oluşturmak mümkün olmaktadır. Kent güvenliğine ilişkin mobese sistemi, yolbul sistemi, trafik akış durumu, hava durumuna ilişkin bilgilere erişim ve su, elektrik, doğalgaz gibi çeşitli hizmet alımlarına ilişkin faturaları yedi gün/yirmi dört saat internet üzerinden ödeme olanağı sağlanmaktadır. Hastanelerin, nöbetçi eczanelerin konum ve çalışma saatlerine online erişim mümkün olabilmektedir. Bir kente ilişkin tarihi ve doğal değerlere, eğlenme ve dinlenme alanlarına, alış-veriş merkezleri ve caddelerine, yeme-içme ve konaklama ile bunların konumsal durumuna, çalışma gün ve saatlerine, hizmet alım maliyetine ve kentlerin günlük hava raporuna ilişkin bilgiye internet üzerinden erişim olanağı sağlanabilmektedir. Bir binada kurulacak otomasyon sitemi ile bina içinde birçok aygıtın kullanılabilmesi, binaya giriş çıkışın kontrol altında tutulması, binayı aydınlatma ve havalandırma ile ısıtma ve soğutma işlevi, otomasyon sistemleri üzerinden uzaktan erişimle yapılabilmektedir. Özetle kent ölçeğinde kamusal yaşama ilişkin tüm verilerin dijital olarak toplanması, bu verilerin saklanması ve söz konusu verilere zaman ve mekândan azade erişim olanağının yaratılması, kentsel yaşamı kolaylaştırıp daha nitelikli kılabilir. Ancak bu uygulamada kurumsal ve bireysel anlamda bir takım sorunların yaşanması da kaçınılmaz görünmektedir.

"AKILLI KENT" UYGULAMASINDA ÖĞRETEN VE ÖĞRENEN OLMAK

"Akıllı Kent" uygulamasında kullanılan otomasyon sistemleri, diğer bir ifadeyle akıllı sistemler, toplumlarda ve kent yaşamında davranış değişikliği oluşturur (Akgül, 2015: 1). Bu uygulamalar, kentsel ilişkileri ve kent kullanım biçimini yeniden üretir. Laborit (1990: 12, 21, 27, 98)'e göre, insanın çevresini değiştirmesi bir olgudur ve nihayetinde kent, bir insan ürünüdür. Bu durum, kent ve kentliler arasındaki toplumsal geçişkenlik sürecinin yönünü ve niteliğini göstermesi açısından ayrıca önemlidir. Kent ve kentliler arasındaki ilişki bağlamında gerçekleşen geçişkenlikte üretilen nesnel ve öznel değerler, geçmiş ile gelecek arasındaki bağlamı oluşturur. Yazara göre kent, bir toplumsal kümenin yani kentlilerin ürününü simgeler ve bu anlamda kent, bir etkileyenin "etki"sidir. "Etkileyen" kavramıyla vurgulanmak istenen toplumsal kümedir, yani kent yerleşikleridir. Bu bağlam içinde kent yerleşiklerinin güttüğü ereğin kent kurmak olmadığı; kentlilerin esas ereğinin yaşamak, yapısını sürdürmek, belki de mevcudiyetini korumak olduğu belirtilmiştir. Bu durumda yapısını, onu üretip ondan yararlanan insan kümesi yeni kent yerleşikleri belirliyor ise bu anlamda kent, canlı bir varlık olamaz; ancak toplumsal bir varlığın kendi yapısını denetlemek ve ayakta tutmak üzere kullandığı bir "araç" olabilir. Bu bağlamda araçsallaştırılan kentin aynı zamanda bir giysi, bir zırh, bir sınırlayıcı, bir alışveriş yeri, bir zar olduğu da belirtilmiş ve bu yaklaşım çerçevesinde bir nesne olarak kentin edilgenliği esas alınmıştır. Buna karşın kente canlı bir organizma gözüyle bakanlar, her ne kadar insan ürünü olsa da ona, toplumsal süreçte göreli bir belirleyicilik atfeder ve kenti, bir özne olarak esas alır. Diğer bir ifadeyle kentin toplumsal değişim sürecinde göreli bir belirleyiciliğinin söz konusu olduğuna inananlar, kentin, kent yerleşikleri üzerinde belli bir etkisinin bulunduğu saikıyla kente yaklaşırlar. Bir anlamda kent ile kentliler arasındaki geçişkenlik halinin kabulü ve

geçişkenlik halinin karşılıklı/mütekabil bağlamına rağmen bilgiye dayalı kentsel teknolojinin devingenliği karşısında bireyin zayıflığı bir özne/belirleyici/öğreten olarak kenti, kentsel alanda etkin ve belirleyici kılması kaçınılmazdır.

Bir toplumun ürettiği nesnel ve özel değerler ve bu değerlerin biriktirilip yeniden üretildiği ve aktarıldığı yerleşim alanları olarak kentler, medeniyetin yani gelişim ve değişimin odak noktası olarak bir kimlik kazanır. Medeniyetlerin tarihi aşağı yukarı kentlerin tarihi (Kıray, 2007: 9-10) olduğuna göre bu kimlik, onu, kırsaldan ayırıcı kılar; farklılaşma ve örgütlenmeyi de içeren kente içkin nicel ve nitel özellikler yansıtır. "Kent, nasıl ve hangi araçlarla üretilir" sorusu, "merkezi ya da yerel iktidarı elinde bulunduran siyasi erk(ler) (kent yöneticileri), kent tasarımcıları (mimarlar), tüccar-esnaf-sanayici gibi girişimciler, örgütlü sivil inisiyatifler ve örgütsüz kent yerleşikleri biçiminde geniş bir çevrenin yani kent aktörlerinin göreli tasarrufu sonucu veya bunların kentle olan temas derecesi ve niteliği ile üretilir" biçiminde yanıtlanabilir. Ancak kenti, kent yerleşiklerinin yaşamı üzerinde belirleyici kılan ve ona özne rolünü kazandıran esas unsur, bilgi ve teknolojik gelişmeler bağlamında geliştirilen ve kentsel yaşamı kolaylaştırmayı hedefleyen kent otomasyon sistemleridir. Kentlerin gelişmişlik düzeyi bağlamında kentsel alanda nicel ve nitel açıdan farklılık sergileyen bu sistemleri, "Akıllı Kent" uygulaması gibi çarpıcı bir girişim bağlamında bir merkezden koordineli olarak yönetmek ve kentin tamamında işlevsel hale getirmek çabası, şüphesiz kent ile kentliler arasındaki ilişki biçimini de yeniden üretecektir. Dolayısıyla kent ile kent yerleşikleri arasındaki ilişki biçimini yeniden üreten otomasyon sistemleriyle donatılmış yeni bir kent dokusu, kenti, kentsel alanda belirleyici, hatta yönlendirici kılıp kent pratikleri üzerinde onu, başlı başına bir özne haline getirmesi muhtemel görünmektedir. Şöyle ki, "Akıllı Kent" uygulama bağlamında kentsel dokuda hayata geçirilmek istenen ya da hali hazırda uygulanmakta olan otomasyon sistemleri, kamusal işlem ve hizmetlere erişim ile bunlardan yararlanma biçimini ve kentsel alanın alt ve üst fiziki donanımını dereceli olarak değiştirmeye başlayacaktır. Metro, metrobüs gibi ulaşım araçları, yürüyen merdivenler, asansörler, güvenlik amaçlı mobese kameraları, en uygun yolu bulmaya yardımcı yolbul (navigasyon) aygıtı, teknoloji donanımlı akıllı binalar ile birçok farklı alanda kullanılan akıllı otomasyon sitemleri kentsel gündelik yaşamın bir parçası durumuna gelmiş bulunmaktadır. Toplumsal yaşamı kolaylaştıran bu sistemler, yol ve hava durumu, yedi gün/yirmi dört saat internet üzerinden online fatura ödeme gibi kent ulaşım/güvenlik/bilgi donanımları, kent kullanım biçimini yeniden üretmektedir. Bu gelişmeler ekseninde kent yerleşiklerinin ya da kullanıcılarının kent üzerindeki belirleyiciliği göreli olarak zayıflayacağı ve edilgen konumlarının belirginleşeceği; ayrıca otomasyon sistemleriyle donatılmış kentsel alanı kullanabilmek için söz konusu bu sistemlerin nasıl kullanıldığını öğrenmek zorunda kalacakları savlanabilir. Bu bağlamda gündelik yaşam pratiklerini kolaylaştırma adına geliştirilen bilgi ve teknoloji donanımlı bu sistemleri kullanmak ve gündelik yaşamına taşımak zorunda kalacak olan kent yerleşiklerinin hepsi değilse bile bunlardan önemli bir kısmının söz konusu bu yeni teknolojiyi kullanma ve benimseme konusunda sorun yaşaması muhtemel görünmektedir.

"Akıllı Kent" uygulaması, toplumsal yaşama nüfuz edip kentsel hizmet sunum ve alım biçimini yeniden ürettiğine göre bu uygulamanın kent yönetimi ve kentliler açısından bir takım olası olumlu ve olumsuz yönlerinden söz etmek mümkün görünmektedir. En başta bu uygulama, kentlilerle bütünleşen, onların talep ve beklentilerini dikkate alan bir uygulama olarak tanımlanır. Bu uygulamanın hayata geçirilmesi durumunda mevcut ve olası kentsel sorunlar, zamanında ve yerinde tespit edilebilir; sorunlara ilişkin yapıcı çözümler, zaman kaybı yaşanmadan etkin bir biçimde üretilebilir. Daha da önemlisi kentsel politika oluşturma ve kente ilişkin karar alma süreçlerinde kentlilerin eğilimini dikkate değer bulma ve bu eğilimleri karar alma süreçlerine dâhil etme yaklaşımı, söz konusu uygulama üzerinden yerleşik uygulamaya dönüştürülebilir. Buna karşın kent yönetimlerinin, "Akıllı Kent" çözümlerini hayata geçirirken finansman, standartlarda uyum ve entegrasyon gibi önemli sorunlarla karşı karşıya kalabileceği belirtilmiştir (Kalkınma Bakanlığı, 2013: 10). Bu uygulama hayata geçirilirken yeni teknolojik ve ağ altyapısının olası olumsuz etkilerinin göz ardı edilebileceği; potansiyel kentsel kalkınma alternatiflerinin değerlendirilemeyeceği; "Akıllı Kent" odaklı stratejilerin özünde iş-odaklı, sermaye-odaklı stratejiler olması dolayısıyla bu anlamda uzun vadede kayıplara neden olabileceği belirtilmiştir (Akgün, 2012: 7). Söz konusu uygulamaya ilişkin kent yerleşikleri açısından da bir takım olumsuz sonuçlarının muhtemel dâhilinde olduğu söylenebilir. Örneğin teknolojinin kentsel hayatın neredeyse tüm dokusuna nüfuz etmesi dolayısıyla bu uygulama, tüm kentlilerin hayatını aynı derecede kolaylaştırmayabilir. Dahası bu uygulama bağlamında kent dokusuna sirayet eden otomasyon sistemleri, kentsel alanı kullanmak zorunda olan kent yerleşiklerinden bazılarını yardım almaksızın evinden ya da sokağından çıkamaz duruma getirebilir. Kentlileşme yani kentsel uyum, bir süreç dâhilinde kente içkin alışkanlıkları benimseme, içselleştirme ve bunları davranışlarına aktarma durumuyla ilgilidir. Bir ya da birkaç kuşaktır kente yaşayanlardan göreli olarak küçük bir kısmının teknolojiyi kullanmayı reddetmesi dışında çoğunluğun kentsel alandaki yeniliklere ilişkin uyum sorunu yaşayacağına ihtimal vermek zor olmakla birlikte, aynı savı, kente yeni göç edenler içinde de ileri sürmek pek olası görünmemektedir. Buna göre köyden kente yakın tarihte göç edenler, kentsel alanı kullanma konusunda henüz belli bir düzeye erişmemiş iken, yoğun bilgi ve teknolojiye dayalı otomasyon sitemlerini kullanmak durumunda kalmaları, uyum sorunu yaşayacaklarına dair güçlü bir emaredir. Bu durumda bazılarımız için kent,

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insan hayatını kolaylaştıran bir yapı olmaktan uzaklaşıp insanı sınırlandıran ve hareket alanını kısıtlayan sevimsiz bir yapıya dönüşebilir.

SONUÇ

"Akıllı Kent" uygulaması, son yıllarda adından sıkça söz ettiren ve teknolojik gelişmeler ekseninde gelişmiş birçok dünya kentinde uygulama alanı bulan bir projedir. Kent yönetimleri tarafından bu uygulamanın öngörüldüğü gibi hayata geçirilmesiyle farklı alanlara ilişkin bilgi sistemleri tek bir çatı altında toplamak mümkün olacaktır. Böylece kentsel alana ilişkin her türlü kamusal bilgileri, bir veri tabanı üzerinden zaman ve mekândan azade kentlilerin kullanımına açmak mümkün olacaktır. "Akıllı Kent" uygulamasından beklenilen söz konusu toplumsal/bireysel yararların yanı sıra olası toplumsal/bireysel zararlar da literatürde tartışılan konular arasındadır. Diğer bir ifadeyle teknolojik gelişmeler bağlamında dereceli olarak kentsel dokuya sirayet eden otomasyon sistemlerinin tek bir merkezden koordineli biçimde yönetilerek kentsel alanın bu bağlamda yeniden planlanıp düzenlenmesi dolayısıyla bu uygulamanın çok sayıda fayda sağlayacağı, ancak özellikle kentsel alanda kullanılan teknolojiye uyum sağlama konusunda sorunların da yaşanabileceği vurgulanmalıdır. Bu uygulamada bir birini etkileyip yeniden üreten ilişki biçiminde bir tarafta yeni bilgi ve teknoloji ağırlıklı donanımlarla donatılıp bunları kentlilerin kullanımına sunmaya hazır kentler bulunurken, diğer tarafta ise söz konusu yenilikleri öğrenip deneyimleyerek bunları gündelik hayatına taşımaya hazır ya da taşımak zorunda kalan kentliler bulunmaktadır. Buna göre kent kullanım ve hizmet alım biçimini yeniden belirleyen bu uygulama, kent ile kent yerleşikleri arasındaki ilişki biçimini de yeniden üretecek olması dolayısıyla kentsel alanda uyum sorununun yaşanması kuvvetle muhtemel görünmektedir.

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ALI KEMAL'S ATTENTION ON THE WESTERN LITERATURE AND EDUCATION

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Ali Kemal, who was born in Istanbul in 1868, is one of the most intellectual figures who were trained by the Ottoman Empire in the Nineteenth Century. Ali Kemal, who managed to make a name for him in the fields of politics and literature frequently, felt the need to escape twice in Paris because of inspiring by the era's conditions. He remains for one year in Paris where he contacts at first in 1887. In the second round of visiting to Paris in 1895, he would stay away from Istanbul until the Proclamation of *the Constitutional Monarchy II*. Ali Kemal does not stand idly in the years of Paris; when he advances his foreign language on the one hand, he endeavored to follow the literature courses in the Sorbonne University on the other hand. After Ali Kemal published his observations about art, literature, history, and social life that belong to this period of time in *the Ikdam Newspaper*, he brings together them in his books called as "*Sorbonne Dârülfünûnu'nda Edebiyat-ı Hakikiyye Dersleri"* (1896) and "*Paris Musahabeleri"* (1898). Under the study, we will try to assess the attention and determination of Ali Kemal, who is significant and remarkable for his era, about the Western Literature and Education that he gave place to his two works.

Keywords: Ali Kemal, Literature, Education, Art, History

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ALMANCAYI İKİNCİ YABANCI DİL OLARAK ÖĞRENEN ÖĞRENCİLERİN DİLSEL BECERİ VE KÜLTÜREL BİLGİLERİ: CUMHURİYET ÜNİVERSİTESİ ALMAN DİLİ VE EDEBİYATI BÖLÜMÜNDE BİR ÖRNEK

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ÖZET
Bilim ve teknolojideki ilerlemeler sayesinde ülkeler arasındaki sınırların neredeyse tamamen ortadan kalktığı bir dünyada yabancı dil öğrenmek şüphesiz ki gittikçe önem kazanmaktadır. Yabancı dile verilen önem ülkelerin eğitim sistemlerinde bazı değişiklikleri de beraberinde getirmiştir. Söz konusu değişikliklerden Türkiye de büyük ölçüde etkilenmiştir. Bilindiği gibi iyi bir dil eğitimi için hedef dilin kültürel özelliklerini bilmek hem öğrenenlere hem de öğretenlere büyük faydalar sağlamaktadır. Ayrıca dil öğrenme sürecine olumlu bir ivme kazandırmaktadır. Buna karşın bu süreçte öğrenenlerin farklı nedenlerle de olsa birtakım zorluklarla karşılaşması muhtemeldir.

Bu araştırmanın amacı, yabancı dil öğrenen öğrencilerin eğitimleri boyunca geliştirdikleri dil becerilerinin ve hedef dilin kültürü hakkındaki bilgilerinin mevcut durumlarını, karşılaştıkları kültürel ve kültürlerarası sorunların neler olduğunu ve bütün bunların öğrencilerin cinsiyet ve eğitim durumlarına göre ne gibi farklılıklar gösterdiğini belirlemektir.

Bu çalışmada Sivas Cumhuriyet Üniversitesi Alman Dili ve Edebiyatı Bölümü öğrencilerinin dilsel ve kültürel becerileri incelenmiştir. Çalışma kapsamında 1. 2. 3. ve 4. sınıf öğrencilerine uygulanan anket aracılığıyla öğrencilerin var olan dilsel becerileri ve yabancı dilin kültürü hakkındaki bilgileri araştırılmıştır.

Anahtar Sözcükler: Yabancı Dil Olarak Almanca, Kültür Bilgisi, Dilsel Beceri, Dil Öğretimi

1. GİRİŞ

Yabancı dil bilmenin günümüzde önemli bir yere sahip olduğu bütün çalışmalarda karşımıza çıkmaktadır. Çünkü yabancı dil öğrenmenin ve öğretmenin her geçen gün daha da önem kazandığı bir dönemde bulunmaktayız. Bilim ve teknolojideki hızlı ilerleme ve gelişmeler neticesinde insanların kendilerine yeni yaşam alanları bulma ve yeni deneyimler kazanma çabaları onları farklı diller öğrenmeye yönlendirmiştir. İnsanlar artık sadece birlikte yaşadığı kişilerle değil dünyanın farklı noktalarında bulunan insanlarla da anında iletişim kurabilmekte, adeta zaman ve mekâna meydan okumaktadırlar. Bütün bunlar ise dil sayesinde mümkün olmaktadır. Fakat yabancı dilin kurallarını öğrenmek ve öğretmek o dili öğrenmeye yetmemektedir. Bir yabancı dili bilmek demek sadece söz konusu dildeki gramer kurallarını bilerek hatasız cümleler kurmak anlamına gelmemektedir. Bir dili tam anlamıyla bilmek o dilin ait olduğu kültürel ve toplumsal değerleri de iyi bilmekle olur, aksi takdirde iletişimde kırılmalar meydana gelmesi kaçınılmazdır. Yabancı dil öğreniminde birey başka bir kültüre ve topluma ait olan yetenek, beceri ve özellikleri de kazanmaya çalışmaktadır (Acat/Demiral, 2002:314). Bu anlamda yabancı dilin kültürel özelliklerine de yer vermek gerekmektedir. Çünkü kültür ve dil birbirinden ayrılmaz bir bütündür.

Internet kullanımındaki artış yabancı dil bilmenin ne kadar önemli olduğunu ortaya koymuştur ve internet kullanıcılarının sayısının artmasıyla insanlar her geçen gün farklı kişilerle tanışarak iletişim kurmaya başlamıştır. Akpınar Dellal/ Bora Günak' ın (2009,22) da ifade ettiği gibi insanoğlu dil sayesinde birlikte yaşadığı kişilerle iletişim kurmuştur fakat gelişen iletişim olanakları sayesinde ilişkiler yumağı haline dönüşen dünyayı anlayarak sorgulayıp şekillendirebilmek için tek bir yabancı dil yeterli olmamış ve çok dil öğrenme ihtiyacı ortaya çıkmıştır. Çok dil bilmek bu dillerin kültürlerini de yakından tanımayı gerektirmektedir. Bu nedenle internet kullanıcılarının kültürel farklılıkları ve ortaklıkları kavramaları için yabancı iyi bir dil bilgisine sahip olmaları gerekmektedir (Kınsız/Çetintaş, 2011: 104). Bunun yanında bir dili öğrenmek için öğrencilerinde çabası önemlidir. Başarısını arttırmak için öğrenme etkinliklerine her zaman katılımcı bir tutum sergileyen, öğrenmeye çalıştığı dili tıpkı bir çocuğun anadilini öğrenirken yaptığı gibi yavaş yavaş, sabırla keşfetmeye çalışan, hedef dilin anadilinden farklı yeni bir dizge ve iletişim aracı olduğunun bilinciyle hareket eden, içsel ve dışsal güdüleme, özgüven, hazır bulunuşluk gibi duygusal etkenleri dikkate alan ve performansını sürekli izleyip değerlendiren bir dil öğrenicisinin

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başarma şansı çok yüksek olacaktır (Özçelik, 2013:142-143). Bu anlamda öğrencilerin özyeterlik inançları önemlidir. Öğrenciler yeni bir dil öğrenirken kendi yeteneklerini değerlendirirler. Eğer düşük bir algıyla dil öğretimine başlarlarsa bu durum başarılarını etkileyecektir. Bazı öğrenciler kendi yetersizlikleri üzerinde yoğunlaşarak, öğrenme görevlerini bir kenara bırakırlar. Kendilerini yetersiz algılamaları da kaygı düzeylerini artırarak, başarılarını etkiler (Hancı Yanar/Bümen, 2012,98).

Bu çalışmada ankete katılan öğrenciler İngilizceyi birinci yabancı dil olarak öğrendikten sonra üniversite öğrenimleri için Almancayı ya isteyerek tercih etmişler ya da uygulanan yabancı dil ve genel yeterlilik sınavları sonucunda elde ettikleri akademik başarı ile bu alanı seçmeye mecbur kalmışlardır. Bölüm öğrencileri dört yıl boyunca zorunlu olarak 40 kredilik İngilizce dersi alarak İngilizce sertifikası almaya hak kazanmaktadırlar. Öğrencilerin bu bölümü tercih etmelerindeki temel nedenlerden biri de söz konusu sertifikanın dört yıllık eğitim öğretim süreci sonunda öğrencilere veriliyor olmasıdır.

Çalışmada Almancayı ikinci yabancı dil olarak öğrenen öğrencilerin gerek dilsel becerileri gerekse kültürel bilgileri sayesinde söz konusu dile ve o dilin kültürüne yönelik tutumları hakkında görüşler anket sonuçlarına göre ortaya konmuştur.

2. ARAŞTIRMA YÖNTEMİ

Bu çalışmada Almancayı ikinci yabancı dil olarak öğrenen öğrencilerin eğitimleri boyunca geliştirdikleri dil becerilerinin ve hedef dilin kültürü hakkındaki bilgilerinin mevcut durumlarını, karşılaştıkları kültürel ve kültürlerarası sorunların neler olduğunu ve bütün bunların öğrencilerin cinsiyet ve eğitim durumlarına göre ne gibi farklılıklar gösterdiğini ortaya koymak amaçlanmıştır.

2.1. Örneklem

Araştırmanın katılımcılarını Cumhuriyet Üniversitesi Alman Dili ve Edebiyatı Bölümünde 1.,2.,3. ve 4. sınıflarda öğrenim gören toplamda 118 öğrenci oluşturmaktadır. Araştırma grubu öğrencilerinin öğrenim gördükleri sınıflar dikkate alındığında bütün sınıflarda çoğunluğu kızlar oluşturmaktadır. 1. ve 4. sınıflarda erkek öğrencilerin sayısının 2. ve 3. sınıfa göre daha az olduğu görülmektedir (bkz. Tablo 1).

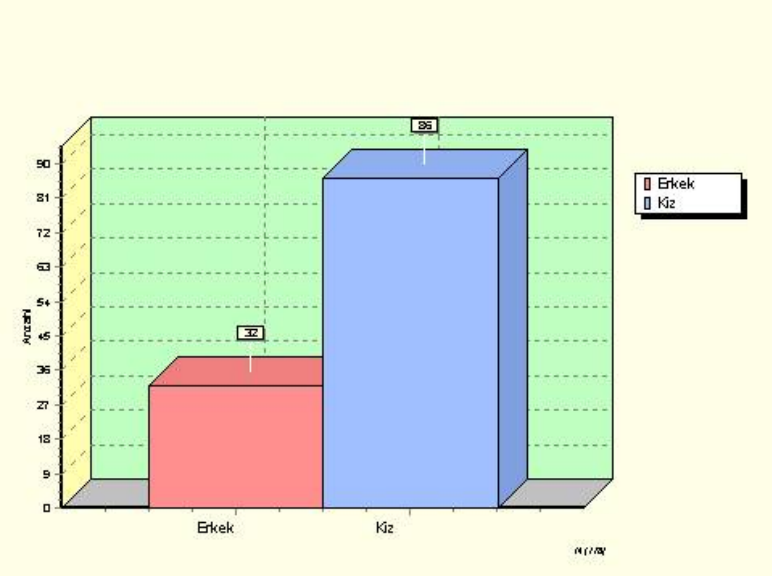
Tablo 1: Araştırma Grubu Sınıflara Göre Cinsiyet Dağılımı

	Erkek	Kız	Toplam Yüzde
1	18,8%	81,3%	100,0%
2	34,9%	65,1%	100,0%
3	31,0%	69,0%	100,0%
4	17,2%	82,8%	100,0%
Toplam	27,4%	72,7%	100,0%

Araştırmaya katılan öğrencilerden yaşları 19-27 arasında değişen 86'sı (%72,7) kız, 32'si (%27,4) erkek öğrencidir. Türkiye genelinde dil bölümlerinde cinsiyet dağılımında kız öğrencilerin baskın olduğu göz önüne alındığında Cumhuriyet Üniversitesi'nde de bölümün çoğunluğunu kız öğrenciler oluşturmaktadır (bkz. Grafik 1).

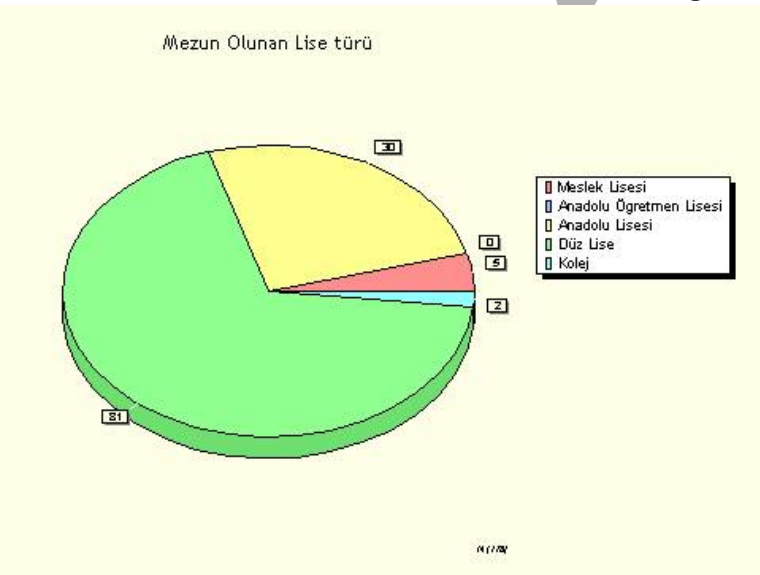
Grafik 1: Araştırma Grubu Cinsiyet Dağılımı

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Araştırmaya katılan öğrencilerin 81'i (%68,6) düz liseden mezun olmuştur. Düz liseyi 30 (% 25,4) öğrenci ile Anadolu lisesi takip etmektedir. Anadolu Öğretmen Liselerinden mezun olan öğrenci bulunmazken, 5 (%4,2) öğrenci Meslek lisesinden, 2 (%1,7) öğrenci ise Kolejden mezun olmuştur (bkz. Grafik 2).

Grafik 2: Araştırma Grubunun Mezun Olunan Lise Türüne Göre Dağılımı



2.2. Veri Toplama Aracı

Veri toplama aracı olarak 25 "çoktan seçmeli açık uçlu" sorudan oluşan anket kullanılmıştır. Çoktan seçmeli sorularından 5'i kişisel bilgi, 14' ü mevcut dil bilgileri ve becerileri hakkındaki öz değerlendirmelerini ve 6' sı ise kültür bilgisi ile ilgili soruları içermektedir. Anketin oluşturulmasında Kınsız/ Çetintaş'ın (2011) çalışmasından faydalanılmıştır.

2.3. Verilerin Toplanması ve Analizi

Anket öğrencilere 2014-2015 eğitim-öğretim yılının yaz döneminde uygulanarak öğrencilerin gönüllü olarak katılmaları göz önünde bulundurulmuştur. Toplanan verilerin analizinde Software programı Graftstat4'ten faydalanılmıştır. Bütün sorular verilen cevaplara göre gruplandırılmış ve aynı görüşe sahip öğrenci sayıları ile yüzdeleri değerlendirilmiştir. Araştırmanın sonuçları tablo ve grafiklerle gösterilmiş ve yorumlanmıştır.

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3. BULGULAR

GraftStat4 yardımı ile her bir soru için oluşturulan tablo ve grafiklerle elde edilen veriler öğrenci sayıları dikkate alınarak yüzdelik dağılımları belirlenmiştir. Tablo ve Grafiklerdeki önemli veriler sunularak yorumlanmıştır.

3.1. Öğrencilerin Dil Becerileri

Ankete katılan öğrencilerden çoğunluğu 1-3 yıl (53 öğrenci) ile 4-5 yıl (45 öğrenci) arasında Almanca dilini öğrendiğini belirtmiştir. 1 yıldan az bir süredir Almancayı öğrendiğini belirten 1 öğrenci bulunmaktadır. 10 yıldan fazla Almancayı öğrenen öğrenci sayısı 3'tür, 8-10 yıl arasında öğrendiğini belirten öğrenci sayısı 2'dir. Öğrencilerin Almancayı öğrenme süreleri arasında önemli bir fark bulunmaktadır (bkz. Tablo 2).

Tablo 2: Araştırma Grubunun Hedef Dili Öğrenme Süresi

Ne kadar süredir Almanca öğreniyorsunuz?

İfade	Sayı
1 yıldan az	1
1-3 yıldır	53
4-5 yıldır	45
6-7 yıldır	14
8-10 yıldır	2
10 yıldan fazla	3
Toplam	118

Buna göre üniversite eğitimine başlamadan Almanca öğrenen öğrenciler bulunmaktadır. %83,9 oranında öğrenci Almancayı üniversitede öğrenmeye başlamışken %16,1 oranında öğrenci ise Almancayı üniversite eğitimine başlamadan öğrenmiştir (bkz. Tablo 3).

Tablo 3: Hedef Dili Öğrenme Süresinin Üniversite Dışında Öğrenme Süresine Göre Dağılımı

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Ne kadar süredir Almanca öğreniyorsunuz?
Üniversite eğitimi dışında ek olarak Almanca öğrendiniz mi?

	1 yıldan az	1-3 yıldır	4-5 yıldır	6-7 yıldır	8-10 yıldır	10 yıldan fazla	
Evet	0	4	9	3	1	2	19
Hayır	1	49	36	11	1	1	99
Toplam	1	53	45	14	2	3	118

Ankete katılan öğrencilerin % 76,9'u Almancayı severek öğrendiğini belirtmiştir. % 23,2'si ise severek öğrenmediğini belirtmiştir. Bu oran küçümsenmeyecek kadar fazladır. Elde edilen verilere göre Almancayı severek öğrenmediğini belirten öğrencilerin kendi dil seviyelerini nasıl buldukları ile ilgili öz değerlendirmelerinde anlamlı bir ilişki bulunmaktadır. Almancayı severek öğrenmediğini belirten öğrencilerden %5,6'sı çok kötü, %7,4'ü kötü ve %7,4'ü Almanca dilinde kendilerini yeterli bulduklarını belirtmişlerdir. Bu verilerden öğrencilerin motivasyonlarının dili öğrenmeye etkisi olduğunu ve öğrenme başarılarını etkilediğini söyleyebiliriz (bkz. Tablo 4).

Tablo 4: Öğrencilerin Almancayı Severek Öğrenip Öğrenmediklerine Göre Kendi Dil Seviyelerini Değerlendirme Dağılımları

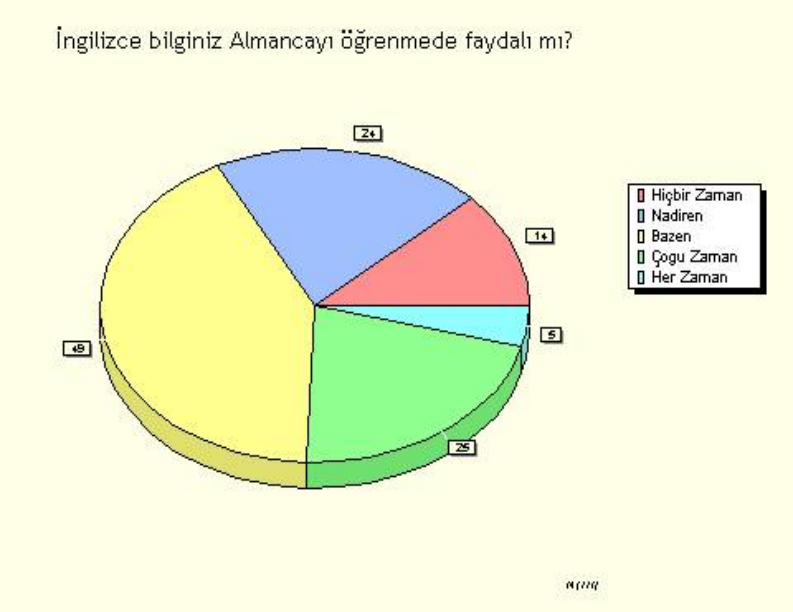
Dil bilginizi nasıl buluyorsunuz? (Almanca)
Almancayı severek öğreniyor musunuz?

	Çok kötü	Kötü	Yeterli	İyi	Çok iyi	
Evet	0,0%	9,3%	32,4%	29,6%	5,6%	76,9%
Hayır	5,6%	7,4%	7,4%	2,8%	0,0%	23,2%
Toplam	5,6%	16,7%	39,8%	32,4%	5,6%	100,0%

Birinci yabancı dilin ikinci yabancı dil olan Almancayı öğrenmedeki faydası ile ilgili soruya öğrencilerin % 41,9'u bazen olarak yanıt vermiştir. %21,4'ü çoğu zaman, %20,5'i nadiren olarak cevap vermiştir. %4,3'ü her zaman diye yanıt verirken, % 12,0'si hiçbir zaman olarak cevap vermiştir. Elde edilen bu verilerden birinci yabancı dil olarak öğrenilen İngilizcenin ikinci yabancı dil olarak öğrenilen Almancayı öğrenmede olumlu etkisinin olduğunu söyleyebiliriz (bkz. Grafik 3).

Grafik 3: Öğrencilerin İngilizcenin Almancayı Öğrenmedeki Faydası İle İlgili Görüşleri

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Öğrencilerin çoğunluğu öncelikle İngilizcenin Almancayı öğrenmede dilbilgisi kurallarını ve yapısını öğrenirken (%28,4) ve yeni bir kelime öğrenirken (%28,4) faydalı olduğunu belirtmiştir. %10,3'ü bir metni okuyup anlamada faydalı olduğunu belirtmiştir. %14,2'si ise İngilizcenin Almancayı öğrenmede hiçbir alanda faydası bulunmadığını belirtmiştir (bkz. Tablo 6).

Tablo 6: Öğrencilerin İngilizcenin Almancayı Öğrenmede Çeşitli Alanlarda Faydası İle İlgili Algıları

Aşağıdaki dilsel alanların hangisinde İngilizce bilginiz Almanca öğrenmenizde faydalıdır?

İfade	Yüzde
Dil bilgisi kurallarını ve yapısını ögrenirken	28,4%
Yeni bir kelime öğrenirken	28,4%
Yeni öğrendiğim kelimenin telaffuzunu öğrenirken	6,5%
Yeni öğrendiğim kelime ve cümleleri yazarken	5,8%
Bir metni okuyup anlamaya çalışırken	10,3%
Bütün alanlarda	6,5%
Hiçbir alanda	14,2%
Toplam	100,0%

Anadili öğrenme süreci göz önüne alındığında ilk önce anlamanın yani dinlemenin, daha sonra ise üretimin yani konuşmanın gelişmesi gerçekleşmektedir. Bu insan beyninin işleyişinin bir göstergesidir. Dil öğretiminde de bu sıranın bozulmaması gerekmektedir (Taşer, 1996). Oysa ankete katılan öğrencilerden 58'i (%49,6) dört dil becerisinden en az konuşma becerisine hâkim olduğunu belirtmiştir. Elde edilen verilerden %22,2 ile en yüksek cevap oranını yazma becerileri oluşturmaktadır. Öğrencilerden %14,5'i duyma ve %13,7'si okuma becerisi olarak cevaplandırmıştır. Bu verilerden öğrencilerin her ne kadar dilin kurallarını bilseler de iletişimsel becerilerde sorunlar yaşadığı ortaya çıkmaktadır (bkz. Tablo 8).

Tablo 8: Öğrencilerin Dört Dil Becerisinden En Az Hangisine Hâkimsiniz Sorusuna Göre Cevapları

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Dört dil becerisinden en az hangisine hâkimsiniz?

Dört Dil Bec.	Yüzde
Okuma	13,7%
Duyma	14,5%
Konuşma	49,6%
Yazma	22,2%
Toplam	100,0%

Yine öğrenciler dört dil becerisinden özellikle hangisini geliştirmek istersiniz sorusuna %84,6 oranla konuşma becerisi olarak belirtmişlerdir. Bu verilere göre öğrencilerin genelde dili teorik olarak öğrenmeleri ve konuşma becerisini geliştirmek için gerekli ortamın bulunmaması konuşma becerisine yeterince hâkim olamadıklarını göstermektedir. Fakat öğrenciler bir dilin kurallarının, kelime bilgisinin ve söyleminin iyi öğrenilmeden konuşma becerisinin gelişmeyeceğinin farkında değildirler (bkz. Tablo 9).

Tablo 9: Öğrencilerin Dört Dil Becerisinden Özellikle Hangisini Geliştirmek İstersiniz Sorusuna Göre Cevapları

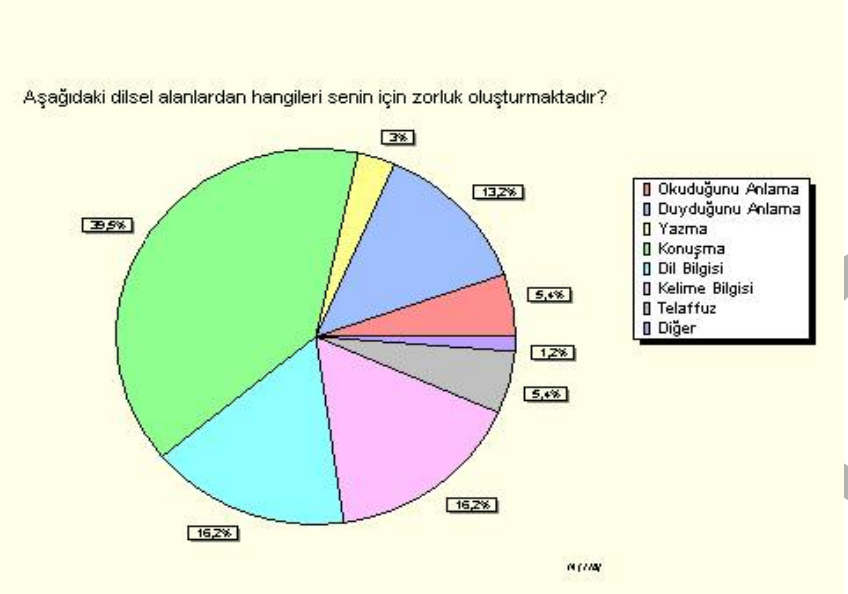
Dört dil becerisinden özellikle hangisini geliştirmek istersiniz?

Dört Dil. Bec.	Yüzde
Okuma	2,6%
Duyma	10,3%
Konuşma	84,6%
Yazma	2,6%
Toplam	100,0%

Öğrencilere sorulan sorulardan olan "aşağıdaki dilsel alanlardan hangisi senin için zorluk oluşturmaktadır?" sorusuna çoklu yanıt vermek mümkündür. Buna göre öğrenciler %39,5 oranında dilsel alanlardan en çok konuşma becerisinin kendileri için zorluk oluşturduğunu ifade etmişlerdir. Konuşma becerisinden sonra %16, 2 oranında dil bilgisi ve yine aynı oranda kelime bilgisinin kendileri için zorluk oluşturduğunu belirtmişlerdir. Buradan öğrencilerin hem kelime bilgisi ve sözcük bilgisine hem de konuşma becerisine yeterince hâkim olmadıklarını anlayabiliriz (bkz. Grafik 4).

Grafik 4: Öğrencilerin Aşağıdaki Dilsel Alanlardan Hangileri Senin İçin Zorluk Oluşturmaktadır Sorusuna Göre Cevapları

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Öğrencilere neden Alman Dili ve Edebiyatı Bölümünü tercih ettikleri sorusuna birden fazla yanıt vermek mümkündür. Elde edilen verilere göre öğrencilerden %39,7'si Alman Dili ve Eğitimi Bölümünü üniversite yerleştirmesinde İngilizce için yeterli puana sahip olmadıkları için tercih ettiklerini söylemişlerdir. Bunun yanında %21,2 oranla İngilizce yanında ikinci bir yabancı dili öğrenmek istedikleri için tercih ettiklerini ve %17,1 oranında ise Almancaya ilgisi olduğu için tercih ettiklerini belirtmişlerdir. Bu verilerden Türkiye genelindeki üniversitelerde Alman Dili bölümlerini tercih eden öğrencilerin lisede yabancı dil bölümlerinde İngilizce dilini öğrenirken üniversite sınavlarında İngilizce için yerleştirmede yeterli puan almamaları öğrencileri bu bölümü tercih etmelerine neden olmuştur (bkz. Tablo 10).

Tablo 10: Araştırma Grubunun Neden Alman Dili ve Edebiyatı Bölümünü Tercih Ettikleri Sorusuna Göre Dağılımı

Neden Alman Dili ve Edebiyatı Bölümünü tercih ettiniz?

İfade	Yüzde
Almanca diline ilgim vardı	17,1%
Üniversite yerleştirmesinde İngilizce için yeterli puana sahip olmadığım için	39,7%
Öğretmenlik mesleğini sevdiğim ve Almanca öğretmenliği yapmak istediğim için	5,5%
İngilizce yanında ikinci bir yabancı dili öğrenmek istediğim için	21,2%
Almanca bilmek Türkiye'de önemli bir yere sahip olduğu için	2,7%
Alman'yada (Almanca dilinin konuşulduğu ülkelerde) çalışmak/yaşamak için	4,8%
Turistlerle iletişim kurabilmek için	4,1%
Diğer sebepler	4,8%
Toplam	100,0%

Birden fazla cevap verme mümkün olan Almancanızı ilerletmek için neler yapıyorsunuz sorusuna: Öğrencilerin 58'i (%29,7) internetten faydalanarak geliştirdiğini belirtmiştir. 49'u (%25,1) film ya da tv izleyerek ve 32'si (%16,4) kitap okuyarak geliştirdiklerini söylemişlerdir. 17'si (%8,7) gazete ve dergi okuyarak, 13'ü (%6,7) turistlerle iletişim kurarak ve diğer imkânlardan faydalanarak, 9'u (%4,6) tatil seyahatleriyle ve 4'ü (%2,0) ise özel dil kurslarını ziyaret ederek geliştirdiklerini ifade etmiştirler (bkz. Tablo 11).

Tablo 11: Araştırma Grubunun Almancanızı Geliştirmek İçin Neler Yapıyorsunuz Sorusuna Göre Dağılımı

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Almancanızı ilerletmek için neler yapıyorsunuz?

İfade	Yüzde
Film veya Tv izlemek	25,1%
Kitap okumak	16,4%
İnternet	29,7%
Gazete/dergiler	8,7%
Turistlerle iletişim kurmak	6,7%
Özel dil kursları	2,0%
Tatil seyahatleri (Almanya vs.ye)	4,6%
Diğer imkanlar	6,7%
Toplam	100,0%

3.2. Öğrencilerin Kültürel Bilgileri

Bir dilin kültürünün en iyi şekilde öğrenilebilmesi için söz konusu dilin konuşulduğu ülkelerde belli bir süre yaşamak gerekir. Ancak böylelikle kültürlerarası farklılıklardan doğabilecek yanlış anlama ve anlaşılmalar ortadan kalkar. Fakat bütün öğrenciler yurt dışında bulunma ya da yaşama imkânına sahip olamamaktadırlar. Ankete katılan öğrencilerden sadece 19'u (%16,2) yurt dışında bulunmuştur. Bu kişilerin çoğunluğu verdikleri cevapta Almanya'da çeşitli sebeplerle bulunduklarını ifade etmişlerdir. Yurt dışında bulunma süreleri orada doğmuş büyümüş 1 öğrenci hariç bir yıldan azdır (bkz. Tablo 13).

Tablo 13: Araştırma Grubunun Almanya'da ya da Almanca Konuşulan Ülkelerde Bulundunuz mu Sorusuna Göre Dağılımı

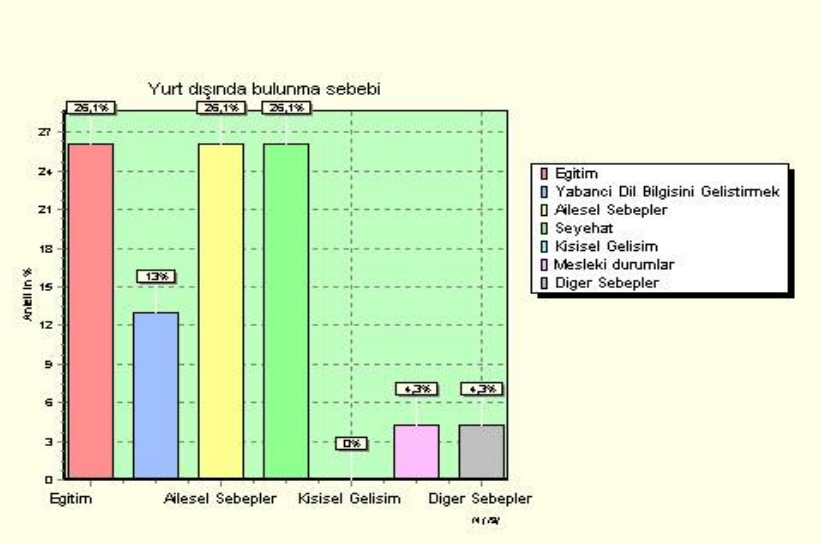
Almanya'da ya da Almanca konuşulan ülkelerde bulundunuzmu?

Sınıf	Evet	Hayır	T. Yüzde
1	6,3%	93,8%	100,0%
2	11,6%	88,4%	100,0%
3	17,2%	82,8%	100,0%
4	27,6%	72,4%	100,0%
Toplam	16,2%	83,8%	100,0%

Yurtdışında yaşama genellikle öğrencilerin dil ve kültür bilgisini mükemmelleştirmek için ideal bir fırsat olarak görülmektedir, ayrıca öğrencilerin ileriki eğitimleri için onları motive etmektedir (Ecke,2013:2). Grafiği incelediğimizde öğrenciler çeşitli nedenlerle yurtdışında bulunmuşlardır. Öğrencilerin % 26,1'i eğitim amaçlı, %26,1'i seyahat amaçlı ve yine % 26,1'i ailesel sebeplerden yurtdışında bulunmuştur. Öğrencilerin %13'ü yabancı dil bilgisini geliştirmek amacıyla, %4,3'ü mesleki amaçlı ve %4,3'ü ise diğer sebepler olarak belirtmiştir (bkz. Grafik 5).

Grafik 5: Yurtdışında Bulunma Sebebine Göre Dağılım

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Anket sorularından Alman kültürü ve Almanlar hakkında yeterli bilgiye sahip misiniz sorusuna %56,0 oranında öğrenci evet derken %44, 0 oranında ise hayır cevabını vermişlerdir. Bu oran neredeyse ankete katılan öğrencilerin yarısını oluşturmaktadır. Cevaplar sınıflara göre incelendiğinde en yüksek oranla %75,0 1. Sınıflar yeterli bilgiye sahip olmadıklarını belirtmiştir. Bir üst sınıfa geçtikçe hayır cevabının oranı azalmaktadır. Bu yüzdelerden öğrencilerin zamanla dil becerisinin yanında dilin kültürü hakkında da bilgiye sahip olduklarını anlayabiliriz (bkz. Tablo 14).

Tablo 14: Araştırma Grubunun Alman Kültürü ve Almanlar Hakkında Yeterli Bilgiye Sahip misiniz Sorusuna Göre Dağılımları

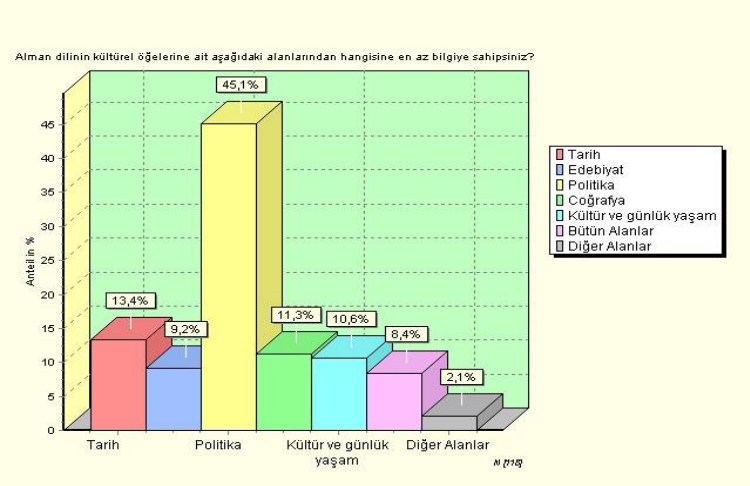
Alman kültürü ve Almanlar hakkında yeterli bilgiye sahip misiniz?

Sınıf	Evet	Hayır	T. Yüzde
1	25,0%	75,0%	100,0%
2	51,2%	48,8%	100,0%
3	64,3%	35,7%	100,0%
4	72,4%	27,6%	100,0%
Toplam	56,0%	44,0%	100,0%

Çoklu yanıt vermenin mümkün olduğu sorulardan olan Alman kültürüne ait alanlardan hangisinde en az bilgiye sahip olduklarını sorusuna öğrencilerin %45,1'i politika olarak cevap vermiştir. Önemli bir eksikliğin politika bilgilerinde olduğunu söyleyebiliriz. Diğer alanlara hemen hemen aynı oranda cevap vermişlerdir (bkz. Grafik 6).

Grafik 6: Araştırma Grubunun Alman Dilinin Kültürel Öğelerine Ait Alanlarından Hangisinde En Az Bilgiye Sahip Oldukları Sorusuna Göre Dağılımları

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Yine çoklu yanıt vermenin mümkün olduğu sorulardan olan Ülke bilgisi alanlarından hangisinin ilgilerini çektiği sorusuna ankete katılan öğrencilerin %50,3 (78)'i kültür ve günlük yaşam olarak yanıtlamıştır. Bunu %20,6 (32) ile Alman edebiyatı, % 16, 1 (25) Alman Tarihi takip etmektedir. 9 kişi aynı zamanda Alman Sanat ve Müziğinin ilgilerini çektiğini söylemişlerdir. Bunun dışında kalan alanlar ise az bir oran kapsamaktadır (bkz. Tablo 15).

Tablo 15: Araştırma Grubunun Ülke Bilgisi Alanlarından Özellikle Hangisi İlginizi Çekmektedir Sorusuna Göre Dağılımları

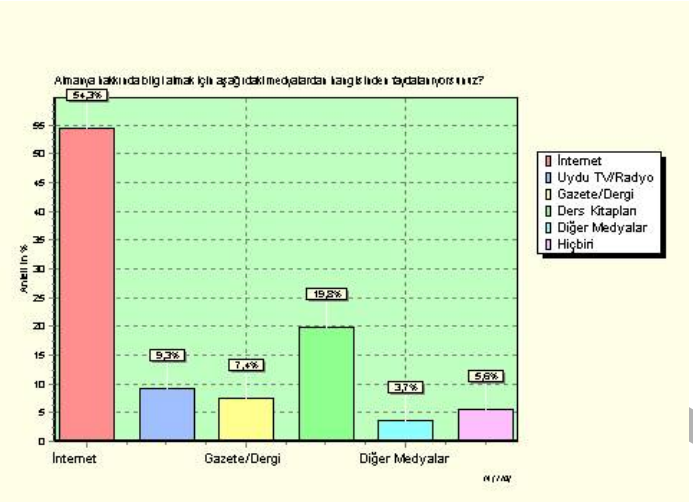
Aşağıdaki ülke bilgisi alanlarından özellikle hangisi ilginizi çekmektedir?

	Yüzde
Kültür ve günlük yaşam	50,3%
Alman Edebiyatı	20,6%
Alman Tarihi	16,1%
Almanya'nın Politik Yapısı	1,9%
Coğrafi Yapısı	0,7%
Alman Sanat ve Müziği	5,8%
Alman Ekonomisi	2,6%
Diğer Alan	1,9%
Toplam	100,0%

Öğrencilerin önemli bir bölümü, 88'i (%54,3) Almanlar ve Alman kültürü hakkında internet aracılığıyla bilgi aldıklarını, 32'si (%19,8) ders kitaplarından faydalandıklarını belirtmişlerdir. Günümüz çağını düşününce internet her alanda karşımıza çıkmaktadır ve öğrencilerin internetten faydalanmaları doğaldır. Bunun dışında önemli oranda ders kitaplarından da faydalandıklarını belirtmeleri klasik basılı materyallerin dil öğrenmede hala önemli bir yeri olduğunu göstermektedir. Diğer medyadan faydalanma oranları azdır (bkz. Grafik 7).

Grafik 7: Medyadan Faydalanma Durumuna Göre Dağılımları

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4. SONUÇ VE ÖNERİLER

- Almancayı severek öğrenen öğrencilerin motivasyonlarının yüksek olmasına rağmen başarı durumlarının beklenildiği kadar iyi olmadığı yaptıkları öz değerlendirmeler sonucu ortaya çıkmıştır.
- Öğrencilerin Alman kültürü ve Almanlar hakkındaki bilgilerinin birinci sınıftan dördüncü sınıfa kadar zamanla arttığı görülmektedir. Bu durumda alt sınıftaki öğrencilerin de hedef dilin kültürü hakkında yeterli bilgiye sahip olabilmeleri için oryantasyonlar düzenlenebilir.
- Öğrenciler en çok internet aracılığıyla Alman kültürü hakkında bilgi aldıklarını belirtmişlerdir.
- Öğrencilerin yarısı kendilerini dört dil becerisinden konuşmada yetersiz bulmakta ve yarısından fazlası söz konusu beceride kendilerini geliştirmek istediklerini ifade etmektedirler. Bu durumda ders içerikleri ve öğrencilerin Almanca seviyeleri de göz önünde bulundurularak onlara uygun materyaller ile konuşma ağırlıklı çalışmaların yapılması önerilmektedir.
- Öğrencilerin yurt dışında bulunma oranları arasındaki fark gerek kültürel algılarında gerekse dil becerilerinde önemli faklılıklar orta çıkarmaktadır. Bu farklılık derslerin işlenişini hem öğrenciler hem de öğretmenler açısından güçleştirmektedir.
- Yabancı dil öğretiminde görülen aksaklıklar sürekli olarak öğretici gözüyle irdelenmekte ve çözüm yollarıda o doğrultuda üretilmeye çalışılmaktadır. Ancak sınıflarda öğreticilerin göremediği ya da öğretmenler tarafından sorun olarak algılanmayan durumlar öğrenciler açısından değerlendirildiğinde problem olarak karşımıza çıkabilir (Kırmızı, 2010: 199). Bu yüzden öğrencilerin beklentileri ve gereksinimleri göz önünde bulundurularak görüşlerine başvurulabilir.

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AN ACTION RESEARCH APPROACH TO LEADING SCHOOL-LEVEL INSTRUCTIONAL CHANGE

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This session reports an initiative in one Western Canadian school system to develop the competencies of school administrators in leading instructional change. Using ongoing experiences within their schools, the intent was to enhance knowledge of change leadership and skills of critical reflection; the modelling of change skills; and working with school-based professional teams on a common instructional initiative.

Based upon the work of several researchers in the area of change, change processes and change leadership (Fullan, 2007; Howley & Eckman, 1997;Cross & Dublin, 2002; Reeves, 2009; Leithwood & Jantzi, 2008); Fixsen et al., 2013; Wagner et al., 2006) school leadership teams consisting of principals and vice principals identified one instructional change recently initiated within their schools as the focus for this change leadership activity.An action research model (Mertler, 2012) consisting of three cycles of *planning, action, assessment, reflection and modification,* was employed to guide the participants over a period of five months, coordinated through three sessions with the total group of 70 participants.

In this session, the experiences of these school leadership teams, and the emerging successes, challenges and support needs that emerged throughout this project will be discussed. Related implications for school leaders as they initiate and support instructional change will be examined.

Keywords: instructional design

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AN ANALYSIS ABOUT THE ENVIRONMENTAL BEHAVIOR OF BRAZILIAN UNIVERSITY STUDENTS

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ABSTRACT
With the purpose to check the environmental behavior of undergraduate students in business administration of Brazilian universities, seeking to understand how future managers observe environmental issues in relation to their professional development. Thus, was carried out a survey of 732 college students in 39 universities. The applied scale was based on belief, attitude, concern and consumption and allowed to examine the environmental behavior of public and assume what aspects that generate environmental practices. With the results, it was possible to infer that the current scenario is not conducive to environmental issues in the academic environment, because students think that this matter can be a problem for business development.

Keywords: Enviromental Education, Retail, Reverse Logistic, Sustainability

INTRODUCTION

Factors such as environmental degradation, population growth and the replacement of forests by plantations demonstrate that man is sovereign over natural resources and, consequently, triggering an imbalance occurs in the environment (Braga Junior, Silva & Moretti, 2011).

Thus, the movements that seek to reduce the environmental impacts that arose in the 1970s, have been gaining strength over the years as answers to these industrial activities contrary to the environment (Bandalise, Bertolini, Rojo, Lezana, & Possamai, 2009). These moves are intended to establish rules and regulations for methods of environmental management organizations, emphasizing the importance of the issue and highlighting the emergence of environmentally friendly products and services (Bandalise et al., 2009).

These same concerns (environmental issues and consumption) were the subject of a study of young people in Hong Kong, in order to analyze how these two factors may influence their behaviors (Lee, 2011). For this public, such issues is not new issue, as they are debated in the social and political spheres since the 1960s, highlighting the 1968 student movement in Paris, and the hippies in the United States in the 1970s (Matos, 2012).

According to Cardoso and Cairrão (2011), the youth has been showing signs of autonomy and responsibility to try to seize behaviors to identify young people as main characters to attest their personalities, contrary to the naysayers that characterize them as immature, materialistic and consumerist.

This context, the aim of this study was to determine whether the environmental performance of students from the Brazilian public university influences on their environmental practices. From a scale translated and validated for the Brazilian context, an exploratory quantitative study was conducted through a survey with 35 campuses totaling 1146 respondents and found to analyze 732 questionnaires.

As a result, it can be inferred that the current scenario is not favorable to the development of environmental issues with the students graduating from the Brazilian public universities, as they think this issue as a problem for business development.

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ENVIRONMENTAL BEHAVIOR OF COLLEGE STUDENTS

The concern with environmental issues in students can be seen in the rabbit studies, Gouveia and Milfont (2006), which evaluated university on human values considered important in understanding and predicting attitudes and pro-environmental behaviors. Pinheiro, Monteiro, War and Penaloza (2011) analyzed the reasons and environmental concerns related to environmental conservation practices from the perspective of action of the students of this course.

In another study using the scale NEP (New Environment Paradigm), there is the work of Bechtel, Corral-Verdugo and Pinheiro (1999), which are compared American students, Brazilians and Mexicans in environmental issues, noting that the American students and Mexicans are more divided on the nature and growth, but less radical; already the Brazilians do not see the need to separate these two conditions.

The teaching of environmental issues was Gonçalves-Study Days object, Theodosius, Carvalho and Silva (2009), referring to environmental discussions in the syllabus of Directors on undergraduate courses, as the formation and the advancement of environmental awareness in business schools represent major challenges and require a profound reflection on the teaching methods of the discipline.

In some countries, higher education institutions have developed environmental practices, and theoretical contents:

a) Study on Environmental Education and Environmentally Responsible behavior - ERB conducted with undergraduate students from a public university in southeastern North Carolina, USA, maintains that there is an association between environmental education and the ERB, leading them to development of a new measure of ERB focused on impacts on natural resources (Fusco, Snider & Luo, 2012).

b) Software Utility MC (Concepts Mapping Technique), to achieve the goals of environmental education at the university level of the Universidad Nacional de Educación a Distancia (UNED), Madrid, whose results show the motivational potential of this instrument, as well as its effectiveness to facilitate concepts mapping technique that increase both the analytical thinking of students and their understanding of the relationship between the basic concepts related to environmental issues (Murga-Menoyo, Bautista-Cerro & New, 2011);

c) Environmental Education Project in Zimbabwe identified results of new forms of activities to meet the challenge of sustainability of this project, proving to be useful for other future environmental education projects financed by donors and can confront them with the same challenge of project sustainability Initial (Ongevalle, Petegem, Deprez & Chimbodza, 2011).

One should also mention the adoption of good consumer practices to bring the students called green consumption:

a) With advertising campaigns aimed at increasing consumer demand for green energy, emphasizing the psychological benefits of the brand, whose results have confirmed the most predictable effects, demonstrating the overall importance of the psychological benefits of the brand (Hartmann & Apaolaza-Ibáñez, 2012).

b) The roles of attitudes, subjective norms, perceived control, early emotions, past behavior and the desire to predict pro-environmental behavior intention, showing what was anticipated by the study: that negative emotions and past behaviors are significant predictors of desire to engage in favor of environmental action and the desire, in turn, provides positive behavioral pro-environmental intentions (Carrus, Passafaro & Bonnes, 2008).

Authors	Objetivo	Resultados
Garcia, Silva, Pereira, Rossi e Minciotti (2008)	Identify how these consumers evaluate innovative behavior, relating the existence of rewards to companies that promote social and environmental responsibility.	a) the constructs importance and recognition indicated a membership value, proving that there is a strong causal relationship; b) there is a new consumer behavior, which in its purchase decision reward the socially and environmentally responsible companies; c) this population shows that their behavior tends to remain, and even be strengthened in adulthood, forcing changes in the companies to suit the changing demands of such consumers and to compete; d) this innovative approach can contribute to a new way not only to think but to act with respect to green consumption.
Pinheiro, Monteiro,	Analyze the reasons and environmental concerns	a) demonstrate that environmental concerns do not relate to the practice when they say that the environmental problems are being over-treated;

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Guerra e Penãloza (2011)	of undergraduate students of management with respect to environmental practices	b) individuals who have ecocentric motives are more concerned about the consequences of their actions on the environment; c) the ecocentric motives and biospheric concerns are related to the ability of people to act to preserve the environment.
Santos e Tavares (2011)	Seek answers to the question: "Why should a consumer like a product over another?"	a) 75% of students consume soft drinks and 25% juices; b) the main reason for the choice of refrigerant is based on attribute and ease of purchase.
Gomes, Gorni e Dreher (2011)	The study analyzes the behavior, speech and practice of university students in relation to sustainable consumption.	a) The majority are aware of the importance of their actions related to the environment; b) students are aware of environmental problems, but its practice is different, because they consider that the cost-benefit ratio is not relevant compared to the environmental cost-preservation or their personal contribution; c) mention that the higher price of sustainable products, compared to traditional, is related to the lower supply of environmentally friendly products.
Cardoso e Cairrão (2007)	Check sustainable consumption of university students also evaluating its influence on the purchase of environmentally friendly products.	Environmental awareness and attitudes of young people related to sustainable consumption have a positive impact on the purchasing decision of environmentally friendly products.
Promotos h e Sajedul (2011)	Explore the factors that affect the behavior of young consumers attitudes in their green purchasing intentions and understand their purchasing intentions based on the Theory of Planned Behavior (TPB)	a) the influence of parents is the main antecedent of all the variables under investigation; b) the three main predictors (parents, peers and environmental knowledge) are important to understand the buying intentions of young consumers; c) the influence of parents, peers and environmental knowledge plays an important role in the control and the purchase intentions of green products.
Serpa, Ávila e Faria (2010)	Influence of Corporate Social Responsibility - CSR - the consumer's purchasing decision.	a) Research has indicated that consumers are willing to pay more for products from socially responsible companies that develop social actions that directly benefit their lives or their neighborhood. b) They are not willing to pay more for products bearing a neighborhood in another city or another state.

Figure 1. College Students Consumption Behavior

Considering aspects relating size and results linked to environmental behavior, some authors suggested the following relationships:

a) Hsu (2004) studied the effects of an Environmental Education Program in environmentally responsible behavior.

b) Polina (2010) in a study on the green culture in university students reflected on the ideal types of environmental awareness and behavioral practices.

c) Prado, Silva, Junqueira and Almeida (2011) investigated the influence of green marketing in the consumption habits of students of Business Administration courses.

d) Gorni, Gomes and Dheher (2012) observed the behavior and sustainable consumption.

e) Salome (2012) had dimensions related to environmental awareness and consumption habits.

In Figure 1, are identified other studies where college respondents have shown awareness of the importance of their actions related to environmental issues. Consequently, Garcia, Silva Pereira, Rossi and Minciotti (2008)

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bail that this innovative approach can contribute to a new way not only to think but also to act with respect to consumer behavior.

METHODOLOGICAL PROCEDURES

Given the objective of this study was performed an exploratory quantitative study. Thus, a survey was carried out among a sample of 1,146 respondents, and their responses were collected in Brazilian Federal Universities. The data collected allowed to validate and complete the proposed relationship by chance in the survey.

To understand the environmental behavior, environmental practices were divided into consumption, attitude, concern and beliefs, and the following assumptions were related:

H1: The Environmental Behavior presents a positive relationship with the consumption potential of students;
H2: The Environmental Behavior presents a positive relationship with Real Consumption of students;
H3: The Environmental Behavior presents a positive relationship with the local concern of students;
H4: The Environmental Behavior presents a positive relationship with Global Concern students;
H5: The Environmental Behavior presents a positive relationship with the local attitude of students;
H6: The Environmental Behavior presents a positive relationship with the Global Attitude of students;
H7: The Environmental influences behavior has a positive relationship with the belief of the students.

To meet the objective of the research and relate the environmental performance of graduate students with environmental practices in the context of attitude, beliefs, concerns and consumption, the research instrument used in this study was designed in two parts.

First, the NEP scale, constructed and Dunlap VanLiere (1978) for measuring the proposed new paradigm, but this same range was revised in 2000 by the same authors, was established Ecological New Paradigm Scale, in order to cover a better understanding of the main points of the ecological world view, offer a more balanced set of pro and antiambientalistas items, trying to avoid a discriminatory terminology previously detected, and enabling the measurement of the degree of membership of a given population to new ecological values (Dunpal, VanLiere, Merting & Jones, 2000).

Having made these adjustments and following the recommendations DeVellis (2003), the evaluation was subjected to 10 experts from the field of education and environment to carry out the face validity, content validity and the consequent adjustment of the scale to the objective of the research. So experts received the scale along with the concepts of each construct and contributed to adjust the phrases (evaluation) and consider whether they fit in the constructs proposed by research (face validity) (Netemeyer, Bearden & Sharma, 2003).

Aiming to capture and analyze the expectations of respondents, we used primary data sources, with closed questions framed in Likert scale of 4 points, McDaniel and Gates (2001), where alternative measured the intensity level of agreement and disagreement of respondents, starting with the value (1) representing strongly disagree until the value (4) representing totally agree.

For data analysis we used the SPSS 15.0 software for frequency testing and the adherence test to multivariate normal distribution (PK Mardia) the LISREL 8.80 software. As an additional clarification was seen in all tests the significance level (α) of 0.05 or 5% to be more rigorous. In the sequel, it was held to Structural Equation Modeling (SEM) to evaluate the consistency of the proposed model. Therefore, the SmartPLS 2.0 software - M3 (Ringle, Wende and Will, 2005) was chosen as it allows a better analysis of noncompliant data to a multivariate normal distribution and more complex model, as recommended by the authors and that was the case of this research.

The models for calculating measurements of SEM are those that do not require the multivariate normality. More specifically three models can be used: DWLS (Diagonizaded Weighted Least Square and Least Squares Weighted Diagonalizados), WLS (Weighted Least Square or weighted least squares) and PLS-PM (Hair, Anderson, Tatham and Black, 2009; Jöreskog and sobom, 1993). The first two require very large samples, as the PM-PLS provides a better fit for the data analysis into smaller samples, which was the case in the present study.

Thus, the PLS-PM was an alternative with quality proven by the international community of researchers in various fields of knowledge (Ringle et al., 2005) and allowed for greater "plasticity" in the data analysis.

ANALYSIS AND SEARCH RESULTS

Performed procedures for validation and subsequent implementation of the research, the scale had its application directly (M) and electronics (E). The direct application occurred in universities where it was possible its use in the classroom, with teacher support. The electronic application was used as an alternative in universities where it

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was not possible to count on the support of teachers in the classroom. In this sense, the proposed procedures were followed by Fleming and Bowden (2009) for electronic applications, and the course coordinator at the universities where the direct application could not be provided a link to the survey for students to respond at a time outside the room class.

The research was initiated in September 2012 and closed in July 2014. This time he gave up due to the strike of the servers of federal universities during the application of research and has generated an increase in the data collection period. At the end of the application process, they collected 1,146 questionnaires answered fully and considered to analyze 732 questionnaires.

The selection of questionnaires was conducted by the heterogeneity assessment method not observed, that is, a multivariate statistical method that performs "sweepstakes" random in all the data and selects groups that have some kind of logical relationship or internal consistency (Ringle, Sarstedt & Mooi, 2010). This procedure separates, for example, groups of respondents with bias in the responses or several inconsistencies.

With the collected answers, the model that sought to test and that was the starting point for the analysis of the data was generated by the logical assumption AFC - confirmatory factor analysis of second order (Souza Silva, Moretti, & Garcia, 2014), that is, generates an unmeasured construct (in the case COMP_AMB) that binds to all other (measured) such that it can evaluate the degree of the causal relationship of each said measured construct "all" (COMP_AMB).

Following the recommendations of Ringle, Silva and Bido (2014) to validate the sample was 732 respondents used the G * Power 3.1.7 software with the specifications of Hair Jr. Hult, and Ringle Sarstedt (2014), i.e., Size effect of Medium (0,15) and the test power of 0.80, it follows that would be required for a scale as that used in the research, a sample of 55 respondents, at least, which would be sufficient to detect the effects desired the Structural Equation Modeling with Partial Least Squares method (Partial Least Square - PLS).

For the model fit proceeded to the elimination of variables (one by one) with factor loadings (or correlations) lower. So they were eliminated from the model variables AG_13, AG_14, CP_20, CR_1, CR_2, CR_4, CR_6, PG_10, PG_11 and PG_12.

Table 1. Adjust quality by eliminating the Construct Global Attitude

	AVE	Composite Reliability	R^2	Cronbach´s Alpha	Q^2	f^2
Local Attitude	0.705	0.878	0.409	0.790	0.31	0.4
Consumption Potential	0.583	0.807	0.663	0.644	0.38	0.187
Real Consumption	0.639	0.876	0.601	0.812	0.392	0.398
Beliefs	0.636	0.776	0.113	0.434	0.065	0.021
Global Concern	0.602	0.819	0.057	0.667	0.026	0.22
Local Concern	0.544	0.687	0.075	0.198	0.032	-0.083
Reference Value (Ringle et al (2014)	> 0,50	>0,70	R^2=2% small effect, R^2=13% medium effect and R^2=26% big effect	>0,70	Q^2 > 0	Values 0,02, 0,15 and 0,35 are considered small, medium and large.

After the disposal of the variables mentioned and Global Attitude construct (That was with only one item), the model showed values of quality testing appropriate model. Thus, it proceeded again to initial calculations adjustment quality. Table 1 and Figure 2 show the results of recalculations.

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The analysis of Table 1 indicates that the values are adequate, and again three constructs present values of the Cronbach's alpha test below 0.70, but as already mentioned, not hinder the evaluation of the model fit. Also not, exhibit the coefficients for determining Pearson (R^2). These coefficients measure the portion of the dependent variable explained by the independent. Using the presented criteria (see Table 1), only the constructs beliefs (R^2 = 0.113) and global concern (R^2 = 0.057), which showed approximately medium and are respectively approximately small. The others can be consider large.

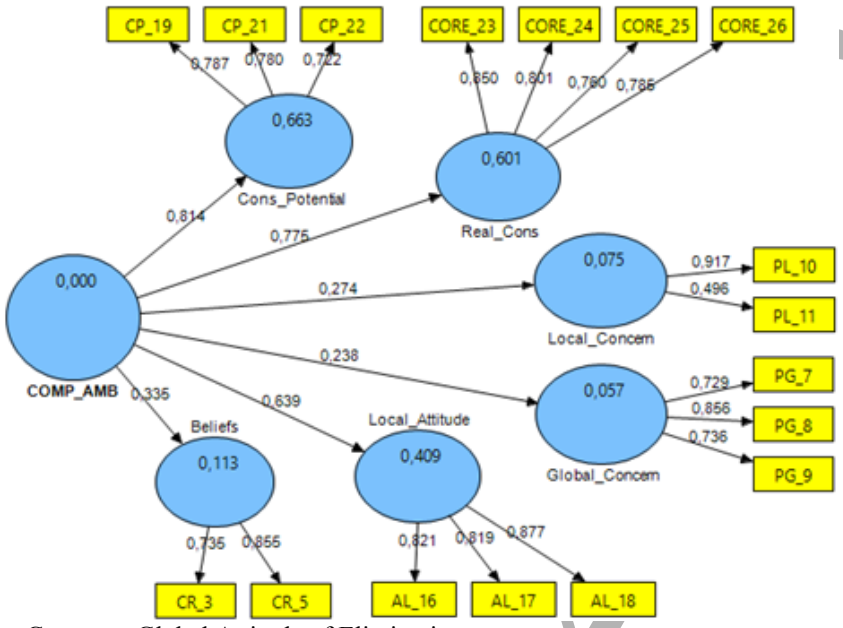


Figure 2. Model to Construct Global Attitude of Elimination

Was shot the Bootstrapping without construct Global Attitude and results, all values were above 1.96 and, therefore, reject up the Ho and correlations and path coefficients are accepted.

	Local Attitude	Consumption Potential	Real Consumption	Beliefs	Global Concern	Local Concern
Local Attitude	0.84					
Consumption Potential	0.37	0.764				
Real Consumption	0.199	0.509	0.8			
Beliefs	0.167	0.175	0.137	0.797		
Global Concern	0.13	0.178	-0.032	0.087	0.776	
Local Concern	0.215	0.163	0.197	0.105	0.168	0.737

Table 2. Validity assessment Discriminant Model - Exchange of Square Roots of AVEs (in yellow) and the correlations between constructs

Continuing, he opted for the criterion of Fornell and Larcker (Ringle, et al., 2014), clearly more robust than the evaluation of cross-charges for assessing the discriminant validity of the model. The values of the square roots of AVEs were calculated and these were placed in the main diagonal of Table 2 (yellow). It is noted that the correlation values are smaller than the square roots of the birds. Thus, it appears that there discriminant validity of the model. This date is very important because through his observation it can be said that the model has distinct elements, even with relationship to each other (Ringle et al., 2014).

Once being adjusted model, it is observed that the values are accepted and can be interpreted in addition to the existence of the discriminant validity. Went to evaluate the Effect Size (f^2) or Cohen indicator (evaluates how much each construct is "useful" for model setting) and Predictive Validity (Q^2) or Stone-Geisser indicator (evaluates the accuracy the adjusted model) (Ringle et al., 2014). The results are show in table 1 and their analysis reveals that the model presents accuracy in all constructs, but it shows that the constructs Beliefs and Local Concern, respectively, have little importance and slightly above a median effect.

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Finally, after all model fitting steps may be interpret the path coefficients (see Table 3). The environmental behavior is best explain by the constructs Local Attitude (0.639), consumption potential (0.814) and Real consumption (0.775), and less explained by the constructs Beliefs (0.335), Global Concern (0.238) and Local Concern (0.274).

Table 3. Evaluation of Hypotheses Search

Path	Beta	t-value	p-value	Conclusion
COMP_AMB =>Local Attitude	0.639	17,193	0.037	Supported
COMP_AMB =>Consumption Potential	0.814	54,611	0.015	Supported
COMP_AMB =>Real Consumption	0.775	33,112	0.023	Supported
COMP_AMB =>Beliefs	0.335	6,359	0.053	Not supported
COMP_AMB =>Global Concern	0.238	4,001	0.06	Not supported
COMP_AMB =>Local Concern	0.274	7,409	0.037	Not supported

CONCLUSIONS

The theme of the environmental performance of the university has been studied by authors such as Gonçalves Dias-Theodosius, Carvalho and Silva (2009); Pinheiro, Monteiro, War and Penaloza (2011); Bechtel, Corral-Verdugo and Pinheiro (1999); Murga-Menoyo, Bautista-Cerro & New (2011); Carrus, Passafaro and Bonnes (2008) to assess the environmentally friendly behavior of stimulus to the knowledge of environmental practices.

With the purpose of the study to verify the environmental behavior as influencing the environmental practices of graduate students, from a scale translated and validated for application to graduate students in management of the Brazilian federal universities, were expected to understand how future managers note environmental issues.

Thus, based on the scale applied to the research, it can be inferred that the current scenario is not favorable to the development of environmental issues in the academic environment, as students think that this issue can be a problem for business development.

In the constructs potential and actual consumption, where one of the factors involved is the price, the environmental performance starts to take second place. Agreeing with Braga Junior, Silva and Moretti (2011), environmental practices do not relate to consumption and have negative impacts on the decision to purchase green products.

Thus, one can see that the undergraduate students of Brazilian federal universities form their environmental performance by aspects related to their daily lives and connect their attitudes and consumption (potential and actual) to this fact. To construct "real consumption" even getting adjusted to the model, it fits with an average of 2.22 responses and 40% coefficient of variation, that is, students have a low environmental behavior and are unwilling to value products or companies concerned with environmental issues.

This statement can be enhanced when viewed constructs "Beliefs, Global Concerns and Local Concern" which fit the model, but have little importance on the building's environmental performance.

So when we talk about "Beliefs", students show undecided on the belief that the environment must be adapted to the needs of humans, and that this right must be exercised. This fact is due to CR_3 items (humans have the right to modify the natural environment to meet your needs) and CR_5 (humanity do not have to adapt to the natural environment because it can modify it to suit your needs) it was found that model and that have an average of 2.9 and 27% coefficient of variation, and you end up demonstrating that they are willing to modify and tailor the environment to meet human needs.

As for the items of the constructs "Global and Local Concern", the answers contradict the construct "beliefs" because here the students go on to take advantage of the environmental issues that are dealt with in the model.

One suggestion - as a result of the results of this research would be to insert and discuss more forcefully the importance of preserving the environment, in order to develop the future managers of the companies the spirit of seeking for alternatives that promote sustainable development of mankind and companies.

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AN EVALUATION IN READING SKILLS AND HABITUDES OF UNDERGRADUATE STUDENTS

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ABSTRACT

The aim of this study is to determine the opinions and attitudes of the undergraduate students concerning in reading skills and practices. The differences in students reading practices and attitudes were observed in terms of gender, parents' educational status, pre-university education and their departments. In this study screening model was used in the purpose of the determination of students reading practices and attitudes. With the aim of collecting data, "Attitude Scale Reading Habitude" quintet Likert-type consisting of 32 items was used. In this study the work group was consisted of undergraduate students from different departments in Aksaray University and Fırat University. In the data analysis, independent group t-test was done according to gender variable and variance analysis was used according to the variables of class, parents' educational status, graduated high school and their departments. After variance analysis scheffe test was used to identify the source of the difference in the case of significant difference identification. Also pearson correlation analysis was done within the aim of identification of the relationship between reading skills and sub-dimensions. In conclusion, a positive correlation between students reading practices and habitudes, and a significant differentiation between different variables were found. In this respect in developing and expanding the undergraduate students reading skills and habitude, it was observed that providing a support and environment in a programmed manner, benefit from methods and techniques of literature, text linguistics and science indicators and the development of aesthetic pleasure by emphasising art education are imperative.Reading, language education, literature, native language, linguistics.

Keywords: Reading, language education, literature, native language, linguistics.

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AN EVALUATION ON ADVERTISING LITERACY EDUCATION: AN ASSESSMENT OF MEDIA LITERACY CURRICULUM IN TERMS OF ADVERTISING LITERACY IN TURKEY

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Media literacy started to be taught in elementary education at 6th, 7th and 8th grades in Turkey since 2006. Media literacy curriculum, which was prepared by The Radio and Televison Supreme Counsil (RTUK) and The Ministry of National Education (MEB), has been updated. New teaching material for media literacy in elementary education started to be taught in 2014-2015 education term. The main focus of this study is an evaluation of media literacy curriculum in terms of advertising literacy in Turkey. In this frame, the content of media literacy course was examined in terms of advertising literacy. In this context, old and new teaching materials in elementary education were compared. In the conclusion of the study, the main components of advertising literacy curriculum were identified. Besides, the similarities and dissimilarities of old and new teaching materials in the field of advertising literacy were revealed.

Keywords: Media literacy, advertising literacy, Turkey

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AN EXPERIMENT ON THE USE OF VORONOI DIAGRAM IN ARCHITECTURE: HOWL'S MOVING CASTLE

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ABSTRACT
Voronoi diagram is basically a mathematical method that divides a surface based on distance to the points in a specific subset of the surface. The diagram divides surface into the regions based on the principle that each point is assigned to the closest point or object in the subset. The diagram, which was named after honor of George Voronoi in 1903, is applied in many different fields in science and technology including, urban design and architecture. It is commonly preferred in architecture and urban design to solve space-planning problems based on population or distance. Beside, in architecture Voronoi is used as a form finding method especially for structural forms. Within the scope of this study it is benefited from Voronoi Diagram as an early design tool in the Architectural Design Studio-4 at KTU, which was conducted by Asst. Prof. Aysun A. Öksüz in 2014-2015 spring academic year. The theme of the studio was to create a "moving castle" for Hayao Miyazaki's Howl character in the anime of "Howl's Moving Castle". The main form of the castle, which was settled in a highly sloppy and wide site, was created using three-dimensional Voronoi algorithm. There are many existing algorithm to generate Voronoi tessellation in digital environment. In the scope of this project, it is benefited from the Voronoi algorithm of Grasshopper plug-in in order to create the form of the castle. The parametric model is generated through the algorithm in Grasshopper and 3D model is transferred into Rhinoceros. The main purpose of this study is to explore the use of Voronoi Diagram in architectural design education as a design medium.

INTRODUCTION
Architectural design is a long complex process that consists of many variables including extrinsic and intrinsic parameters. Intrinsic parameters are mostly incommensurable values such as designer's own experiences, cognitive capacities and design skills. On the contrary extrinsic parameters are related to site, landscape, social and cultural data as long as these are calculable in some way (Aktaş, 2014). In architectural design education, students are taught to handle both intrinsic and extrinsic parameters. Intrinsic values increase by time and experience for the students. On the other hand, teaching how to design with extrinsic parameters those are coming from the external world, within the scope of basic design principles is a major part of the design studios in architecture education. In the design studios, students benefit from several tools, which are composed of representational techniques such as drawing, painting, collage, photography, and modeling. These tools are significant because they are the media that help the design process. Today, highly developed digital technologies push the designer to work more and more in the digital media, which is now a competitive factor. Therefore, it is important to pursue digital tools in architectural design studios not only as a representational media but also as a design tool. Regarding that use of computational tools in architecture rather than traditional CAD tool are strongly encouraged recently.

Computational tools are already applied to many phases of the design process in both education and practice. However, their application to whole process from very beginning to the end is not possible in current design practice. As Van Berkel and Bos state "It simply is not possible to foresee and to register in your computer all of the parameters that you will be working with as you engage in the long and complex process of architecture "(2006, p.14). In this project we applied to Voronoi diagram in the very early phase of the design process. The algorithm is constructed via Grasshopper plug-in and the computational model is transferred into 3D modeling program Rhino.

THE STUDY

1. BACKGROUND
Voronoi diagram basically a mathematical technique, which subdivides a surface into the regions based on distance to the points in a specific subset of the surface. It divides space into sub-spaces (Bahramine and Babaki, 2015) based on the principle that each point is assigned to the closest point or object in the subset. The diagram, which was named after honor of George Voronoi in 1903, is also known as Voronoi tessellation, Voronoi decomposition or Dirichlet tessellation (Bahramine and Babaki, 2015).

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In order to clarify how does the diagram works; we may refer to Aranda and Lash *recipe* for tiling process with Voronoi. These are the steps that need to follow to create a simple Voronoi diagram. First a set of points is taken. Then each point is connected to the closest neighbor in the set. Later bisector lines, which are halfway between two points at an angle perpendicular to the line that connects to points, are constructed. And the action is repeated for each point tin the set (2005). Ultimately, a Voronoi pattern that consists of Voronoi cell emerges (Fig. 1). Essentially, a Voronoi cell is the intersection of bisector lines that are constructed from one point to all the other points in a chosen set of points (Aranda and Lasch, 2005). In order to generate a closed cell in Voronoi diagram, at least four non-linear points should be assigned.

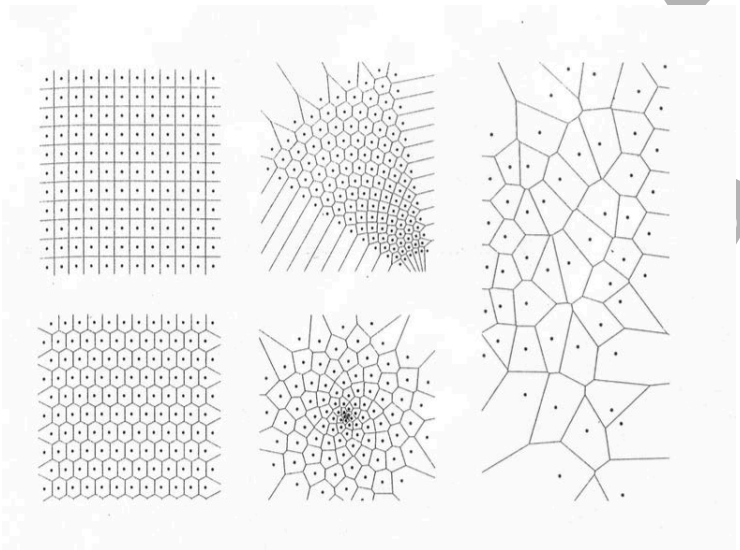


Figure 1: Voronoi formation in different set of points. (Aranda and Lasch, 2005).

Voronoi diagrams can be found in nature at every scale and are used in the study of many fields including biology, anthropology, computer science, marketing, and the growth of crystalline structures (Aranda and Lasch, 2005). Many forms in nature can be described by Voronoi diagram. It is possible to observe the Voronoi cells for example on the wings of a dragonfly, on the skin of a giraffe, in the structure of a leaf or in a soil crack pattern, etc. (Fig. 2)



Figure 2: Voronoi structures in nature. URL-1.

Voronoi structures that are found in the nature have inspiration to many projects in architecture. Voronoi tessellation is a multi-functional geometric structure (Berg et al., 1997). It is also firmly related to another geometric structure, named Delaunay triangulation (Berg et al., 1997). They are strongly linked that Voronoi tessellation can be considered as "geometric dual of Delenuay triangulation" and "one can be derived from another" (Oxman, 2010). Thus, the diagram has a very wide application area including architecture. Voronoi

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tessellation can be applied in both two and three-dimensional architectural concepts for subdividing space or surfaces. According to Oxman (2010), a Voronoi tessellation is simply an example of a tiling process, which is generated algorithmically from random points that appear on a surface. C-wall is a CNC cut space-divider project is an example of surface generation through Voronoi tessellation algorithm (Fig. 3). The project is conducted at, Knowlton School of Architecture, Ohio State University and involves the process of transformation of point-based data into volumetric cells (URL-2).

Voronoi diagram is used for spatial organization as well as surface partitioning. The Vertical Village by Yushang Zhang,Rajiv Sewtahal, Riemer Postma and Qianqian Cai architects is one of the project that is generated through application of 3D Voronoi algorithm (Fig. 4). The vertical volume is divided into individual residential cells regarding regular activities such as eating, sleeping or gardening via 3D Voronoi algorithmic system, which lead to the creation of the '3d plot' or 'Vertical Village' project. (URL-3).

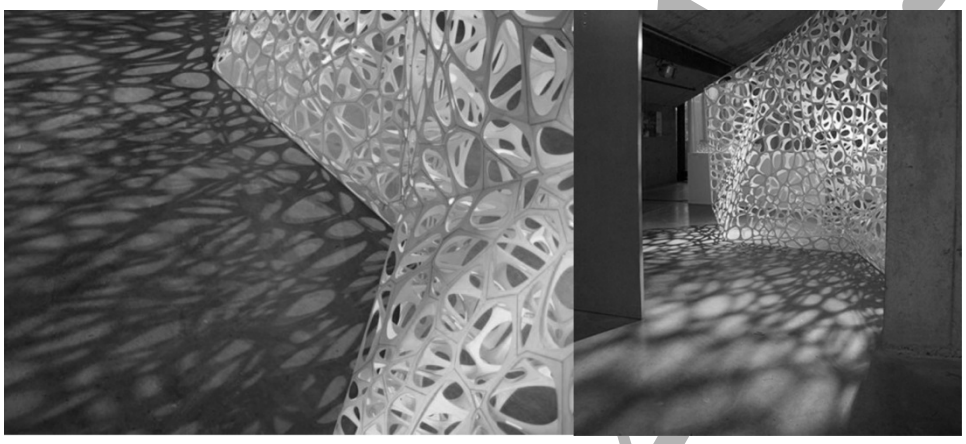


Figure 3: C-Wall project: Application of Voronoi tessellation for surface generation. URL-2



Figure 4: Vertical Village project: Application of 3D Voronoi algorithm. (URL-3)

With respect to its wide range of use in architecture as a design tool, we applied Voronoi diagram in the Architectural Design Studio-4 at KTU. In the following section, the use of Voronoi algorithm within the scope of the studio work that is conducted with the authors will be presented.

2. STUDIO WORK

Within the scope of this study it is benefited from Voronoi Diagram as an early design tool in the Architectural Design Studio-4 at KTU in 2014-2015 spring academic year. The theme of the studio was to create a "moving castle" for Hayao Miyazaki's Howl character in the anime of "Howl's Moving Castle". First, the Diagram is applied to project in the very early phases during making the zoning plans according to the given program. There are many existing algorithm to generate Voronoi tessellation in digital environment. In the scope of this project, it is benefited from the Voronoi algorithm of Grasshopper plug-in in order to create the form of the castle. The

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parametric model is generated through the algorithm in Grasshopper and 3D model is transferred into Rhinoceros.

In the first phase two-dimensional Voronoi algorithm is implemented for the zoning. In the second phase three-dimensional algorithm is engaged with the previous one for form finding. Main form of the castle was created using three-dimensional Voronoi algorithm in a highly sloppy and wide landscape.

2.1. Zoning with Voronoi

In the anime of Miyazaki's Howl's Moving Castle there are five main characters who live in the castle: Howl, Sophie, Calcifer (fire demon), Markl, Witch of the Waste and Heen (the dog of the Witch). Even though Howl and Sophie are seems to be the main character of the anime, each character have strong influence on the story. The center and the heart of the Castle is the Howl's fire demon Calcifer, who is also the guardian of the castle and Howl's heart. The architectural program is made through the analysis of all the characters in the anime. Special features of each character are considered while composing list of needs. According to the given program, firstly hand sketches were made regarding the centralization of the Calcifer and distribution of other functions through him (Fig. 5).

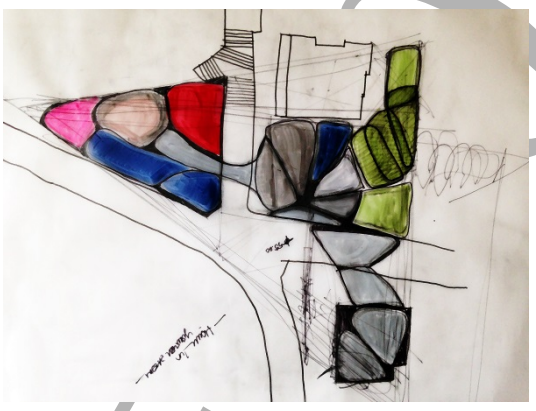


Figure 5: Very early hand sketch for the zoning plan showing the distribution of different function on the site.

This hand sketch was originated the foundation of the projects. Accordingly computational process was started. In the computational process two-dimensional Voronoi algorithm is applied to the site. Based on the given program, points are replaced the convenient coordinates on the site. Each point replace respectively in several steps and algorithm is repeated in the each step (Fig. 6).

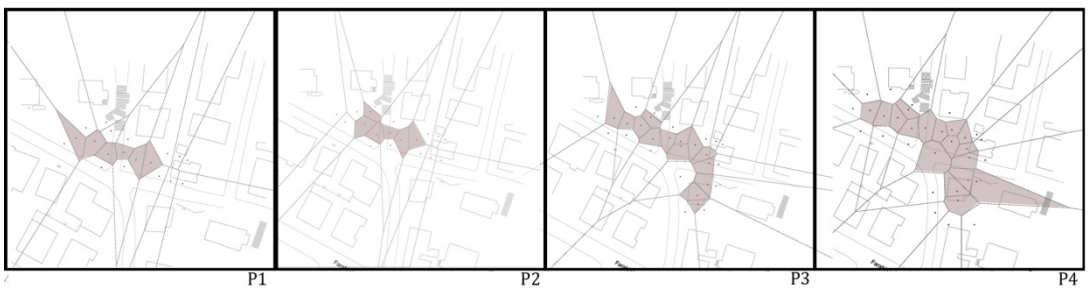


Figure 6: Computational zoning plans based on two-dimensional Voronoi tessellation on the surface.

Oxman (2010) criticizes that regardless of its use, many algorithms exist that produce simple version of Voronoi tessellations from random point clouds. Instead of using random points on surface, points were assigned by the author.

The algorithm had been iterated several times until the expected zoning plan was achieved. In the second phase of the process the tessellation were tired to convert into three-dimensional form.

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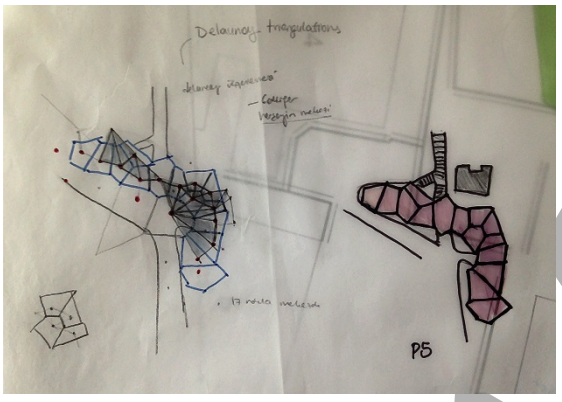


Figure 7: Hand sketch over the computational zoning plan. The sketch on the left shows the Delaunay triangulation that derived from Voronoi tessellation. On the right is sketch Voronoi tessellation in the fifth iteration.

FINDINGS

Architects have always been in search of form finding due to their concern to have a personal signature in their buildings (Burry 2003). As it stated before advancing digital technologies provide new tools that promote designers to work with complex spatial forms. Nowadays, with the pursue of digital technologies, the number of "landmark involving geometrically complex freeform skins and structures" is increasing (Pottmann et. al, 2015). Voronoi structure is one of the most used tool as a form finding method. In the second phase of the project, three-dimensional Voronoi algorithm is used to create the form of the castle. According to the given program, points are replaced the convenient x-y-z coordinates in on the site. Instead of using random surface points, the points are assigned by the author. The parametric model is generated through the algorithm in Grasshopper (Fig. 8).

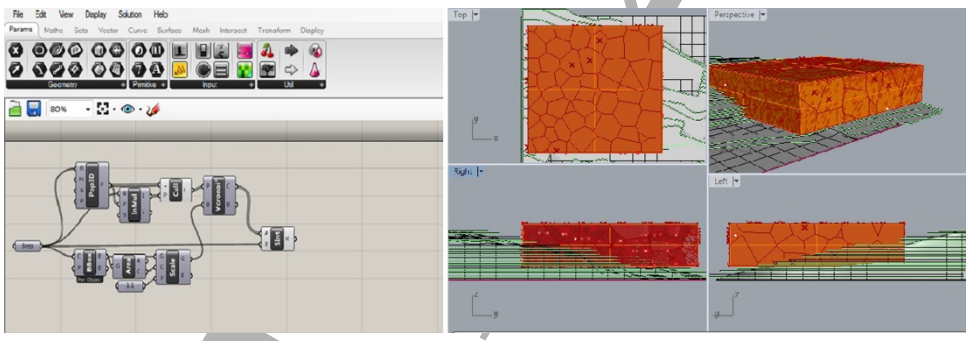


Figure 8: Parametric mass model. On the left Voronoi algorithm that constructed in Grasshopper controls the tessellation. On the right model in Rhino, which is controlled by Grasshopper.

Several explorations made through the algorithm when the desired zoning plan on the site is achieved, the 3D model is transferred into Rhinoceros. Essential subtractions over the form were made manually in Rhino. For example, the parts over the road were subtracted while the essential parts such as bearings remain (Fig.9-10). Figure 11 demonstrates the plan, perspective and front view of the form. Point cloud that constructed the foundation of Voronoi tessellation can be also seen.

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Figure 9: Elevation from East.

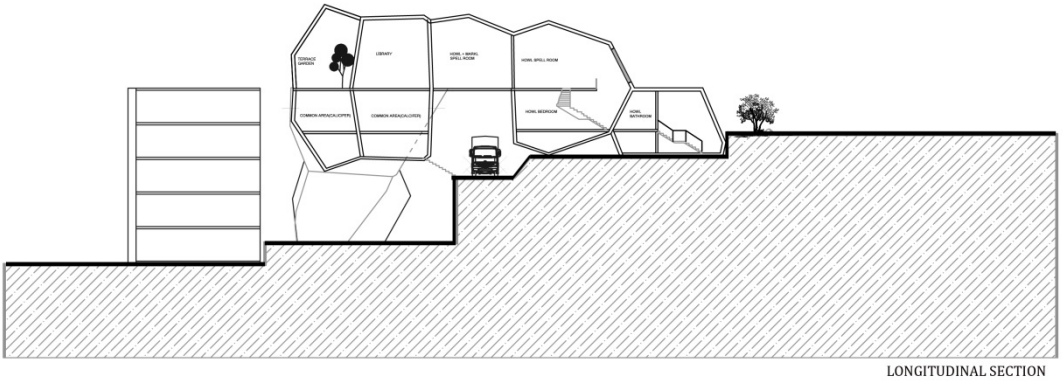


Figure 10: Longitudinal Section

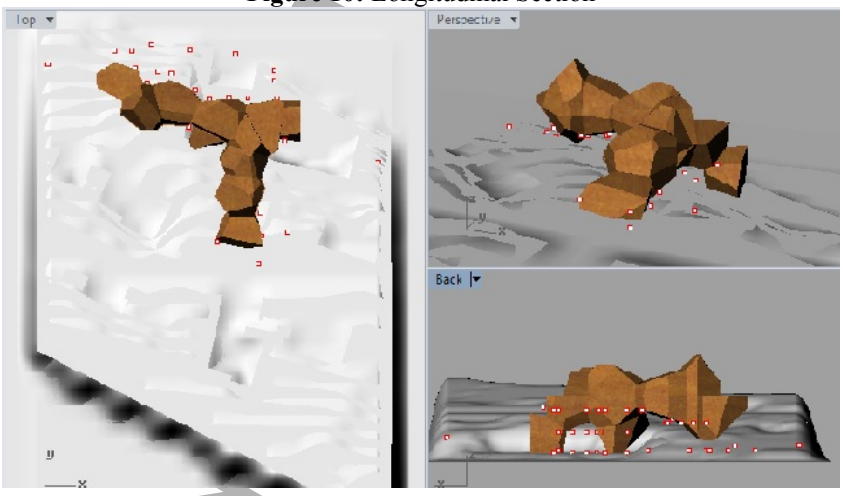


Figure 11: Plan, perspective and front view of the form.

CONCLUSIONS

Advancing digital technologies provide new tools that promote designers to work with computational tools. Therefore, it is important to pursue digital tools in architectural design studios not only as a representational media but also as a design tool. Voronoi diagram, which is also known as Voronoi tessellation, Voronoi decomposition or Dirichlet tessellation, is one of these tools that commonly used among architects in various project. The diagram can be applied in diverse way in any phase of the design process. Mostly it is used to solve complex spatial problems, surface tessellation or problems that involves equalization based on distance. Its multi-functional structural form enables diverse uses. In this project, we applied Voronoi diagram as a way of form finding in architectural design process. Thus, it is benefitted from the diagram especially in the early phases of the design process. The diagram helped to zoning planning on the site according to given program. Furthermore, it assists to create mystical form of the Howl's castle. The main purpose of this study is to examine the use of Voronoi Diagram in architectural design education as a design medium.

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THE EFFECTS OF PEDAGOGICAL TRAINING PROGRAM ON STUDENTS' PROFESSIONAL ATTITUDES AND SELF EFFICACY LEVELS

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ABSTRACT
Obviously, one of the most important elements of education is teacher. The effect of the teacher is very high and the importance of professional attitudes and self-efficacy levels of teachers are improving in each day. Nowadays, pedagogic training program is going on for the students that are graduated from the other faculties than education. At the end of this certificate program, these students are being teachers. This study aims to investigate the effects of pedagogic training program on students' professional attitudes and self efficacy levels. A weak experimental design is conducted for the study. Experimental design is known as one of the quantitative research methods. The population of the study are 1037 Siirt university pedagogical training program students. This program started in July 2014 and finished in January 2015. Professional Attitude Scale (PAS) and Teacher Self-Efficacy Scale (TSS) are used as pre-test at the beginning and post-test at the end of the study. PAS is developed by Çetin (2006) and includes 35 items and TSS is developed by Çapa, Çakıroğlu and Sarıkaya (2005) and includes 24 items. At the end of the study, there is no statistically significant difference between pre-test and post test scores on participants' professional attitudes scores and its subscales love, value and appropriateness. Additionally there is a statistically significant difference on participants self-efficacy scores and its to subscales student participant and teaching strategies.

Keywords: Pedagogical Training Program, Professional Attitudes, Self Efficacy

INTRODUCTION

The world is changing and developing in many sectors so the organizations must make revisions in both their human management politicizes and their systems to adapt these developments and the changes. Educational systems and schools as part of the process of these changes and developments need to make improvements. Nowadays societies want individuals to have critical thinking, questioning, aware of personal and social responsibilities from educational systems. Obviously, one of the most important elements of educational systems are teachers. In this century, the are some changes in the structure, definition and responsibilities of teaching profession. There is a strong need to improve teachers' qualities as parallel to new educational programs to develop their questioning, critical thinking and responsibilities. A special knowledge to make a job, the concept of proficiency as described for license, the improvement of the qualities that the teachers should have must be gained by teachers (Köksal, 2008). Ministry of Education in Turkey made some training programs to improve teachers' proficiencies and attitudes. In developed countries, teaching profession is known as a career profession in the base of professional mentality. However, in Turkey, teaching profession efforts to create its own rules and proficiencies for reaching standards. Because, when a teachers' success is increased, this will automatically increase students' and educational systems' success. Sönmez (2003) determine the basic and important elements of school system in education as; student, program and teacher. When one of them is missing, he states that education and schools can not be exist.

In the related literature, generally, the expected qualities of teachers are listed as follows by (Numanoğlu ve Bayır, 2009);

Taking into account the individual differences and needs of students in teaching process,
Improving human relations and communication skills,
Encouraging students for cooperative learning and active participant,
Advising them for their spare time,
Counseling tem for environmental studies,
Using student centered approaches during lectures,
Helping students that need special education,
Planning and using appropriate techniques and strategies,

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Evaluating them with appropriate methods and instruments for their cognitive, affective and psychomotor domains,

- Preparing teaching materials,
- Encouraging them for expected behaviors,
- Connecting between inter-disciplines,
- Knowing intelligent quantity types and learning styles,
- Knowing enough subject matter.

Teachers professional attitudes and self-efficacy levels become important because of these expected changes in the proficiencies of teachers. In this regard, attitudes are different than opinions, values and beliefs. Opinions are known as personal reflections to specific situations and formations. However, attitudes are more general because of the effects to broader range of events groups and groups of people (Üstüner, 2006). Recently, the increase in the number of studies related to attitudes nd self efficacy levels of teachers show us the importance of this subject. Because, higher and positive self efficacy levels and teaching profession attitudes effect students' success and motivations (Ekici, 2006).

As a result of these, researchers tried to investigate the changes on professional attitudes and self efficacy levels of the students that enrolled pedagogical training program to be a teacher. So the effect of pedagogical training program is being determined. Researchers are tried to answer the following sub-problems:

- What are the pre-test and post-test results of teaching professional attitudes scores of pedagogical training program students?
- What are the pre-test and post-test results of self-efficacy level scores of pedagogical training program students?
- Is there a significant difference between pre-test and post-test scores of teaching professional attitudes of pedagogical training program students?
- Is there a significant difference between pre-test and post-test scores of self-efficacy levels of pedagogical training program students?
-

METHOD

During the study, a weak experimental study is conducted to investigate pedagogical training program students' teaching professional attitudes and self-efficacy levels. As known, in scientific methods, the precise results can be obtained by experimental studies which is a kind of quantitative studies (Büyüköztürk, 2014; Can, 2014; Corrine, 2011). Large group design is used and the same participants are examined in different conditions, before and after the treatment. To supply these, pre-tests were used before pedagogical training program and pos-tests were used at the end of the program. The program took 5 months and students got courses related to education and teaching profession. The scores of the instruments were analyzed by using a statistical program.

The study is started in July 2014 in Siirt University- Education Faculty and finished in January 2015. 1037 students that enrolled to pedagogical training program were constructed the population of this study. The population was accessible so the sample selection procedure was not applied. The study consisted of two parts. In the first part, pre-test was applied in July 2014 and in the second part post-test were applied at the end of the program. Two instruments were used to collect data from the participants. First, "Professional Attitude Scale" (PAS) is used to understand the attitudes of participants towards teaching profession. This scale is constructed by Çetin (2006) and consists of 35 items with three factors: love, appropriateness and value. Second, "Teacher Self-Efficacy Level Scale" (TSS) is used to understand participants self-efficacy levels. The scale was transformed to Turkish, reliability and validity analyzes were done by Çapa, Çakıroğlu ve Sarıkaya (2005) and consists of 24 items. TSS has three factors; student participant, teaching strategies and classroom management. Additionally, reliability analyzes were done by the researchers and found above 0.70 for both scales. Data is analyzed by using SPSS 21.0 and frequency (N), arithmetic average ($\overline{X}$), percentage (%), standard deviation (Sd) was calculated for PAS, TSS and their subscales. To see the statistical significant difference between pre-test and post-test scores of the instrument and their subscales, after looking groups homogeneity parametric statistical techniques were used. T-test analyzes were applied and looked for the difference in $p \leq .050$. The findings are presented in tables as in follows.

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RESULTS

The demographic characteristics like gender, age and branches of the pre-test participants are presented in Table 1.

Pre-test results of the participants are presented in Table 1.

Table 1. Demographics Features of Pre-Test Participants

		N	%
Gender	Female	174	41,4
	Male	246	58,6
	Total	420	100,0
Age	30 and Below	28	6,7
	31-40	351	83,6
	41-50	41	9,8
	Total	420	100,0
Branch	Social Sciences	231	55,0
	Quantitative Sciences	189	45,0
	Total	420	100,0

From Table 1, the distribution of participants for gender and branches variables are seen equable. However, the students above ages 30 are seen very high (93,4%). This resulted from pedagogical training program was not started in the past and students was waiting for it for many years.

The demographic characteristics of the post-test participants in Table 2.

Table 2. Demografic Features of Post-Test Participants

		N	%
Gender	Female	118	38,2
	Male	191	61,8
	Total	309	100,0
Age	30 and Below	30	9,7
	31-40	253	81,9
	41-50	26	8,4
	Total	309	100,0
Branch	Social Sciences	187	60,5
	Quantitative Sciences	122	39,5
	Total	309	100,0

Similar to Table 1, Table 2 also shows that due to gender variable participant distribution is equable and according to gender variable again most of the participants (90,3%) are above 30 age. According to branches the number of participants (60,5%) from social sciences like history, religion, geography and literature is more than those of quantitative sciences like physics, chemistry, biology, mathematics and nursing.

Pre-test and post-test PAS scores of the participants are presented in Table 3.

Table 3. Pre-test and Post-test Scores of Professional Attitude Scale

		Pre-test		Post-test	
		$\bar{X}$	Sd	$\bar{X}$	Sd
Professional Attitudes	Love	2,96	1,20	3,00	1,20
	Value	1,58	0,87	1,65	0,92
	Appropriateness	3,76	1,27	3,74	1,25
	Total	2,77	1,11	2,80	1,12

According to Table 3, in general there is no significant changes in the participants professional attitude scores (pre-test= 2,77 – post-test= 2,80 change= +0,03),in subscales, the most increase is seen in value subscale (pre-test = 1,58 – post-test = 1,65 change +0,07) and this change is not so big to say there is a strong difference between beginning and end of the program. As a result, when we look at the arithmetic averages and the standard deviations, we can conclude that there is no strong effect of pedagogical training program on students' professional attitudes.

Pre-test and post-test TSS scores of the participants are presented in Table 4.

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Table 4. Pre-test and Post-test Scores of Teachers' Self-Efficacy Scale

		Pre-test		Post-test	
		$\bar{X}$	S.s.	$\bar{X}$	S.s.
Self-Efficacy	Student Participant	3,83	0,81	3,90	0,80
	Teaching Strategies	3,87	0,80	3,94	0,83
	Classroom Management	3,71	0,91	3,79	0,93
	Total	3,80	0,84	3,88	0,85

According to Table 4, it is obviously seen that, there is a positive effect of pedagogical training program on participants' self-efficacy levels and its subscales. The reason of that difference may caused from two important properties of pedagogical training program. Firstly, the education taken with pedagogical training program inform the participants about the requirements and the responsibilities of teachers. Secondly, participants' self confidence levels are increasing with the program and they are starting to think that they can make teaching well. Unforgettable thing from the results that the increase in self-efficacy levels is not too much.

T-test results of the professional attitude scores of participants are presented in Table 5.

Table 5. T-test Results for Professional Attitude Scores Between Pre-est and Post-test

		N	$\bar{X}$	S.s.	p
Love	Pre test	420	3,00	0,36	.942
	post test	309	3,00	0,49	
Value	pre test	420	1,65	0,64	.166
	post test	309	1,59	0,56	
Appropriateness	pre test	420	3,74	0,87	.758
	post test	309	3,76	0,81	
Total	pre test	420	2,80	0,29	.582
	post test	309	2,78	0,35	

Note: * There is a significant difference on $p \leq .050$.

Table 5 is constructed to understand whether there is a significant difference between pre-test and post-test scores of professional attitudes scale. According to Table 5, it is seen that there is no significant difference on participants' professional attitudes in general and in subscales. Because p value is bigger than .050. So, we can say that pedagogical training program do not effect participants' professional attitudes significantly.

T-test results of the teachers self efficacy scores of participants are presented in Table 6.

Table 6. T-test Results for Professional Attitude Scores Between Pre-test and Post-test

		N	$\bar{X}$	S.s.	p
Student Participant	pre test	420	3,83	0,48	**.016***
	post test	309	3,93	0,60	
Teaching Strategies	pre test	420	3,87	0,51	**.047***
	post test	309	3,95	0,55	
Classroom Management	pre test	420	3,71	0,60	.058
	post test	309	3,79	0,56	
Total	pre test	420	3,81	0,47	**.015***
	post test	309	3,90	0,47	

Note: * There is a significant difference on $p \leq .050$.

Table 6 is constructed to see whether there is a significant difference or not between pre-test and post-test scores of the participants on teachers self-efficacy levels scale. It is seen that there is significant difference on total scores of self-efficacy levels and it two subscales student participant and teaching strategies because of $p \leq .050$. In the other subscale, classroom management, there is no significant difference is found because of $p \geq .050$. Participants' self-efficacy levels in general and in two subscales, student participant and teaching strategies, are changed significantly. The reason of this result may caused from increase in the education levels of the participants with pedagogical training program supply an increase in the self- efficacy levels of them.

CONCLUSİON AND SUGGESTİONS

During this study, the effects of pedagogical training program on students' professional attitudes and self efficacy levels are tried to be investigated by using one group pre-test and post-test design. There were no control group

for the study so this study can be categorized as a weak experimental study. The findings of the study show that there is no obvious change in participants' professional attitudes at end of pedagogic training program. When we look at the subscales of professional attitude scores; in love and value subscales there is slight increases and in appropriateness subscale there is a small decrease. According to these findings, pedagogical training program does not positively contribute participants' adaptations to teaching profession and love to this job. On the other hand, it may be said, this program negatively affects the participants. The reason of that may be the requirements and the responsibilities of teaching profession like improving yourselves with new techniques, methods, technologies, studying hard with newly changed subject matter of the subject area and adapting teaching profession with new and changeable conditions. However, the participants think that these requirements are not so important for teaching profession. Because the participants enrolled to pedagogical training program think that teaching profession is a relaxed, have more spare times and holidays, and a job guaranteed by public . In value subscale of professional attitude scale, although there is a slight change in positive direction, the quantity of this change is very small and we could not make a comment. As a conclusion, the engrossing point in terms of program and students is that teaching profession is not sufficiently understood by future teachers participated in pedagogical training program.

The other dimension of the study is self-efficacy levels of the participants. As a result of this dimension, there is a small increase in total and subscales of self-efficacy levels. This result may be concluded as pedagogical training program slightly develop students' self-efficacy levels and its subscales student participant, teaching strategies and classroom management. Pre-test and post-test scores are also analyzed to understand whether there is a significant difference or not between beginning and end of the program. T-test is used in statistical package program. As a result of these, there is no significant difference seen in professional attitudes and its subscales while there is a significant difference seen on self-efficacy levels and its two subscales ; student participant and teaching strategies. Additionally, no significant difference were seen on classroom management subscale of self -efficacy levels. This study showed us the pedagogical training program does not heavily effect students' professional attitudes, but this program effect students' self-efficacy levels. The reason of that difference may be caused from the participants' thought about teaching profession as a job that may economically facilitates their lives and their learning in pedagogical training program effect their self-confidence.

At the end of the study, following suggestions can be done for the future studies related to pedagogical training program, professional attitudes and self-efficacy levels:

- This study can be repeated and compared with the other universities' pedagogical training programs and students.
- This study can be redesigned with the aim of comparison between pedagogical training program and education faculty program students.
- A qualitative research ban be conducted with pedagogical training program students to check and deeply understand these quantitive results.
-

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AN EXPLORATORY STUDY OF THE RELATIONSHIPS BETWEEN READING COMPREHENSION COMPETENCE, READING ATTITUDE, AND THE VIVIDNESS OF MENTAL IMAGERY AMONG FOURTH -GRADE STUDENTS

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This study was an attempt to figure out the possible relationships reading comprehension competence, reading attitude, and the vividness of mental imagery among fourth-grade students. Participants were fourth grade students selected using convenience sampling from two different public schools (n=103) in Bartın, Turkey. This study was designed as a correlational study describes the degree to which two or more quantitative variables are related, and it does so by using a correlation coefficient. The data gathering tools used in this study were "Reading Comprehension Test (RCT)" which was developed by the researcher and included both factual and inferential questions, "Vividness of Imagery Questionnaire (VIQ)" developed by Sheveland (1992) and "Elementary Reading Attitude Survey (ERAS)" developed by McKenna and Kear (1990). Multiple linear regression was used for data analysis. The analysis revealed that reading attitude and vividness of mental imagery were a significant predictor of students' reading comprehension competences. In addition, results showed that approximately 14% of the variance in reading comprehension competence were explained by reading attitude and vividness of mental imagery [$R=.369$, $R^2=.136$, $F_{(2-96)}=7.578$, $p<.01$].

Keywords: Reading comprehension competence, reading attitude, vividness of mental imagery, fourth graders

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AN IMAGINATIVE APPROACH TO ECOLOGICAL LITERACY EDUCATION

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The study aimed to explore future course of ecological education through "Ecological Literacy". The ecological crisis has been overshadowed by the pollution and collapse of ecosystem. Education has responsibility about that situation. Ecological literacy is the ability to ask 'what then?' and to understand connection between self-existence and world, and also the combination of knowledge, affective and practice. For developing ecological literacy, this study focuses on Imagination. Engaging in imagination enables us to transcend reality and experience an alternative perspective providing emotional connection. It is very useful cognitive tool for making learning more meaningful. Through imagination, this paper suggests pedagogical methodology to improve literacy for ecology.

Keywords: ecology, literacy, imagination

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AN INTERACTIVE LEARNING SYSTEM APPROACH FOR MENTALLY DISABLED CHILDREN BY USING ANIMATIONS

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It is difficult to focus for the mentally disabled children (MDC) when a teacher wants to teach about an education topic in the class. But every child, including the mentally disabled one, likes computer games and other electronic devices such as PC, game vehicles, smart phones and etc. Our interactive software and hardware system approach for mentally disabled children will let them understand the education topics faster and joyfully. Our potential users are the parents, the schools and the special education centres of mentally disabled children. Instead of long lasting training weeks, the children will learn the same courses in hours by using our system.

The mentally disabled children should use more senses such as hearing, seeing, touching the system interactively.

Our team visited some potential users such as the schools, the special education centres, also interviewed with the parents. After some studies, we understood that it is very important to use interactive software and hardware system for MDC (mentally disabled children) by using proper animation applications.

Keywords: interactive learning, software, mentally disabled children, animation

INTE 2015

AN INVESTIGATION OF SOLUTION APPROACHES OF ELEMENTARY MATHEMATICS TEACHER CANDIDATES TOWARDS VARIOUS ANALYTICAL GEOMETRY PROBLEMS

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Analytic geometry is a branch of mathematics which enables to study on algebraic problems through geometry and geometric problems through algebra. In this branch of mathematics, it is expected from students to solve the problems by not depending on presentation of problems and subject area of problems they come across and by adopting both algebraical and geometrical approaches. In this context, the aim of this study is to investigate of solution approaches of elementary mathematics teacher candidates which they adopt in order to solve analytical problems on lines and circles which are presented visual and algebraic. 63 third year elementary mathematics teacher candidates participated in the study. Solution approaches of the teacher candidates were determined by analyzing the solutions of 4 problems which were presented in 2 visual and 2 algebraic forms. These 4 problems included 1 visual and 1 algebraic analytic problems on lines and 1 visual and 1 algebraic analytic problems on circles. When the answers of teacher candidates were examined, it was found that most participants adopted geometrical approaches in order to solve the analytic problems on both lines and circles. In other words, while teacher candidates solve the analytic problems on both lines and circles, they preferred geometrical solution approaches irrespective of subject area of the problem. When the problems were categorized as “presented in visual and algebraic forms”, it was again found that most participants adopted geometrical approaches in order to solve the problems in visual and algebraic forms. In other words, while teacher candidates solve the analytic problems on both lines and circles, they preferred geometrical solution approaches irrespective of presentation form of the problem. When it is considered that geometrical approach is not enough for solution of every problem, the study recommends that students should learn different solution approaches and raise awareness of necessity of various approaches.

Keywords: math education

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ANALYSING THE 8TH GRADE CITIZENSHIP AND DEMOCRACY CURRICULUM REGARDING MULTICULTURALISM ON THE BASIS OF DEMOCRACY

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Schools are micro models of society where knowledge, culture, relations, behaviours and emotions are reproduced in, inevitably and constantly; and curriculum is a living organism, where we can find the roots of our thoughts or prejudices and the culture of the society; thus education has quite significant role on the construction of social identity.

It is a fact that in such global world, societies consist ofa variety of individuals, groups, institutions and their relations with each other; and naturally there are differences as well as similarities between. In democratic countries people have to accept differences through the context of diversity and pluralism; because, social conflict hinders the development of democracy. Therefore, it can be claimed that there is a strong relationship between education, social identity construction, internalization of multiculturalism, and democracy.

The reality is that Turkey is a multicultural country with different ethnicities, religions and cultures.If education is considered as the most significant and effective part of the identity construction process and social peace - because by education, it would be easier to hold individuals together-, students should be experienced democracy by realising multiculturalism for social peace and respecting others regarding to protect democracy culture through the multicultural structure of the country and the world.Therefore, this study aims to analyse the 8th grade Citizenship and Democracy Curriculum regarding multiculturalism on the basis of democracy.

The present study takes a qualitative approach to analyse multiculturalism in 8th grade citizenship and democracy curriculum. The textbook of the course and the guidebook for teachers will be analysed with the official curriculum approved by Ministry of National Education of Turkey in 2011 by using content analysis method.

Keywords: Multiculturalism, Citizenship and Democracy Curriculum, Social peace

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ANALYSIS ON THE EFFECT OF MIDDLE SCHOOL STUDENTS' PRIVATE TUTORING USING PROPENSITY SCORE MATCHING

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This study aims at examining the effect of private tutoring on middle school students by utilizing the propensity score matching method under the education environment where experimental research methods, such as randomization, are not applicable, in order to verify the effect of private tutoring without selection bias. To this end, data released by first through third years of Korea Education Longitudinal Study (KELS), a large scale longitudinal study that includes students' academic performances in English and mathematics, were analyzed to identify whether students' performances differ by school location and by students' GPAs when students are participating in private tutoring. In addition, based on the propensity score matching method, resampling was done to separate a participating group (students who receives private tutoring) and a non-participating group (students who do not receive private tutoring). This process is designed to match the participating and the non-participating groups by estimating propensity scores, expected values of private tutoring in order to make covariates affecting private tutoring and academic performances have similar properties. Covariates affecting students' academic performances include gender, studying hours, parents' educational background, household income, school location, co-education and their GPAs. After the matching process, analyzed cases were, 1,488 of English and 1,528 of mathematics among first-year students; 2,422 of English and 2,416 of mathematics among second-year students; and 3,034 of English and 3,018 of mathematics among third-year students.

Findings of this study are as follows. First, analyses on the differences between the two groups found that, on average, students in the participating group had longer study hours, their parents were more educated and their household incomes were higher than their counterpart. Significant differences between the two groups were also identified by gender, school location, co-education/separate-education, and students' GPAs. Such differences were almost evenly found among all students regardless of the subjects. Second, analyses on the factors by which students decided to participate in private tutoring found that the determining factors differed from subject to subject. In deciding to receive private tutoring, for English, all students were affected by their gender, studying hours, household income and GPAs; and for mathematics, all students were influenced by their household income, school location and GPAs. Third, analyses on the effect of private tutoring on students' academic achievement by using the propensity score matching method found that in English, private tutoring had little effect on the first-and the third-year students' academic performances while improving the bottom and the top performance groups among second-year students. In mathematics, private tutoring also had little effect on the first- and the third-year students' academic performances while improving only the top performance group among second-year students.

Therefore, private tutoring sessions have little or no effect on students with respect to school location, but benefit only a limited number of students by their academic performances (GPAs) in English and mathematics. This result demonstrates that although advance learning may have positive impact on some students particularly English and mathematics due to the nature of those subjects, and help students develop interest and confidence in subjects.

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Keywords: private tutoring, propensity score matching method, students' academic performances

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ANECDOTE-SPIN-INSTRUCTIONAL-DESIGN

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ABSTRACT

Instructional Design is a wonderful tool in the hands of any Instructor, be a class teacher or a lecturer, or a professor. Having an Instructional design and knowing how to use it will make one an effective instructor (Bandura 1997). The design could be in the form of a method or a paradigm, or any cognitive frame work (Elliot and McGregor 2001; Cury et al., 2006). Each design could have its own logic, for example Clarke, Ayres, and Sweller (2005) used spreadsheet application as instructional design to teach students mathematical concepts and procedures (Ambrose et al., 2010). Here we propose a design namely ***Anecdote-Spin-Instructional-Design***. People of every age, be it young or old or middle aged, all like to hear amusing stories or interesting facts and figures or enumeration of real incidents or narration of an anecdote (Stevens and Levi 2005). Sprouting to be a very handy Instructional Design shortly.

Keywords: Instructional Design, Education, Participatory learning, Classroom Management, Techniques of Teaching, Story-telling.

INTRODUCTION

Instructional Design is a wonderful tool in the hands of any Instructor, be a class teacher or a lecturer, or a professor. Having an Instructional design and knowing how to use it will make one an effective instructor (Bandura 1997). The design could be in the form of a method or a paradigm, or any cognitive frame work (Elliot and McGregor 2001; Cury et al., 2006). Keeping in mind that the Instructional design that one uses should be a triple 'p', practical, productive, and progressive. The instructional design that one handles should have a developmental space, a *sleuth,* or opportunities for progression within the designed-system, (Carter et al., 2007). "Research has shown that good problem solvers will try new strategies if their current strategy is not working", (National Research Council 2001, p.78). The Instructional Design should help the Instructor to drive home the ***Instructional Content*** effectively. "…the magic of metaphor to inform, educate, teach values, discipline, build experience, facilitate problem solving, change, and heal" (Burns 2005).

Anecdote-Spin-Instructional-Design.

The paradigm of the instructional design could be of various kinds and forms. Each design could have its own logic, for example Clarke, Ayres, and Sweller (2005) used spreadsheet application as instructional design to teach students mathematical concepts and procedures (Ambrose et al., 2010). Here we propose a design namely ***Anecdote-Spin-Instructional-Design***. People of every age, be it young or old or middle aged, all like to hear amusing stories (Burns 2005), or interesting facts and figures or enumeration of real incidents or narration of an anecdote (Stevens and Levi 2005). Hence it's a very catchy type of a tool as an instructional design.

The application of the ***Anecdote-Spin-Instructional-Design*** is very simple and also has provision for multiple options. This instructional design is primarily for the schools, colleges and university students, structured in a pattern of 3 Modules. Each Module is complete in itself and could be used in different context. One can also use the entire design of 3 Modules for one full session. For example, if the instructor addresses a group of lower level school students the Module-I is sufficient to get across the message. If the instructor is addressing the higher level school students or college students the instructor could start off with the Module-II directly, or even start with the Module-I and proceed to the Module-II and conclude there. If the instructor is addressing the college or university students it's enough to use Module-III. In any case all the Modules could be used independently or even collectively for a single package.

The aspect of the Instructional design should be like a double edged sword. It should cut on both sides such as: the instructor should be able to utilize it with sharp application of it during instruction (Sprague and Stuart 2000), while the learner gets the benefit of the instruction promptly penetrating into the participants, clearly and precisely, "simple strategy can help students feel connected to the content, that they belong in the course or field, and reinforce their developing sense of competence and purpose", (Ambrose et al., 2010, p.183).

The design should have a pattern of consequent steps gradually and naturally flowing with logical sequence, "decompose complex tasks, identify weak or missing component skills, and track the effect of those gaps on student

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performance," (Lovett's 2001), whereby both the instructor and the instructed move into the content of the instruction hand in hand, closely following the point of discussion. The instructional design should help reduce the cognitive load of the participants which may facilitate learning (Paas, Renkl, and Sweller 2003, 2004), at the same time the instructor should be able to identify those aspects that weigh heavily on the learner disrupting the goals of the instruction, hence, use an appropriate design that quickens the learning process.(Ambrose et al., 2010).

Module – I

1. Anecdote.
Narration of an incident. (Maybe a fable or fact or story or an event). Any audience will be involved in an instruction if it is interesting wherein the cognitive burden is reduced with narrative presentation (Sprague and Stuart 2000). The audience participation is optimum when the instruction brings about an interaction between one's expectations and cognition within the information structures (Paas et al., 2004). Hence, right at the beginning the instruction should draw the attention of the participants which is one of the purposes of the narration.

2. Connecting the key concept
The key concept of the Instructional Content (***Ins-Con)*** should be connected with the narration. This is a very brilliant task of the instructor. Having an interesting anecdote or a fable is quite simple and possible to acquire easily, but the application to the Instructional Content is the most important skill of the instructor. (Tschannen-Moran and Woolfolk Hoy 2001). Hence the instructor should be comfortable with both the narrative content (***Nar-Con***) and the instructional content to make the key concepts merge.

3. Development of the narration
In due course of elaboration, one can present the anecdote suitable to the ***Ins-Con,*** and has to develop it considerably which is the fundamental message that has to be driven home. Communicating the information with proper explanations and developing the theme, are part and parcel of the design (Eggen and Kauchak 2004). Developing the narrative content clears all doubts and makes communication effective. Ability to simplify complex terminology, and draw analogies and examples are salient features of the instructions. (Westwood 2008, p.61)

4. Deriving the message from the narration
Message from the narration is both productive and progressive as a first phase outcome of the discussion, (Gettinger and Kohler 2006). It serves as a conclusion for the ***Nar-Con*** and could be utilized in the comparative correlation of the ***Ins-Con*** at any future reference. (Emmer et al., 1980). A synthesis at every stage is productive aspect that indicates a step by step approach to the argument of instruction (Cooper 2010).

Module – II

5. Focusing on the instructional Content.
Leaving the point of narration and **Focusing on the instructional Content** thus giving due importance to the core of discussion. Modern researchers suggest that in the higher level of studies, Opening the discussion with the main instruction could well have an impact on the students on fundamental 'informations and skills that are well defined' though presented in a logical sequence. (Ormrod 2000; Westhood 2008, p.12). Therefore the ***Ins-con*** in itself becomes a starting point of the discourse. Once the ***Ins-con*** is at its zenith of the discussion, use the ***Nar-Con*** to support the argument.

6. link the Instructional Content
Getting back into the Narrative Content to link the Instructional Content. The capacity of the instructor's efficiency plays a vital role at this juncture with all the experience to find proper co-relation (Byrne 1994), with the image and the real. The priority of the instructional content should be pointed out using the narrative content. Failing to indicate the priority would mean failure of the design. (Williams 2012).

7. The Sleuth of the design
Amplifying the theme of the Instructional Content and **opening up conversational dialogue to allow participation and sharing of opinion**, (Cooper 2010). from the audience… 'participatory – approach in learning process produces better results than passive spectator – approach learning', (Elliot & McGregor 2001; Cury et al., 2006). Instructor

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should coordinate instructional content and 'social skills objectives by using cues and consequences' that emerges through the open floor. (Smith and Gilles 2003)

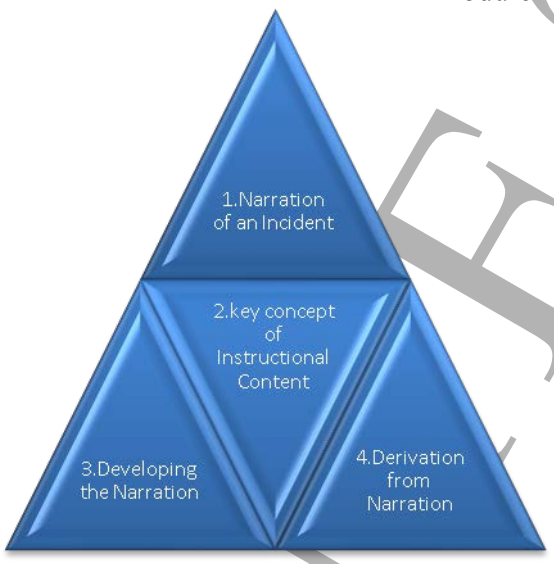
Module – III

8. HIT the Instructional Content directly on the head,
While covering and connecting the propped up references, because different types of examples will help the students to grasp the theories and concepts, and enhance the capacity of the students to correlate in other contexts as well, (Ambrose et al., 2010).

9. Point of reference to the Instructional Content
Blending the Narrative Content as a point of reference to the Instructional Content, using the utmost attention to the salient element of the Instructional content. Care should be taken not to dilute the main point while maintaining the design of the instruction. (Becker 1992).

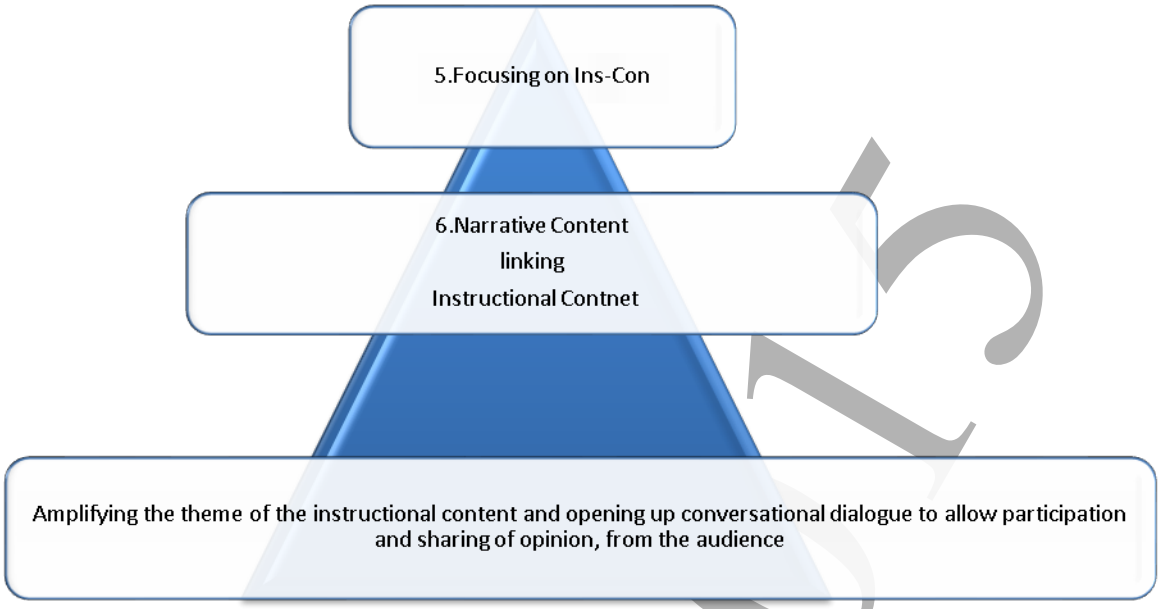
10. Priority for the Instructional Content
Concluding with priority for the Instructional Content, comprehending the entire presentation. The Instructor must try to give a coherent synthesis. (Wong 2005; Aloe et al., 2013). The last phase is also to coordinate the presentation of the ***Ins-Con*** with and verifying with the participants, students, (Wight and Chapparo 2008)

Module – I (fig:1)

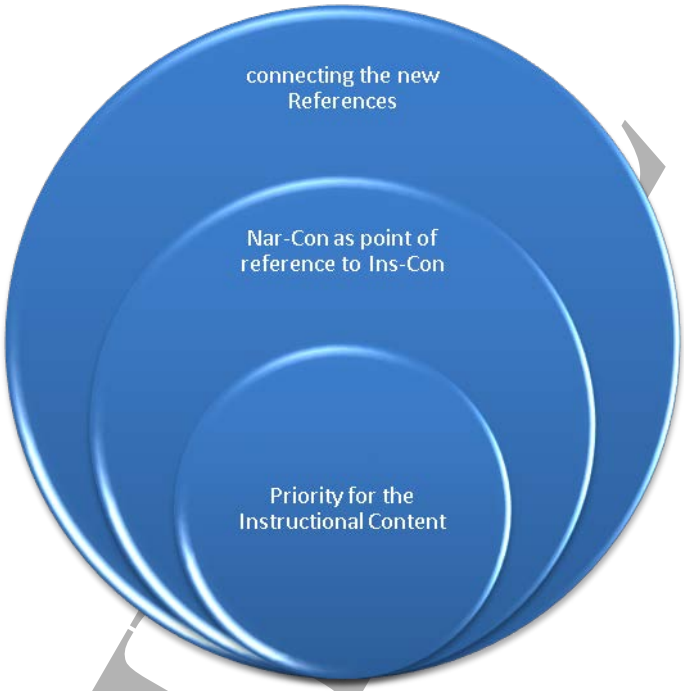


Module – II (fig:2)

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Module - III (fig:3)



CONCLUSION

The Instructional Design gives us ample chance for modifying and varying according to the need. There are instances with learning difficulties (Randall 2006), where we could create our own pattern and designs fitting for the ambient. The instructor should be able to induce creative thinking and active participation. (Carter et al., 2007). That is the aim and purpose of the Instructional Design.

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APPROACHES TO TEACHING INFORMATION AND COMMUNICATION TECHNOLOGIES IN PREGRADUATE TEACHER TRAINING

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ABSTRACT
The paper deals with the issue of ICT teaching in pregradute teacher training on both the Bachelor‘s Degree and Master‘s Degree level. The paper also analyses the educational approaches to teaching, trying to capture the possible differences between specializations and identify possible specifics and methods which reflect interdisciplinary relations with an effort to strengthen the professional key competences of a teacher (with an emphasis on communicative language competences). The aim of this paper is to present the results of a content analysis and the proposed measures leading to a higher quality of education outlined in the context of pregraduate teacher training.

INTRODUCTION
The key to an effective education of the present and future generations of pupils and students is a complex professional preparedness of a teacher, his general knowledge. In concordance with the current trends we do not strictly mean the contents preparedness but mainly the competent preparedness. Activity character of the competences allows a teacher to educate the pupils with a help of cooperation of classical educational methods and modern technologies, mainly the ICT. In this context, the questions emerge, how are the teachers supposed to use the ICT, how to implement them into the instruction process, what methods of pupil´s learning will be incited, what key competences can be enhanced by using the ICT in the correct situations (Kubrický, 2013).
The relationship of a teacher to information and communication technologies plays the understandable and important role here. It is not made only by a subjective conviction and interest, but also by the quality of education within the pre-graduate teacher training, alternatively the expanding studies. Our goal is to reflect the content and methods of the Bachelor´s and Master´s Degree studies within the field of Informative education oriented on preparing the future informatics teachers of the ISCED level 2 and secondary school pupils and students on the Faculty of Education of Palacký University Olomouc. Our effort is to analyse the current state of the instruction from the point of view of prevailing character representation of the teacher´s ICT competences in the instruction of chosen subjects of the mentioned field. Regarding the fact that the knowledge of the English language is also one of the decisive determinants of successful gaining of knowledge from the ICT field, we also put emphasis on the perspective strengthening of the English language knowledge.

ICT EDUCATION ON THE DEPARTMENT OF TECHNICAL EDUCATION AND INFORMATION TECHNOLOGY ON FACULTY OF EDUCATION OF PALACKÝ UNIVERSITY OLOMOUC
At the Department of Technical Education and Information Technology it is possible to study both degrees, Bachelor´s and Master´s. The Bachelor´s degree subject of study “Information education with focus on education” is a field of study that has a priority to create a basis for the follow-up teacher training even though to find an employment is also possible from this Bachelor´s degree. This branch of study is focused on the field of information education as a stable part of the preparation of primary school pupils and students of various fields of study throughout the Czech Republic. In this field of study there are included besides the disciplines of an informatics and mathematical character also the basics of electrotechnology and electronics so that the absolvent is fully capable of not only knowing but also mediating all needed terms of information activity, knowledge of software structure, programming, functions of information technology, knowledge of operational systems and also technical knowledge. The applicants can choose this field of study as a double major. The possible fields for combining the double major are B7507 Specialization in pedagogics and B7506 Special pedagogics.
The graduate of the Bachelor´s degree is mainly prepared to successfully continue with the study of follow-up Master´s degree in the field of technical and information education teaching. The graduate has general knowledge and he knows the basic knowledge and processes in his field. In a creative way, using methods accenting the activity comprehension he is ready to apply the scientific and technical knowledge, creative skills and to instigate creating of desirable bonds and attitudes to the fields of programming, creating of educational materials or administering of e-learning systems and informational systems.

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The goal of this field of study is to create the optimal prerequisites for the adoption of the set of competences which are necessary for the employment of a graduate of the study field; by the set of elective disciplines of the study field it is overseen the usage of the individual dispositions of the students in the frame of broad spectrum of information technologies in the educational process conditions.
The set of disciplines of field´s study plan is then divided into the technical disciplines of the profiling character, broader scientific basis and also the disciplines including broader context. Then, the selective disciplines of an extending character are implemented. The emphasis is put on the practical side of the graduate´s employment. The ratio between the theoretically lectured subject matter and practically aimed exercises also responds to this fact. The professional experience with the length of 10 days is also a part of this study field. This professional experience is realised by students on professional workplaces of school institutions and companies that are concerned with the implementation, administration, operation and development of information technology and its systems.
After finishing of studies a graduate will be able:

- to show an extensive knowledge of subjects and an extent of information technology field;
- to have the knowledge of the most important informatics topics, which are mainly algorithmisation and programming, construction of computers, operating system, administration of computer networks, gaining data from the real processes and its processing, creating and administrating of database and information systems, processing of computer graphics, creating of web applications, also the analyses are in more simple cases possible in the given fields;
- to prove the necessary knowledge of theory, concepts and methods of the field, they are for example able to prove the knowledge of methods from the separate fields of information technology;
- to solve practical problems with the use of professional knowledge and on the basis of a framework defined task in the field, for example they are able to independently design and realise works of a smaller scale (software and hardware products, computer systems, control systems, computer networks), and they are able to do so mainly with the use of the known and verified methods and technologies, they are able to understand the issue of extensive systems;
- to prove, justify and document the chosen methods of solving;
- to administrate smaller software, hardware systems and networks;
- to create extensive texts, and mainly texts describing the intended or realised solutions;
- to find, sort and interpret the information which are relevant for solving of the defined practical problem;
- to test new approaches and technologies, cooperate on the realisation of technological changes and innovative activities;
- to prove their theoretical knowledge of basic topics of the information technology fields;
- to prove their multidisciplinary knowledge of the basic education topics which are needed for creating of educational offer on primary school;
- to explain and evaluate the principles of effective communication;
- to orientate in the primary and secondary literature concerning the scientific fields of subject specialization;
- to interpret the relations between the basic pedagogical and psychological categories and their functioning in the educational process;
- to interpret the psychological and pedagogical principles of development, education and upbringing of a person;
- to didactically transform the multidisciplinary knowledge and skills that are necessary for the educational process in the basic education;

The goal of the follow-up Master´s degree study *Učitelství technické a informační výchovy pro střední školy a 2. st. základných škol* (Teaching of technical and information education for secondary schools and ISCED 2 level) is to offer a comprehensive, professionally oriented Master´s degree education which prepares a graduate for the instruction of the lectured subjects, thematic topics, courses or projects from the field of technical education, information education and information technology in the school institutions which offer the education. The graduates of the field of study gain the relevant knowledge and skill in the field of technical education, information education (including the information and communication technologies), contemporary didactic conceptions and methodical approaches to the instruction of technical and informational oriented lectured subjects.
The study prepares the graduates mainly for the realisation of instruction focused on the user oriented approach to technology, information and communication technology and to performing of the instruction of technical and information education in the school conditions. Besides the own instruction activities they are also ready to perform the function of ICT coordinator according to "Koncepce státni informační politiky ve vzdělání" (Conception of state information policy in education), to work as advisers and instructors in the field of ICT

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usage and development on schools, to lead and organize non-instructional activities oriented on the pupil´s work with technology and to administrate the school computer information systems.
The graduates can be employed as teachers of mandatory and elective subjects form the field of technical and information education on schools which offer lower secondary or higher secondary education (ISCED 2, ISCED 3, special schools, then mainly technical lyceums, vocational schools, dual education system schools and special practical schools). They can work also as ICT coordinators and administrators of school computer information systems. Then they can work as lectors or organizational workers in school institutions and in the sphere of company training.

Expert knowledge:
After finishing of studies a graduate will be able:

- to show a vast knowledge of scientific disciplines of own approbation and to understand these disciplines, principles of its structure, relations inside and also outside of the disciplines of own approbation;
- to interpret, explain facts, terms, scientific disciplines´ statements from which the instructed subjects of their subject approbation are derived;
- to show a vast knowledge of the basic education contents and its understanding;
- to orientate in a vast spectre of instruction methods, interpret and evaluate the instruction strategies and representations in relation to the instruction of a specific curriculum;
- to show a deep knowledge of pupil´s personality development mainly in the relation to the learning process;
- to show a knowledge and understanding of assessment and self-assessment criteria;
- to interpret and evaluate the goals of technical and information education instruction;
- to understand the methodology of pedagogics, psychology and scientific disciplines of own subject approbation;
- to orientate in pedagogical conceptions and specializations, in development of opinions on conception of the teaching process in historical context, they evaluate the current tendencies;
- to orientate in main development trends of European education, in alternative and innovative conceptions of education;
- to understand the theories, concepts and methods of present-day knowledge in pedagogical and psychological disciplines concerned with the process of instruction and learning;
- to orientate in the current methods, techniques and tools of research in the field didactics of own approbation, to know how to interpret methodological problems of research in the field didactics of own approbation;
- to understand socio-scientific context of education, to interpret and evaluate the relation between the findings of the socio-scientific disciplines (philosophy, sociology, ethics, psychology, pedagogics) and the instruction and learning processes;
- to analyse the inner relations of the field contents of own approbation subjects, their relations to the practice, their interdisciplinary and beyond-disciplinary overlaps;

Expert skills:
After finishing of studies a graduate will be able:

- to control the transformation process of the field subject approbation knowledge, that means to set goals of instruction, critical analysis, interpretation and structure of curriculum, choice of appropriate instruction forms and methods, to take into consideration the individual possibilities and needs of pupils;
- to choose appropriate assessment and self-assessment methods of instruction methods and learning results, to reflect the processes and result of instruction with the goal to improve the planning of future instruction;
- to plan instruction considering the goals set in the curricular documents and considering the individual possibilities of pupils;
- to choose and functionally use teaching aids and tools during the instruction of a given field;
- to functionally use information and communication technologies in education;
- to apply various instruction methods and organisational forms with regard to own subject specialization;
- to create quality environment for learning, mainly socially-emotional climate based on the mutual respect, cooperation and following the agreed set of rules of behaviour and coexistence in a class;
- to appropriately adjust the knowledge and skills to a specific context of a given school class, given grade, given school or community where the school is situated;
- to apply appropriate diagnostic methods of pupil´s performance assessment;

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- to communicate with pupils, parents and colleagues in a cultivated manner, with respect and adequately to their age and position;
- to adapt the educational programme in the relevant disciplines to concrete conditions of pupils and school levels;
- to individually and appropriately realise the teaching process of technical and information education in all its phases (planning, instruction realisation, instruction reflection);
- to evaluate own educational activities on the basis of own knowledge and to creatively improve own educational performance on the basis of self-reflection;
- to analyse the educational programme from the point of view of expected outputs from teaching in the field of own subject approbation;
- to formulate a research problem from own field approbation, field didactics, pedagogics and psychology;
- to choose the corresponding research methods for solving a research problem from own field approbation, field didactics, pedagogics and psychology;
- to structure and design an expert text, use expert language, present the result of own research in expert community.

On the basis of these facts we continue working on the level of designing the contents of individual subjects, including the targeted approaches of instruction.

ICT IN MODERN CONCEPTION OF EDUCATION

The 21st century on its beginning introduced in terms of the discussion about ICT in education a targeted shift of attention more to the pupils and students. (Sak, 2007) They changed the position of ICT from the goal of education to the means of education. There is a focus on the functional creativity, adapting of instruction goals, plans and methods. The ICT competences of a teacher became from a separate category a part of integrated whole of teacher´s professional competences, a part that is not limited by a technical barrier but is consequent and interconnected with other fields of professional competences.

The outcome and a way of understanding the ICT competences of a teacher are also confirmed by the standards of the American organization *The International Society for Technology in Education* (ISTE, 2008, online). Before it was focused more on the expert technological knowledge and skills of teachers (issued in 2000) but lately it is oriented mainly on the development of pupils´ personalities and on the influencing of instruction methods and teaching with the use of expert knowledge and skill (year 2008). In the current conception are the ICT competences of a teacher according to the ISTE organization focused on the complex qualities of a teacher which are then characterised within the detailed elaboration of the following points:

- Supporting and inspiring the learning and creativity of pupils.
- Preparing the educational and assessment activities responding to the digital age.
- Using the technologies while working.
- Building and supporting of responsibility and citizenship.
- Self-improvement and professional growth.

These criteria in their own manner must be projected also in the professional training of the future teachers within the subjects aimed at concrete ICT applications. The approaches which are being created are a reflection of the effort to develop the above stated competence fields on the basis of own experience of students, their interests, link between the other competence fields, self-improvement and steep growth of knowledge, skills and approaches to many useful information in the digital world. So the educational processes such as *e-learning* and *web-based-learning* have more and more space in the training of future teachers. (Klement, 2012) They also allow getting over one of the main obstacles of the effective applied ICT instruction faster. The constant and rapid advancement and with it connected aging and depreciation of many instruction materials. To ensure we kept the motivation and interest of students in concrete fields before, every year we had to vehemently modify the instruction contents of subjects such as *creating of www applications*, with respect to reflecting the current trends, innovations also of advanced options customised to the users of still younger and younger age.

We can incorporate this issue into a theory of so-called digital natives and immigrants. Contemporary generation, from pre-school children to university students, is different from the previous one. The reason of this changes is the arrival and spreading of digital technologies. Everyday life of an individual was significantly influenced and changed by the digital information and communication technologies. They are applied in many new areas, they quality is increasing and they are capable of creating global information networks. These changes have to manifest themselves also in the educational process. Marc Prensky calls this changes a “digital singularity”. (Prensky, M., 2001). Przensky calls present pupils and students “digital natives” and the older generation, in which it is possible to include teachers, calls “digital immigrants”. Probably the biggest issue of contemporary education is that teachers (as digital immigrants) manage their students (as digital natives) only with difficulties – their opinions and understanding of world is totally different. Teachers have to prepare their

pupils for a life in an environment, which they are not able to imagine and it will be constantly developing. Therefore, there is a need to educate students in an adequate way. In the area of methods and content of instruction, the ability to communicate in a language and style of today's students is for today's teachers indispensable. The teachers also have to progress faster and use randomly acquired information, they do not have to stick to the logical approach step by step every time, they can use multitasking, etc.

Because of this reason we are today creating the instruction approaches separated from static forms of instruction intensions generated by the progress of ICT development and to it constantly adapted sources, to the dynamically competence requirements. These can be fulfilled by the operationalization of subjects´ goals and linking to the original educational sources, which are in the ICT field characterized by features like **extensiveness, expertness, up-to-datedness, applicability, interconnection, community support** and others. In the next part of this contribution we therefore focus on specific securing of this approach with respect to the instruction contents and subject goals.

WORK WITH INSTRUCTION CONTENTS

The instruction contents of most of the subjects realised in the thematic ICT unit is designed on the expert and didactic level. Now, we are paying attention to the expert level, which must reflect the current advancement, the already acquired student´s knowledge but it also must break away from the routine user activities to the area of knowledge growth in the information education field. The instruction contents is created on the basis of generally recognized accredited wholes comprising of higher instances of education. A dynamic form of education supported by appropriate system of educational sources is then implemented to these wholes. These sources directly influence in the last decade the structure of instruction contents, because they implement the progress in the particular fields of ICT much sooner. They also can to a certain extent simulate the environment that was sooner realised only by classic forms of lectures, seminars and exercise thanks to the technical level of advancement of information presentation. Now we will have a closer look on the particular topics of subject *Creating of web applications* that are implemented in the Information education field, including the comparison of statistically defined goal and its further operationalization in the dynamic conception:

Statistically defined instruction goal of subject

> The goal of the subject is to teach the students to create websites with the use of (X)HTML and CSS languages, JavaScript, PHP and MySQL technologies. The subject has an application character; the theoretical lectures are followed by practical exercises. To pass the subject one must write a seminar paper and pass an oral or written exam.

Such defined subject goal is directly connected to specific topics and it does not offer a space for application of dynamic component of instruction, which includes the reflection of teacher´s modern conceived ICT competences. The possibility of application of modern educational sources is not appropriated, however it cannot be understood just as one of the determinative components of instruction contents. The operationalization of instruction goal of the subject in the dynamical conception can look as follows:

Dynamically defined instruction goal of subject

> The goal of the subject is to offer students a space for own familiarization and orientation in the issue of websites and applications creating thanks to the shared and dynamic information centre. The students will learn to use the particular technologies and understand their purpose on specific examples, they will learn to effectively choose and classify the ready components and put them together into functional units.

The conception of componential topics of instruction follows such defined instruction goal of the subject. Their listing is partially influenced also by the used educational source, as it was discussed above. In the case of the subject Creating of web applications, the portal w3schools.com is used for the instruction, which makes the basic dynamic information centre. (W3Schools, 2015, online). The main principle is the fulfilment of all imposed requirements from the point of view of the original educational source, including the focus on specific examples and at the same time the possibility to improve the knowledge of the English language while studying ICT. This fact aids its partial or full implementation within the instruction from the first years of study, including the university instruction. The componential topics of the instruction of subject *Creating of web applications* in simplified version include:

- Basic terms and their meanings in the issue of creating web applications.
- Approaches to creating webpages and web applications – the ways of designing and developing, used technologies, alternative applications and tools.
- Statistical templates of webpages and web applications, frontend frameworks, gaining and sharing of ready-made components.
- Principle and possibilities of user scripting, library and further superstructures, their meaning in the context of making modern applications.

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- Exchange of information and communication through web forms, the possibilities of design and use of other party´s tools.
- Issue of server scripting and databases, purpose, needs and examples. CMS.
- Domains and Webhosting. Internet marketing. Professional career, specialization and possibilities of employment, creative industries.
- Monitoring of further development, share on building of the educational network and extending of information sources.

The dynamic side of education goal, which means the activity conception directly unpaired with specific tools or technologies, which are considered on the level of means of achieving the given goals must be reflected in the instruction contents whole and in its individual parts. This is guaranteed by a certain extent of own space or deciding of those who study about the choice of important topics, which logically follow in order, however they are limited and usable in the specific context individually. The stated approach naturally does not put gaining of deeper knowledge of specific technologies outside the instruction goals, but it puts them to componential parts tied with specific implementations of absolvent´s professional goals.

THE ENGLISH LANGUAGE IN ICT

The successful gaining of knowledge throughout the subjects such as programming, creating of web applications and databases is conditioned by the basic knowledge of English language. It, as a global standard (sometimes even referred to as a tool), is used almost exclusively for the syntax of programming, query and markup languages, names of entities and objects indexed in databases or for general conventions in naming the agreed processes, methods, algorithms. Therefore, in the un-English speaking countries, the basic foreign language literacy of those who study is necessary, including the knowledge to understand the language lecture of an instruction text written in English. It is not possible otherwise in the environment of original educational sources. The national translation always comes with a delay, we cannot assume its completeness or unconditional correctness. Because of this it is required that the students work with original sources, to know their instruction methodology. Nevertheless, the language competences of most of the students still do not reach the minimal standards, which to some extent limits their further growth. The classical conception of isolated English language and ICT instruction cannot support the dynamic education of competence character in the fields so dependent on up-to date information, their analysis and further application.

The subject instruction contents processed with the help of foreign language, which also mediates the given contents, proceed from the **CLIL** method. It is characterised as "*a didactic approach to effectively integrated instruction of a foreign language and an expert subject, which purposefully and consistently develops the knowledge and skill of a pupil in non-language subject and it also leads a pupil to a natural development of language skills*" (Šmídová, Tejkalová, Vojtková, 2012, s. 9). The concrete realisation of CLIL includes various models, among which the following are important for us:

- The use of instruction materials in foreign language,
- The use of foreign language as the language of instructions
- The use of instruction materials written in foreign language within the e-learning,
- A teacher instructs part of a subject in foreign language, and then he points out in translation the most important passages of instruction contents.

The CLIL method is in its essence an ideal mediator of construction of dynamically conceived education in the direction to gaining the relevant competences. As (Šmídová, Tejkalová, Vojtková, 2012) states, together with the application of CLIL method also the change of a teacher necessarily takes place, a teacher who has a goal not to pass ready-made knowledge in foreign language, but to shift the focus on the students, mainly in:

- Motivation to learning and to sufficient amount of quality impulses.
- Choice of appropriate and stimulating instruction materials.
- Adjustment of language difficulty with the possibility of alternative sources.
- Possibilities to associate newly acquired language knowledge with practical examples of an expert subject.
- Reflection of one´s own progress and learning.

The reflection of above stated is possible to see mainly in the pedagogical constructivism, methods of critical thinking or problematic teaching. The main premises are then derived from the need of activity of the one that learns in the process of knowing, make base out of one´s interests, life experience, environment which he uses a is familiar and close to him, sharing of knowledge and cooperation with other members of education.

CONCLUSIONS

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In the contribution we tried to answer the important questions which are connected to designing of contents and approach of education focused on effective instruction in the ICT field, on the faculty that is primarily training the future pedagogues. We proceeded from the characteristic of profiles of both Bachelor´s and Master´s degree graduates. The education quality in pregraduate training plays a fundamental role a because of that it is necessary to proceed from the essence of teacher´s ICT competences, which are adapted to the process of constant renewal and breaking away from the statistical knowledge and skills, which always have a short validity. The use of original educational sources including the possibility of their implementation as a tool for support of development of the English language knowledge can be incorporated among the necessary prerequisites to achieve these defined goals. Within this integration the positive phenomena can occur, mainly the activation, critical thinking, connecting of various information and their structuring, strengthening of the field knowledge in the dynamic environment supported by the possibilities of developing the language competences.

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ARCHITECTURE AND IDEOLOGICAL MOVEMENTS: USING IDEOLOGICAL MOVEMENTS AS A CONCEPT IN THE ARCHITECTURAL DESIGN PROCESS

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ABSTRACT
The concept of ideology has different definitions that change due to time and space. These definitions alter according to different disciplines or perspectives. In short, beside its philosophical definition, the concept of ideology has physiologic, semiotic, linguistic, politic and epistemological definitions. At this point it is important to distinguish ideology from ideologies. Ideology refers to certain type form of thinking or a conscious form while ideologies refer to specific type of ideas/values, which belong to various social groups that are gathered together to express themselves. In order to clarify the distinction, it is important to understand first definition as ideology and second definition as politic ideologies. In this context this study examines architectural design process through ideological movements that can be defined as political ideologies. When the debates on the effect of ideology on architectural space, the discussions have two different axes: first one is using political power as an ideological medium, which is called ideological architecture. Second one is producing an expression of form through the designer his/herself ideology, which is called ideology of architecture. This study carries on the debates on the ideology and architecture into different level and overlaps the two different axes into single one. In other words, it demonstrates that ideological architecture and ideology of architecture can be produced simultaneously. Regarding that, the study was conducted in Architectural Design Studio-5 at KTU in 2014-2015-fall semester. The concept of the museum was given to the student in a specific space. The political ideology was chosen through anarchism, feminism, communism, capitalism, liberalism, fascism, corporatism, anarchism, terrorism, imperialisms, kemalism. The main purpose of the project is to observe the architectural design process of the student through a political ideology for the given defined space.

INTRODUCTION
Architectural design is interpretation, determination and documentation of conceptual, functional, figural, structural and actual features of all elements in the fiction of construction to perform all determined functions to meet requirements (Izgi, 1999). Architectural design problems are complex problems. The possible solution for a design problem must provide the demands group and the interactions between these demands. However, the amount of information about the solution of design problem is too much and it is generally about discipline (Inan and Yildirim, 2009). The architectural design is an interdisciplinary team work between own information area of architecture and many different information areas. Today, the information area of expert persons from different disciplines are needed for designing the structures with complex functions. Design progress of architecture has changed with the expertise areas of architects and different disciplines. The traditional design methods have been interdisciplinary in architecture area. This means that the architectural information area does not have its significant limits as all science areas. This immensity of architecture has especially been an important stage of architectural education. By considering the other work areas', in other words interdisciplinary frame, of architecture and education, this study targets to review architecture and ideology information areas/interdisciplinary communication/effects on each other/producing each other.

The aim of this study is to question or try how ideology and architecture relation is effective on the architecture production. The main problem area is how the ideological flows may be used in architecture according to the interdisciplinary information content of the architecture.

This study, in which the architecture and ideology relation is questioned by considering the interdisciplinary status of architecture, was made with 10 students in architectural project 5 lesson at the 3rd class of fall term 2014-2015 in KTU Architecture Faculty's Architecture Department. The project matter place was given as "museum" to the students and the project concept was determined as the ideological flows writers. In other words, the students designed a museum for a flow to be selected among the ideological flows. The main target of the project is to see how the architectural place is designed by using the determined political flow by the students.

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THE STUDY

Power always takes advantage of art and architecture. Architecture and art have been seen as an ideological tool through the ages. After the eighteenth century, architecture is used in urbanization, politics, public, health and special issues. Thus, the effects of power is reflected on the place both in urban and single structure scale. The presence of power is transferred to the human mind with certain signs and passwords on all corners of the city. The power uses architecture for settling bodies on places (Foucault, 1984). Since the date when the people started living collectively, the positions of managers and managed people in the society, their living places, association of these places have been interesting subjects (Polat, 2009). Using architecture as an ideological symbol is the most common form of ideological architecture. For example, the palace structures are ideological symbols in all details. As another example, the demand of Hitler to make the strongest structure on earth reveal ideology and architecture relation. This shows that architecture is one of the main tools in legalization of ideologies. Because, building the physical environment is an indicator of ideologies. In this context, a structure to be designed in association with any ideology must have the features of related ideology. The product of the physical space or architecture is the point where this ideological theme is felt/seen/reflected objectively. Tanyeli (1989) describes the effect of ideology on architecture as follows; "ideologies try to reveal some principles on how a product will be revealed. This design principle is usually an answer mold and ideological slogan and its purpose is to show ways to the architect on how to design and interpret the product."

The main situation, which must be paid attention/scared of/realized in the texts in which architecture and ideology concepts are together, is the assumption that ideological architecture concept and architecture ideology concept are the same. Because, the concept of architecture ideology describes the opinion structure of architecture. This opinion structure is an interpretation science which develops with science, culture, philosophy and production values with general and main approaches of the architecture profession. In other words, the architecture ideology is actually the areas in which the idea of architecture is built. Ideological architecture is the physical match of a defined and determined ideology. Rather than the ideology had by the architecture, it is the reflection of ideology it presents. At this point, examination of the ideology concept will make the text based on a more consistent ground.

McLellan (2005) mentioned that a set of philosophical questions, regarding the meanings of nature, human and society, has revealed against the Western European intellectuals after the end of Medieval world and these questions were supported with new views defending the individual and the liberty of conscience (McLellan, 2005). Francis Bacon is among the thinkers suggesting examination based on critics against the mythological interpretation of the world during this period. Bacon (1994) stated that the human thoughts described faulty and irrational understandings and stayed behind the idols and he started the modern social sciences with the idols theory he developed here.

The ideology concept is a product of French Revolution, due to the fact that it matches a systematic area. The person who started to use ideology word itself for the first time is the French Thinker Antoine Destutt de Tracy (1755-1836). In his work named Elements of Ideology (Eléments d 'idéologie) (1817-1818), he suggested a new ideas science to be base for all the other sciences. According to De Tracy, examination of thoughts' origin in an independent way will open the way to a fair and happy society. Although the term 'ideology' is a product of French Revolution, Carl Marx and his followers were the ones who based the ideology concept to the agenda of political statements. Kilicaslan (2008) mentioned that the 'ideology' term has been used in narrower and negative meanings as a general and objective approach to "ideas and thoughts" and the term has lost meaning as "feelings, behaviors and thoughts system regarding world, society and human" and the term has gained negative meaning by being described as "the ideas system used for legalizing special benefits of a person, group and society".

According to Althusser, the function of ideology is to convince persons on the fact that they are free and autonomous subjects. The subject is an entity submitting to both an independent individual and a stronger authority and having no freedom than accepting its submission. Again according to Althusser, ideology is not a product of human mind, it is a phenomenon having a half existence in churches, associations and schools with a variety of concepts and social mortar. "Mortar" term given to the ideological by Althusser can be accepted as existence/creation of the ideological flows and the feature of "association/holding together".

The relation of architecture and ideology concepts with each other brings out the question how the ideological flow or the ideology can be effective on the architectural design. When this question is considered with a wider perspective, the main problem of the study reveals. How can an architectural place be designed by considering an ideology described other than an ideology had by a designer or, in other words, how can a place be produces on the ideology?

The transformation of paradigm work in today's design world necessitates the re-transformation of education. The

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whole of concepts, values and techniques regarding the other disciplines than the architecture can be used for describing the design paradoxes and solutions. The students must be aware of the changing balance of the architectural paradoxes requiring a more holistic point of view for developing the creative thinking and transforming the information flow (Erkok et al., 2005). In this context, the output point of this study is the interdisciplinary status of paradigm changes in education/area/production/design of the architecture mentioned above.

This study was made with 10 students in architectural project 4 lesson at the fall term 2014-2015 in KTU Architecture Faculty's Architecture Department. The study is a workshop lasting 16 weeks and 8 hours a week. At the first stage, the students were given 2-week seminars regarding the ideology, ideological flows and architectural ideology relation. Then each student selected a different ideological flow among the ideological flows given. Selected flows are listed as follows: anarchism, communism, capitalism, liberalism, fascism, imperialism, corporatism, feminism, terrorism, Kemalism.The study will be on a more consistent ground when short information on the aforementioned ideological flows are given.

1. Anarchism
Anarchism is a social term defending the disposal of social authority, power and hierarchy in all terms and defining the political philosophies and social behaviors on this. Anarchism is to reject the authority of all kinds in all circumstances. One of the fundamental principles of anarchism is to be against compelling institutions and social hierarchies (URL-1). Anarchy is usually defined as a society without government and anarchism is the social philosophy targeting to realize this. Today, the concept of anarchism is used for stating the situation of a person living without a government or not based on a institutional authority (Girgin, 2011).

2. Communism
This is a social, political and economic ideology and movement to arrange the society live without state, classes and money based on common ownership on the production tools. The reason on the ground of communism is the demand to establish a society living without classes and with common properties. With the general meaning, all individuals are equal in the societies without class (URL-2).

3. Capitalism
Capitalism is a social and economic system and a mode of production in which trade, industries, and the means of production are largely or entirely privately owned. In this system, private firms and proprietorships usually operate in order to generate profit, but may operate as private nonprofit organizations (URL-3).

4. Liberalism
Liberalism is a political philosophy or worldview founded on ideas of liberty and equality (URL-4).

5. Fascism
This is a heavy dictatorship which ended the political democracy in order to keep capitalism in the period when political democracy committed against capitalism. On this case, there is an abstract state philosophy and the realities of life will be covered with this magnificent government fog. In the field of the theory, fascism adopts Machievelli and supports accuracy and actuality of Mussolini, and Machievelli's methods. Everything is in the State in fascism. There is no value other than the state. The fascist state, as the combination of all values, solves, develops and manages the life of society and individuals in details (URL-5).

6. Imperialism
Spread of a nation or society on an another nation or society directly or indirectly with political, economic, cultural or discursive terms. Thus, imperialism is fundamentally about power as aims and tools. Imperialism is founded by soulful slogans, symbols of war, superior military, economic, political or cultural power and it regenerates itself. For this reason, imperialism generally means the relation between different cultures and the inequitable exchange between them. Imperialism is based on the removal of the other's independent, legal, economic presence rights. In the end, the imperialist powers have all kinds of rights on the societies they controlled (URL-5).

7. Corporatism
It is regular production for all consumers by all producers which are all consumers, too. Corporatism is a political approach which bases all activities on solidarity and common interests as result of seeing the society with a organization perspective. Predictably, the differences of different sections can only live or reveal according to the benefits of the state (URL-6).

8. Feminism
Feminism is an effort to remove the inequalities of women by recognizing the women rights. The main objectives of feminism contain equal rights on education, business, child care and legal abortion rights, women health

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development and prevention of harassment and rape. Gender equality means giving same rights to all genders in all life aspects (URL-7).

9. Terrorism

Terrorism is commonly defined as violent acts or the threat of violent acts intended to create fear , perpetrated for an economic, religious, political, or ideological goal, and which deliberately target or disregard the safety of non-combatants (URL-5).

10. Kemalism

This is an ideological movement unique to Turkey's conditions and the Republic of Turkey and it associates the infrastructure of flows in Harbiye, the intellectual class on Ottoman Empire, Jon-Turk movement and the French revolution and the nation-state system brought by it with the positivism liberal philosophies in the 19th century (URL-5).

FINDINGS

Table 1: Museum design of student Berat Ozturk with anarchism subject

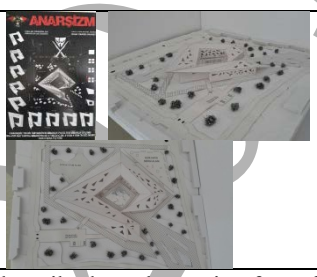
Selected Ideology	Design Concepts	Design
Anarchism	• Disrupt the existing order • Creating a new order	
Explanation of Design	In this context, the student described an alternative form for the square form by separating the square form with a concept. The concept is supported with inconsistent and non-defined scratches on the side	

Table 2: Museum design of student Isin Iren Tasci with communism subject

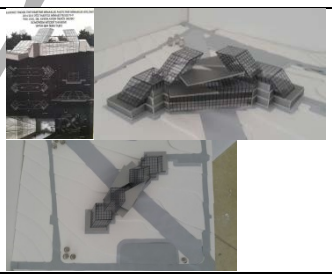
Selected Ideology	Design Concepts	Design
Communism	• Standardization • Dominance • Design on humanscale • Strict equality	
Explanation of Design	In this context, the student firstly created a form with strict symmetry with the concepts created.The designed structure is much higher than the human scale and the scale overwhelming the user was used in the interior place.The design was made to be on a dominant position in higher scales.	

Table 3: Museum design of student Merve Yadigaroglu with capitalism subject

Selected Ideology	Design Concepts	Design
Capitalism	• Rivalry • Competition • Standing out • Benefiting over each other	
Explanation of Design	The student differentiates the created concepts with rectangular forms and small angles and he created a competing and non-defined design trying to stand out and benefit over each other.	

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Table 4. Museum design of student Emre Umut Bahceci with liberalism subject

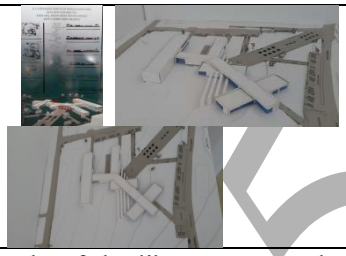
Selected Ideology	Design Concepts	Design
Liberalism	• Balance • Liberty • Pluralistic	
Explanation of Design	The student especially thought of the liberty concept, but he associated the rectangular forms with a vertical axis without standing out.	

Table 5. Museum design of student Muhammed Akbulut with fascism subject

Selected Ideology	Design Concepts	Design
Fascism	• Violence • Single dominion • Union • Dominant • Pressure	
Explanation of Design	The student started with the idea of single dominion and he tried to express the whole design under a single cover. He especially tried to define strict and pressuring concepts with a linear rectangular conflict.	

Table 6. Museum design of student İrem Ezme with imperalism subject

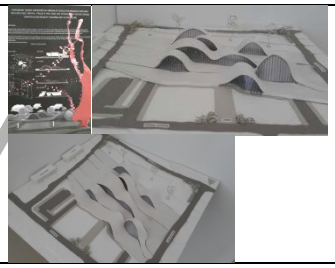
Selected Ideology	Design Concepts	Design
Imperialism	• Occupancy • Dominion • Government • Pressure • Diffusionism • Utilization	
Explanation of Design	The student designed the project under the ground layer by firstly considering diffusionism and occupancy concepts. The mass was kept under the ground from outside and light was given only from the windows.	

Table 7. Museum design of student Merve Cakiroglu with corporatism subject

Selected Ideology	Design Concepts	Design
Corporatism	• Layout • Justice • Diversity as a whole • Stratification	
Explanation of Design	The student tried to establish a singular order over the order of different sections in themselves and he overlapped a singular square form with different angles.	

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Table 8. Museum design of student Sinem Demir with feminism subject

Selected Ideology	Design Concepts	Design
Feminism	• Equality	
Explanation of Design	The student started only with the concept of equality and the equality of two different genders as masculine and feminine was reflected on the forms. The feminine one was expressed with a curvilinear form and the masculine one was expressed with a rectangular form.There are equal scales in both forms as superimposed and square meters.	

Table 9. Museum design of student Feyza Altintas with terrorism subject

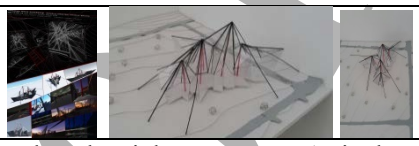
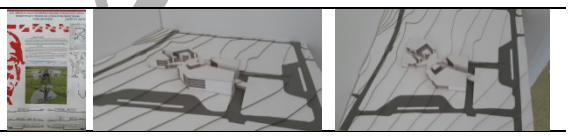
Selected Ideology	Design Concepts	Design
Terrorism	• Violence • Pressure	
Explanation of Design	The student especially focused on the violence concept.A single square plasma was separated with non-defined lights on many axis. The internal places were created with extremely solid triangles and the connection of outer and internal places was cut.	

Table 10. Museum design of student Onder Er with Kemalism subject

Selected Ideology	Design Concepts	Design
Kemalism	• Change • Progress • Conversion	
Explanation of Design	The student started with the concept of change and he converted a main rectangular form in itself by dividing it into four non-defined parts. However, this conversion did not ruin the singular integrity.	

CONCLUSIONS

At the result of this study, which questions how ideology-architecture relation is effective on architectural production, it is seen that the architecture is one of the legalization tools of ideology. However, when designer, architecture and ideology triangle comes together, the question how the place can be created on an ideology to conceptualize the ideology out of the designer's own, can be answered with the interdisciplinary status of architectural information. In other words, the place can be designed by conceptualizing the ideology which is the problem area of designer and benefiting from different disciplined at the stage of production. Especially in the architecture education, making the design stage (regardless of how abstract it is) over the concept shows that the design can be made directly related to the subject.

As a result, it is seen that the own subjective information area of architecture is overlapped with the other information areas at the design progress. Especially, production of the designed place on the concept creates more information area in the mind of student and a free design stage is described in the design stage.

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ARCHITECTURE AND LITERATURE: USING LITERATURE AND NOVELIST/WRITER AS A CONCEPT FOR DESIGN IN THE ARCHITECTURAL DESIGN PROCESS

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ABSTRACT
The relationship between architecture and literature is a significant field of argument that ascending for the last 20 years. In this field of argument, space as an outcome of subjective knowledge of literature itself is trying to be overlapped with the subjective knowledge of architecture itself. Spaces in literary texts are attempting to evaluate through architecture. Due to the fact that story arc and characters could not be created independently of a space, the architectural space is essential in the literature. However, the same situation is not valid for the architecture. If only the designer use the literature as a medium for developing concept, the literature would be linked to architecture. In this context, the aim of this study is to examine the relationship between literature and architecture in architectural design process. This examination or the experiment was conducted in 2014-2015 Fall Semester in Architectural Studio-III at KTU. The space was defined as House of Memory and the concept was chosen as Novelist and his/her novel in the scope of the project. The main purpose of the project is to observe the creation process of an architectural space through concept of specified novelist and novels by the students.

INTRODUCTION
Architectural design is interpretation, determination and documentation of conceptual, functional, figural, structural and actual features of all elements in the fiction of construction to perform all determined functions to meet requirements (Izgi, 1999). Architectural design problems are complex problems. The possible solution for a design problem must provide the demands group and the interactions between these demands. However, the amount of information about the solution of design problem is too much and it is generally about discipline (Inan and Yildirim, 2009). The architectural design is an interdisciplinary team work between own information area of architecture and many different information areas. Today, the information area of expert persons from different disciplines are needed for designing the structures with complex functions. Design progress of architecture has changed with the expertise areas of architects and different disciplines. The traditional design methods have been interdisciplinary in architecture area. This means that the architectural information area does not have its significant limits as all science areas. This immensity of architecture has especially been an important stage of architectural education. By considering the other work areas', in other words interdisciplinary frame, of architecture and education, this study targets to review architecture and literature information areas/interdisciplinary communication/effects on each other/producing each other.

The aim of this study is to question or try how literature and architecture relation is effective on the architecture production. The main problem area is how the literature may be used in architecture with their own subjective personalities, literary works, according to the interdisciplinary information content of the architecture.

This study, in which the architecture and literature relation is questioned by considering the interdisciplinary status of architecture, was made with 9 students in architectural project 3 lesson at the 2nd class of fall term 2014-2015 in KTU Architecture Faculty's Architecture Department. The project matter place was given as "memory house" to the students and the project concept was determined as the Republic Term's Turkish writers. In other words, the students designed a "memory house" for a writer to be selected among the Republic Term's Turkish writers. The main target of the project is to see how the architectural place is designed by using the determined writer by the students and the works of this writer.

THE STUDY
Architecture, as a part of the social structure of it, a reflection of the economic and political order and a projection of the scientific and technical world, is a part of much bigger universe in terms of the production progress and the given products. It takes results and resources of production from this universe. It presents its products to the usage of this universe. Thus, the architecture has an inevitable relation with the other structures creating this universe. This inevitable relation is dominant in the production progress and the architecture evaluates each different data from the different elements of this universe within itself in order to reach the synthesis and reflect them in the

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product (Gokbayrak, 2007). Tanyeli (1999) mentioned that the architecture lends information from the other disciplines, the concepts belonging to the other disciplines becomes architecture's and the architecture area is a giant sponge getting all kinds of information.

After the observation determining that the number and qualification of the studies made on the area described as "interdisciplinary" in all disciplines in the recent years, the researches has been observed in the architecture area. The fact that interdisciplinary issues are questioned in almost all of these studies has caused the result of re-describing the architecture discipline's limits on the relations with the other disciplines. Because of the increase in studies with this subjects, it was thought that a new reading can be made by considering more significance on the subject, job-information limits in the architecture area, the other information areas and how and from where the limit comes (Asut, 2011). In this context, the main problem area of the study is how the architecture information area comes together with the literature information area and how they produce each other.

The relation of architecture and literature is an important discussion area which has revealed in the last 20 years. The place produced by the own subjective information of literature in this discussion area is tried to be matched with the architecture's subjective information area. In the literature texts, the places in which the mental fiction can be produced on the individual experience are tried to be evaluated with the architecture area. The literature area cannot produce event and person texture without place, it can be said that architectural place is a principle in the main fiction of literature.

Literature uses the words as information/transfer/expression/communication means. The word is an abstract product. It uses only one sense of vision as tool with the words. However, the text of word is wide or narrow as the mind limits of the reader. In other words, using a singular sense takes the literature text in a more unlimited mental activity area. However, the architect uses the place as information/transfer/expression/communication tool. The place is an extremely concrete product. Architecture uses all kinds of visual/tactile/audial sense tools.

The word's, which is used as a tool of literature, realization and materialization can only be possible with the place transformation. In other words, the word reaches to the actual expression from virtual expression with the spatial expression. The word of literature is a perception repertoire enforcing the relation between memory and places. It creates new concepts/practices by getting into the meaning layers of places.

The architectural places are expressed in the literature with literary or visual indicators, so the words (Tukel, 2010).The literature area cannot produce event and person texture without place, it can be said that architectural place is a principle in the main fiction of literature. However, this does not apply to the architecture area. The literature effects the place as much as all the other conceptualized areas at the stage of design production of the architecture product. In other words, if the designer accepts the literature as a production or concept tool at the production stage, the architecture will be in relation with the literature area. According to Meric Ugras, it is possible to make inferences between literature ad architecture in terms of representation of the physical environment. The architecture products are within the physical environment as result of the view points and needs of the producers. The places in the literature represent the physical environments of the terms with words (Meric Ugras, 2007).

Although designers/architects reveal the spatialization with more visual elements, they use words to share their thoughts. However, it cannot be said that these words have great share in the production of place. Because architecture has its own linguistic register. These words are texts which use the terminology of architecture and have meaning for their own profession groups. On the other hand, all kinds of words produced for the place, other than the words of architects, have great roles in strengthening the presence of place (Uz Sonmez, 2007). In other words, with word, language or literature as a whole is one of the legalization tools of place.

Tumer (1982) mentioned that architecture and language relation has a more concrete history, in other words, similarities or differences between architecture and language are reviewed by various thinkers and the architects have been actually benefiting from the language all along the line. Tumer supports the language and architect relation with the following references he took from different sources. For example, Quatremere de Quincy mentioned, in the book he wrote on the Egyptian Architecture, that there is a similarity between architecture and language belonging to the whole humanity instead of a single man (Colins, 1965). According to Tumer (1982), there are situations in which language is actually used in the architecture area. For example, before designing an architectural work, a part of the research and information collection are made in lingual surface.

There is an important relation between the fictional place creating the literature and the place fiction in the architecture. While the literature text is produced by the reader again, it is possible to interpret the text with different views and understandings in changing and developing progresses. In other words, the architectural place

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in the literary text/mental perception and the perspective of user change and transform. The architectural place perception also changes with the changing social structure and perspectives. So, there are many similarities between literary texts and architectural places. Literature is a textual repertoire strengthening the relations between social memory and places. It creates new concepts/practices by getting into the meaning layers of places (Uz Sonmez, 2007). The architects have been working on determination of meaning in literature and adaptation of them on the information obtained. Studies mainly concentrates on two approaches. The first of them is to obtain the information on place by using the literary texts; so the production of architectural place by the architects by working on the meanings of indicators belonging to the architectural place. The second one is the interpretation of the architectural/urban place by reading it as a text; so the transformation of the information of architectural place into literary indicators. It is believed that the spatial reading to be made on the works will directly contribute to the information area (Caglar and Ultav, 2004).

Supporting architecture, characters and fiction in the literature texts is almost an obligatory tool used for creating the mental realization of characters and fiction. The other one, the usage of literature in architecture is ambiguous, it exists as long as we use. Designer is the one who brings out the architectural product. However, user is the one who feeds, develops, shapes and gives meaning to the product. Literary text is also created by an individual, as the architectural product and the reader is the one who supports and develops the meaning of literature text as the creation of meaning of the literature text. This individual partnership in the production of architecture and literature brings out this question. Can the writer have more role than the work in the production of architecture and place? With another question expression, can a place be built directly with the text producer? The main problem of this study can be seen when the question is extended as follows. How the literature is used in the education of architecture?

The transformation of paradigm work in today's design world necessitates the re-transformation of education. The whole of concepts, values and techniques regarding the other disciplines than the architecture can be used for describing the design paradoxes and solutions. The students must be aware of the changing balance of the architectural paradoxes requiring a more holistic point of view for developing the creative thinking and transforming the information flow (Erkok et al., 2005). In this context, the output point of this study is the interdisciplinary status of paradigm changes in education/area/production/design of the architecture mentioned above.

This study was made with 9 students in architectural project 3 lesson at the fall term 2014-2015 in KTU Architecture Faculty's Architecture Department. The study is a workshop lasting 16 weeks and 8 hours a week. First of all, 2 weeks of seminars on literature fiction, literature information area and literature subjects were given to the students. Later, the republic term has been limited with Republic Term Turkish Story Literature in the literature information area and the students were requested to select one different writer than each other. In this context, each student selected a different writer. Selected writers are listed as follows: Rifat Ilgaz, Aziz Nesin, Halit Ziya Usakligil, Refik Halit Karay, Omer Seyfettin, Sait Faik Abasiyanik, Orhan Kemal, Cevat Sakir Kabaagacli/Fisherman of Halicarnassus, Sabahattin Ali. The study will be on a more consistent ground when short information on the aforementioned writers are given.

1. Rifat Ilgaz

Rifat Ilgaz was born in Kastamonu on May 7th, 1911. The writer worked as poetry, story, novel and game writer and he also wrote in newspapers and wrote memories (Bezirci, 1997). The artist, who thinks that an artist must be in close relation with the society, has defended revealing the social facts with new manners. He is against molds. He thinks that molds leave the poet behind the times. The writer's stories has developed especially in humor. Rifat Ilgaz did not see humor as a text type. He used humor together with novel, poetry and stories. He has an understanding of humor, which looks at the events with a different perspective; makes the reader anxious or tries to make nervous; shows the reader what the correct behavior is; and in which fun and laugh is only a tool (Burc, 2013).

2. Aziz Nesin

Mehmet Nusret Nesin (Aziz Nesin) was born in Heybeliada on December 20th, 1915. The writer has many works in short story, theatre, poetry and humor areas (URL-1, 2015). Nesin mentioned that the function of art is to

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introduce human to human. Aziz Nesin's art understanding is universal. Nesin bases his whole art life to the thesis he named continuous change. According to him, the writer is in the effort of changing the local society and the world. Aziz Nesin, who felt himself responsible against the era he lived in, tried to correct evil and he thought that the responsible of writer is this. The two primary motifs he used in his works are traditions and stories. Especially fairy tales are seen frequently in his works as forms and motifs (Ispir, 2006).

3. Halit Ziya Usakligil

Halit Ziya Usakligil was born in Istanbul in 1866. The writer is accepted as the most important writer in the era of 'Servet-i Funun'. He has works in various fields as novels, stories, discussions, trips, theatre and memories. The writer has a realistic approach to the persons and events and he reflects the psychology of novel characters with deep examinations. He gives a lot of importance to depictions. He adopted an indirectly and poetic narration instead of basic sentences. He used the luxury part of Istanbul and the types and places enthusiast of the Europe in his novels (Anonymous, 1998).

4. Refik Halit Karay

Refik Halit Karay was born in Istanbul on March 15th, 1888. The writer has works in story, novel, drama, memories and humor areas. His stories are based on honor concept, livelihoods, bad side of Istanbul (Aktas, 2004). Karay is known as political humor, story, novel writer in the Turkish literature. Refik Halit deemed love an adventure. He filled his texts with expertly-made tasty food, beautiful women and love depictions and he made Turkish get a clean, lithe, basic but lightening style (Unal, 2012).

5. Omer Seyfettin

Omer Seyfettin was born in Gonen district of Balikesir in the year 1884. The writer gave works on story, poem, article, joke, epic and novel fields (Alangu, 2010). The writer has an important place in 20th century Turkish stories and he is one of the leaders of basic language flow. The writer, who extended his stories with information, idea and good manners, is known with his small stories. He had a nationalist character and he reflected this in his works. Omer Seyfettin is the first Turkish writer to make the history a story. Exhibiting bad things and making criticism on them are the subjects he focused in his works. He has a lively style and he ends his stories in surprising manners. He thinks that the literary works must be free from ornaments and metaphors and they must get rid of word games (Anonymous, 1988).

6. Sait Faik Abasiyanik

Sait Faik Abasiyanik was born on November 18th, 1906. The writer has works on novel, short stories and poetry fields. The writer has a completely new literary opinion. He carefully selected and depicted the characters in his stories (Sonmez, 2007). Sait Faik Abasiyanik, who has an important place in modern Turkish literature, is known with his stories. The writer, who wrote stories since the day he started writing, has also works in types such as poetry, novel and critics. Sait Faik, who is commonly mentioned in books and publishing with his stories, has an important role in the development of this type in our literature. It can be said that some works of Sait Faik are hard to be determined in terms of types. The first stories of Sait Faik are narratives based on events. The writer seems to be dependent on the story tradition in these stories. In these, the classical story structure shows itself and the social realism structure of the term's stories takes him among the artists reflecting "social facts" (Aslan, 2007).

7. Orhan Kemal

Orhan Kemal was born in Ceyhan District of Adana on September 15th, 1914. The writer has poetry, novels, short stories, theater and memory works. Excerpts from his life can be found in all of his books (Pitir, 2012). Stories of Orhan Kemal are not developed in the entry-development-result relation within a certain event; they depict excerpts from the life. Although many writers develop the surprise at the end of story as base, Orhan Kemal doesn't have this feature. Orhan Kemal's stories do not end unexpectedly. They don't end expectedly, too, the stories contain the result in themselves. The life continues and the stories are a part of this flow. Orhan Kemal's stories contain sections from the writer's life. Simple and intimate subjects selected from the life are reflected in a close

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language. The people introduced in the story are objectively considered and they were depicted with the local language by using dialects time to time. Social and economic status of the society were reflected by using the people in stories (Eyigun, 2006).

8. Cevat Sakir Kabaagacli

Cevat Sakir Kabaagacli was born in Girit in the year 1890. The writer gave works in story field and he made translations. He focused on sea and the lives of people earning life from the sea. The writer, who used the mythology of Aegean coasts and maritime terminologies, regulated his stories in the format of novel (URL-2; Kilicaslan, 2010).

9. Sabahattin Ali

Sabahattin Ali was born in Egridere (Ardino) district of Bulgaria on February 25th, 1907. The writer gave works as little stories, novels, poetry, drama and humor. The writer mentions that the art and the art must be realistic and the art must have an ambition. According to Sabahattin Ali, the language is the communication tool of writer and thus, it must be basic, unadomed and clear. All of his stories have a subject and all subjects are based on an event, all events were created in a certain time-place section and the event progress of all stories are developed in a characteristic following the order of entry-development-solution-result. (Korkmaz, 1991).

FINDINGS

Table 1: The memory house prepared by student Ugur Yesilyurt of Rifat Ilgaz.

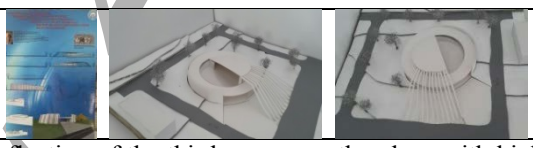
Selected Writer	Design Concepts	Design
Rifat Ilgaz	• 3. Person • Bothering • Abstraction	
Explanation of Design	The start point of design, reflection of the third person on the place with high walls, the necessity for the person to be behind the walls to make the building detected were associated with the literary style of the writer.	

Table 2: The memory house prepared by student Çağatay Algül of Aziz Nesin

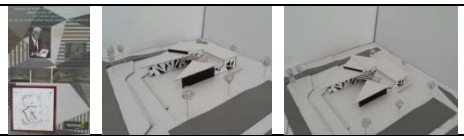
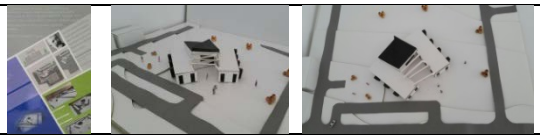
Selected Writer	Design Concepts	Design
Aziz Nesin	• Faults • Change • Social Responsibility	
Explanation of Design	The concepts such as faults and changes, the indicators of the writer's literary style, were abstracted with pointed surfaces and facade spaces. Triangle form was used to emphasize this sharpness.	

Table 3: The memory house prepared by student Furkan İnce of Halit Ziya Usakligil

Selected Writer	Design Concepts	Design
Halit Ziya Usakligil	• Heavy Language • Love • Duality	
Explanation of Design	In the project, a deconstructivist unifying form, which reflects two main masses and reciprocal language depicting "love" and "duality" situations, were used.	

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Table 4. The memory house prepared by student Döndü Erdem of Refik Halit Karay

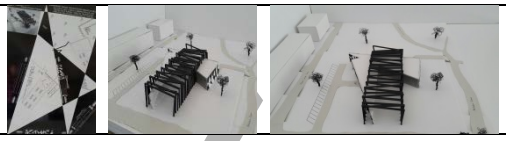
Selected Writer	Design Concepts	Design
Refik Halit Karay	• Hard, • Clear, • Detailer, • Complex,	
Explanation of Design	Matching two clear triangle forms. The spatial space created was matched with a complex structural system.	

Table 5. The memory house prepared by student Furkan Günaydın of Ömer Seyfettin

Selected Writer	Design Concepts	Design
Omer Seyfettin	• Simplicity • Layout • Association	
Explanation of Design	In the design, rectangular form, as the most basic form, was used and the forms were associated with a structural system.	

Table 6. The memory house prepared by student Buket Tabu of Sait Faik Abasiyanik

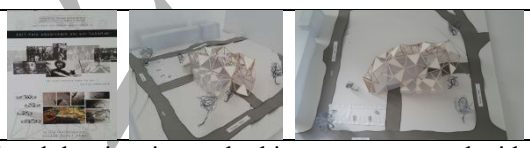
Selected Writer	Design Concepts	Design
Sait Faik Abasiyanik	• The good and the bad • Subconscious reading • Social distinction (rich and poor)	
Explanation of Design	In the design, the individual and the situation under him were expressed with a separate cover structure on a single cube form.	

Table 7. The memory house prepared by student Berat Kumcu of Orhan Kemal

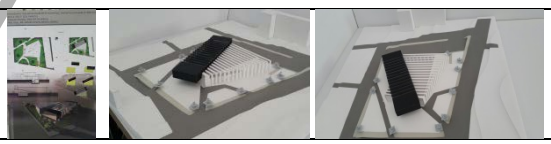
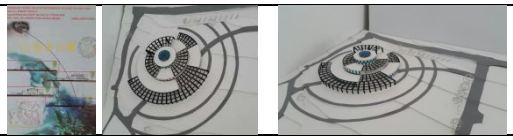
Selected Writer	Design Concepts	Design
Orhan Kemal	• Realism, • Linearity, • Simplicity	
Explanation of Design	In the design, the most basic and clear rectangular forms were matched and they were associated with extremely hard linear structure system.	

Table 8. The memory house prepared by student Arife Kara of Cevat Sakir Kabaagacli

Selected Writer	Design Concepts	Design
Cevat Sakir Kabaagacli	• Fishing nets • Waves	
Explanation of Design	In the design, the place where the writer lives and the sea stories were focused and overlapping stages reflected the sea, while the structure covering spatial spaces reflected the fishing nets.	

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Table 9. The memory house prepared by student Şeyma Türk of Sabahattin Ali

Selected Writer	Design Concepts	Design
Sabahattin Ali	• Time, • Social distinction, • Literate-Peasant Relationship	
Explanation of Design	In the design, two different clear forms are associated with a structural system reflecting the time. These two forms also mention literate-peasant duality.	

CONCLUSIONS

At the result of this study, which questions how literature-architecture relation is effective on architectural production, it is seen that the architecture is used as a tool to reflect mental realization of text in the literature texts and literature in architecture is effective as much as wanted to be used by the designer. In other words, concept expression/conceptualization can be made on all kinds of information areas at the production stage of architecture practice. Literature can also be accepted as any of the information areas in this field.

As a result, it is seen that the own subjective information area of architecture is overlapped with the other information areas at the design progress. Especially, production of the designed place on the concept creates more information area in the mind of student and a free design stage is described in the design stage.

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INTE 2015

ARE THE ENTRANCE EXAMS RESULTS OF APPLICANTS TO UNIVERSITY IN ENGLISH AND GERMAN LANGUAGES EQUALLY GOOD?

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ABSTRACT
The analysis of entrance examinations to the Faculty of International Relations at University of Economics, Prague (FIR UEP) in the subject of English and German is presented in our paper. We analysed correlations between English exams from and German exams. We provide an overview of points acquired from entrance exams arranged by country of origin of applicants for study. Conclusions point to increasing number of gained points in time from English exam for Czech, Slovak and Russian students and degreasing number for students from Vietnam. Number of points from German is degreasing for students from the Czech Republic and Vietnam and relatively stable for Russians and Slovaks.

Keywords: the entrance exams

INTRODUCTION

Czech universities have considerably changed during the past decade and the end of these changes are still ongoing. (Jarkovska et al, 2011; Doucek, Maryska and Novotny, 2014; Maryska, Doucek, Novotny, 2012) Among the most distinct changes belongs the effort to internationalize studies. A lot of foreign students are entering the Czech education market and, on the other hand, Czech students are leaving for foreign countries. (Doucek and Maryska, 2014). Just like Czech students leave to seek experience and education in the somewhat idealized West (Fischer and Finardi, 2010), foreign students come to the Czech Republic especially from the East. As Mach (2015) mentions, a majority of students come from Slavic countries and thus it is easy for them to learn Czech. There are many students from the Slovak Republic, who typically represent the largest community of foreign students in the Czech Republic. According to Golis, Slovaks come to study mostly medicine, economics and informatics (Mach, 2015). A total of 82% of the Slovak applicants mention the quality of studies and 27% better job opportunities in the Czech Republic as the main motivation for studying in the Czech Republic (Mach, 2015). Regardless of where a student comes from, he should have certain initial knowledge that, according to authorities, is necessary for successful studies of economics and economic fields (Hanclova, 2012) taught at the UEP (Doucek, Maryska and Novotny 2013; Doucek, Maryska, 2011; Doucek, Maryska, Nedomova, 2011).

PROBLEM FORMULATION

The number of students applying for the university studies in the Czech Republic is relatively stable in time although number of people born in adequate year (usually 21 year ago) is decreasing. This change leads to the fact that for universities studies apply also students that have worse results during their studies at the high school.

Three years ago our university started a deep analysis of knowledge that have students applying for study at the UEP. This paper focus on a relatively specific area – the analysis of results of the entrance exams to study UEP and the analysis of exam results during the studies in the study programs taught in Czech. These analyses support the solution of the key problems that we are currently dealing with, such as in particular whether or not the number of points achieved in the admission procedure, which can be not quite exactly referred to as knowledge, corresponds with the knowledge that the UEP expects from applicants, whether or not there is a correlation between entrance exam results and regular exam results and whether or not there is a correlation between the type of university or nationality and entrance or regular exam results.

This article analyses following work questions:

- Q1: Is there any correlation between the results of the entrance exam from English and the results of the entrance exam from German with respect to all applicants for studies at the FIR UEP?
- Q2: Is there any correlation between the results of the entrance exam from English and the results of the entrance exam from German with respect to all applicants for studies at FIR UEP who have

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Czech nationality?

- Q3: Is there any correlation between the results of the entrance exam from English and the results of the entrance exam from German with respect to all applicants for studies at FIR UEP who have Slovak nationality?
- Q4: Is there any correlation between the results of the entrance exam from English and the results of the entrance exam from German with respect to all applicants for studies at FIR UEP who have Russian nationality?
- Q5: Is there any correlation between the results of the entrance exam from English and the results of the entrance exam from German with respect to all applicants for studies at the FIR UEP who have Vietnamese nationality?

We analysed a data file that only included those applying for Czech study programs, i.e. study programs that are taught in the Czech language.

MATERIAL AND METHODS (DATA COLLECTION)

The data presented in this paper are collected regularly in the course of the admissions procedure from all applicants for studies. The collection process is in accordance with the provisions of Law No. 101/2000 Coll., on the protection of personal data. All collected data are anonymised.

Methodology

The primary data used for evaluation were exported from the central database systems of the UEP. These were imported to the database of the Microsoft SQL Server 2008 R/2 (Microsoft SQL) through data extracts (MacLennan, Tang and Crivat, 2009).

We have proposed, developed and implemented a specific data model in the application Microsoft SQL that supports requirements on the analysis of data sources. The data were assessed using the "R" tool that allows performing advanced statistical analyses of extensive data sources.

General Data Characteristics

The data file with entrance exams from English and German for the Faculty of International Relations currently includes 50,515 records with history since the year 2010. Each record contains information about every single concrete applicant in a specific year. If a student went through the admission procedure several times, he is included in the file several times. We have the results of bachelor's and master's degree entrance exams, information about a specific entrance exam result, and whether or not a student was accepted.

An important fact, which should be mentioned, is that in 2014 the obligation to take the examination of the two languages was cancelled. So the small sample of data from 2014 is caused by this decision.

RESULTS AND DISCUSSION

As we have already mentioned in the introduction, the article analyses English and German entrance exam results of the applicants for the studies at the UEP and their correlations, regardless of the applicants' nationality, and also subdivides the applicants based on Czech, Slovak, Russian and Vietnamese nationality.
To make the article more understandable, we divided this chapter into three sections:

- Basic characteristics of source data (number of students, division of students, etc.);
- Analysis of English and German entrance exam results;
- Analysis of the correlations and differences between entrance exam results.

The analysis shows the data from different perspectives. The data is classified by time period which the students applied. The article analyses the data from the years of 2010-2014.

Basic Data Characteristics

The basic characteristics of the data file based on applicants' nationality in individual years are shown in Table 1. Interesting trend is a gradual increase in the proportion of foreign students by 2012 and then a sudden drop in 2013 while a proportion of Czech students increased. Table shows that students from Slovakia represent the second largest group of applicants. Their share in individual years is almost identical and fluctuates between 10.51% and 12.09% without counting 2014 when only few applicants made entrance exam in both languages. This share can be explained by the international agreements based on which students from Slovak Republic are studying in the Czech Republic for free. Students with Russian nationality represent the third largest group. We

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can see that in 2014 the proportion of Slovaks and Russians are very similar. Even there was just a small number of applicants from both German and English exam, we are monitoring the growth of Russian applicants to the UEP which are almost caught up with applicants from Slovakia. We will keep monitoring this trend also in view of the political situation in the world. Vietnamese represent other major group.

	Czech	Slovak	Russian	Vietnamese	Others
2010	86,89%	10,51%	0,88%	0,17%	1,55%
2011	83,63%	11,34%	1,31%	1,68%	2,04%
2012	81,63%	12,09%	2,88%	1,61%	1,79%
2013	86,11%	10,53%	0,85%	1,10%	1,41%
2014	91,67%	3,85%	3,21%	0,00%	1,28%

Table 1: Representation of nationalities in % in the admission procedure from English and German to the FIR UEP during the years of 2010 – 2014, source: authors

Results Analysis

Based on the data analysis, we found out that the number of points that the applicants achieved in entrance exams for studies at the UEP fluctuates at the similar level by each year in all basic statistical indicators – Table 2. The average number of points of applicants in English, regardless of year is little higher than German (2 to 3 points), as German is mostly up to second language teaching in secondary schools. The weakest year was 2012 for both exams, but the difference was up to 2 points. Highest score gained applicants from English in 2014. More detailed analysis results are provided in Table 2.

Year	N	Language	Avg	SD	Min	Max	25th	Mod	75th	Skew	Kurtosis	SE	Corr
2010	17241	English	79,22	14,94	6,7	98	72	82	90	-2,24	7,93	0,11	0,68
		German	77,67	16,65	6,2	100	68	80	90	-1,49	3,86	0,13	
2011	14576	English	79,72	14,70	5,6	100	74	82	90	-2,02	6,83	0,12	0,68
		German	77,53	15,69	7,4	100	68	80	90	-1,44	4,01	0,13	
2012	11371	English	78,62	11,34	45	100	72,5	80	87,5	-0,43	-0,20	0,11	0,41
		German	75,63	13,86	42,5	100	65	75	87,5	-0,21	-0,95	0,13	
2013	7171	English	79,92	13,89	10	98	72	82	90	-2,16	8,17	0,16	0,64
		German	76,54	16,16	10	100	66	78	90	-1,10	2,61	0,19	
2014	156	English	83,59	9,11	55	97,5	77,5	85	90	-0,33	-0,49	0,73	0,30
		German	76,03	8,88	52,5	92,5	72,5	77,5	79,06	-0,36	0,09	0,71	
	50515	**English**	**79,34**	**13,98**	**5,6**	**100**	**72,5**	**82**	**90**	**-1,95**	**7,08**	**0,06**	**0,63**
		German	**77,01**	**15,71**	**6,2**	**100**	**66,3**	**80**	**90**	**-1,20**	**3,02**	**0,07**	

Table 2: Total English and German entrance exam results at the FIR UEP, source: authors

Very interesting is the comparison of entrance exam results of applicants having Czech nationality with those of other analysed groups. This comparison is shown in Figure 1. It shows that the tested knowledge of Czech students is the lowest and not increasing the most in comparison to other applicants. On the other hand, applicants from Russia have the best knowledge and are followed by students from the Slovakia. Only Vietnamese and Czech results from German have decreasing tendency.

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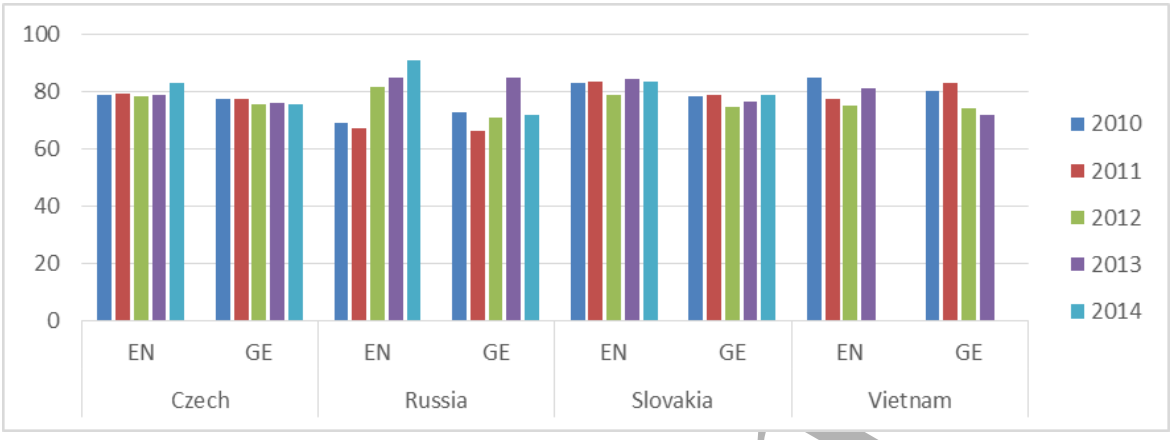


Figure 1: Comparison of the languages entrance exam results of applicants by nationality, source: author

From the boxplots (Figure 2) is readable that only Vietnamese have higher median in score from German than English. That is interesting because their average score is the lowest from all nationalities, but the number is not higher than German median from other nationalities, but has the higher variance. It means they have the lowest median from English exam from all. Czechs and Slovaks have pretty similar variance of both exams. In the figure is also seen that Russians have the best results from English of all.

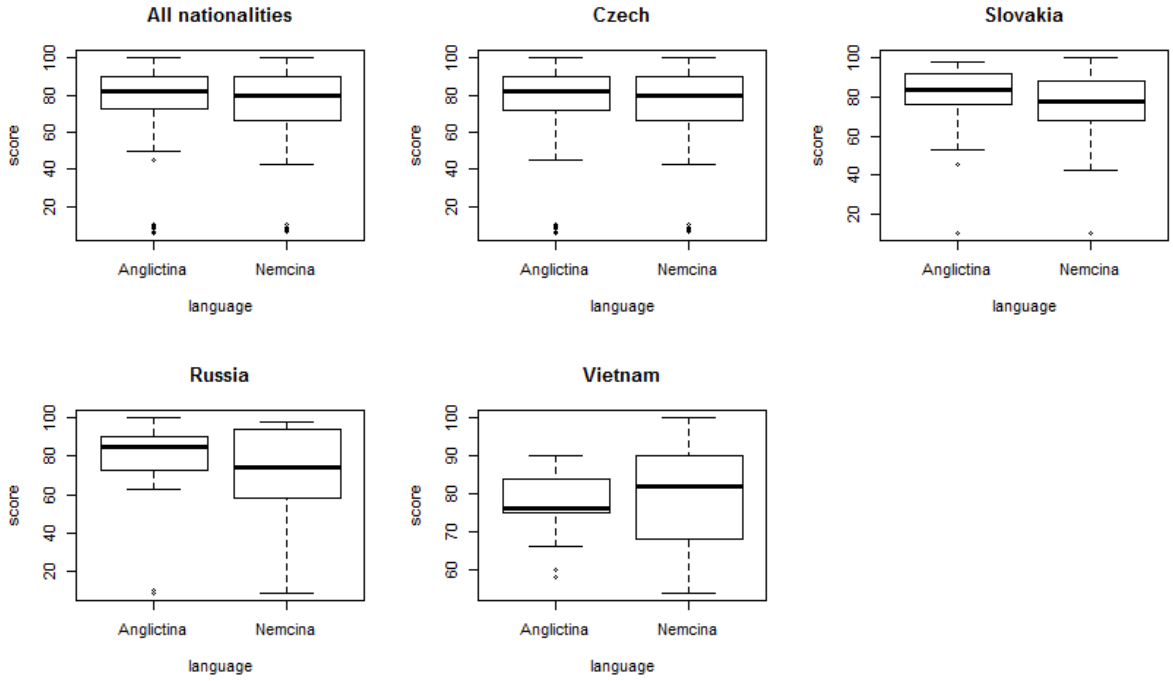


Figure 2: Boxplots of the languages entrance exam results of applicants by nationality, source: authors

The figure shows that the Russian school systems prepare students the best for entrance exams. On the other hand, students from the Czech Republic came out of this comparison as the worst prepared for English. One of the reasons that may explain it is the fact that only the best students from abroad apply to Czech universities (Mach, 2015) or that is expected that students from abroad speak very well English.

Analysis of Work Questions

The tables below analyses in detail the results of individual work questions. The first figure (Figure 3) provides the multiple histograms for each question, focusing on achieved points from English (dark shadow) and German (light shadow) exams. It shows, that histograms for both exams for all years for Czech (Q2), Slovakia (Q3) and all nationalities (Q1) which are primarily dominated by Czechs have similar distributions – normal, left skewed. That means that those students have higher score in both exam results. Russian (Q5) histogram has a multimodal

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distribution.

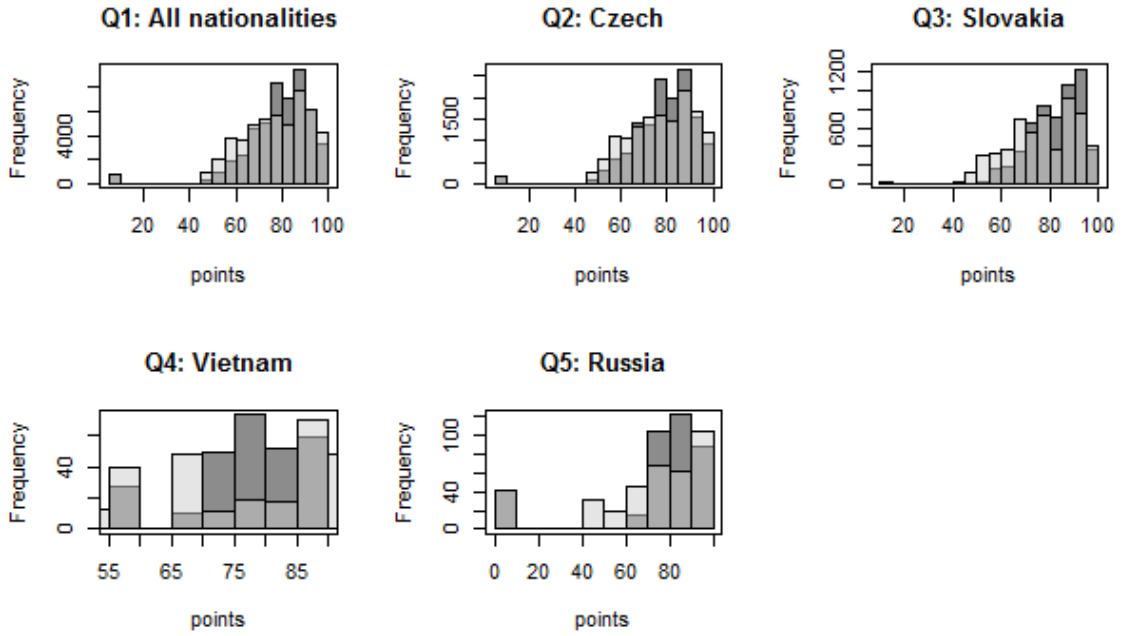


Figure 3: Multiple histograms of work questions, source: authors

Another charts (Figure 4) are linear regression for work questions. It is seen that charts for Q1 – Q3 support the contention, that those applicants have growing score in both entrance exams. Also Q4 have the tendency for higher score from both exams, which was not so evident from the histogram. We can claim that higher score have applicants from the one exam, they have also higher score from the second exam. But it is seen a large difference between score from the exams for Q5.

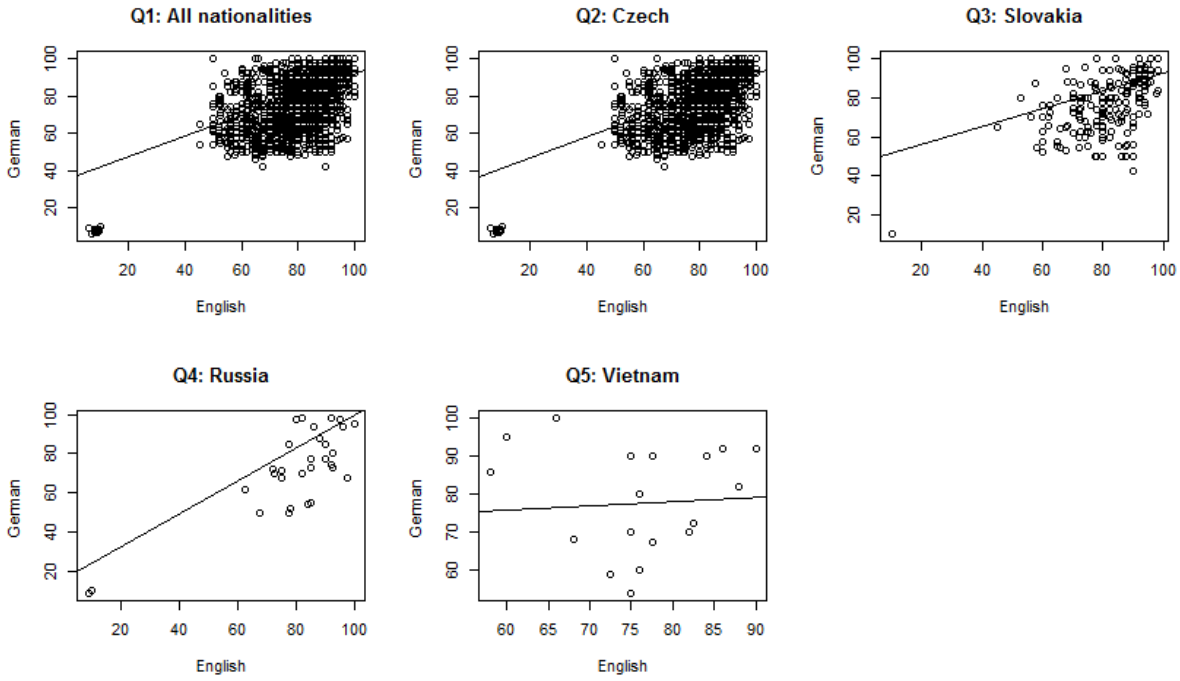


Figure 4: Regression analysis of work questions, source: authors

Table 3 shows correlation between the English and German exams results with respect to all work questions, focusing on individual years that were assessed. It is seen medium to strong positive correlation for all questions in every year except the 2014 for Q3 and Q4, and Q5 in 2012. Interestingly it is seen very strong correlation for

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Q4 and also Q5 in 2010 and 2013. It could be caused due to small number of applicants. Q1 is slightly copying Q2 because of a larger portion Q1 contains sample of Q2.

Assessment questions	2010	2011	2012	2013	2014	All years
Q1	0,68187	0,67951	0,40598	0,63699	0,30057	0,62852
Q2	0,68317	0,64097	0,42067	0,64379	0,40166	0,62161
Q3	0,66662	0,67425	0,31426	0,57562	-0,4625	0,58345
Q4	0,97528	0,97399	0,63077	1	-0,9452	0,89869
Q5	1	0,04276	-0,2101	1	NA	0,16807

Table 3: Correlations for assessment of work questions, source: authors

By paired T-test (Table 4) we looked for a differences between means in exams. Results for Q1 – Q4 show that there is a significant relationship between the both exams of each question as we already found in our correlation table (Table 3). We deny the significant relationship between exams for Q5 as the value of T-test is negative and p-value is high.

					95% Confidence Interval of the Difference		
	Corr	Paired T-test	Df	p-value	Lower	Upper	Mean of diff
Q1	0,6285169	40.7142	50514	p-value < 2.2e-16	2.222728	2.447558	2.335143
Q2	0,6216115	31.41	42770	p-value < 2.2e-16	1.839888	2.084792	1.96234
Q3	0,5834548	31,5503	5600	p-value < 2.2e-16	4,798348	5,434147	5.116247
Q4	0,898692	1814040	734	p-value < 2.2e-16	3.347264	5.048927	4.198095
Q5	0,1680665	-0.6853	536	p-value = 0.4934	-1.6307602	0.7871848	-0.4217877

Table 4: Paired T-test for assessment of work questions, source: authors

CONCLUSIONS

The analyses were performed based on the data obtained from entrance exams at the FIR UEP. Our goal was to analyse the number of points achieved in English and German by students, who applied to Faculty of International Relations by year and nationality and compare the results with each other, whether they depend on each other.

Based on the performed analysis of the both exams from English and German, we reached the following conclusions:

- The number of points in English achieved by applicants from entrance exams are increasing for Czech, Slovak and Russian students in time. Results for students from Slovakia are stable in time (no big differences and for students from Vietnam are degreasing for years 2010, 2011 and 2012 and increasing in year 2013 again.
- Trend in German language is different. Number of points from German is degreasing in Czech Republic and Vietnam and relatively stable for Russia and Slovakia.
- The correlation analysis has proven a medium to medium strong positive correlation for all questions in years 2010, 2011, 2013. In year 2012 is situation different. The correlation is weak for question Q1-Q3, medium for Q4 and weak (negative) in Q5. In year 2014 we see absolutely different results. Weak correlation is for Q1 and Q2, medium strong and strong negative correlation for Q3 and Q4. Overall results displays medium positive correlation in all questions except Q5.
- By paired T-test we looked for a differences between means in exams. Results for Q1 – Q4 show that there is a significant relationship between the both exams of each question. We deny the significant relationship between exams for Q5 as the value of T-test is negative and p-value is high.

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ASSESSING ITEM VALIDITY AND RELIABILITY OF SHARIAH COMPLIANT GOLD INVESTMENT (SCGI) INSTRUMENT USING RASCH MEASUREMENT MODEL

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ABSTRACT
This paper describes the process of assessing the validity and reliability of a new instrument namely Shariah Compliant Gold Investment (SCGI). The instrument consists of 33 items that are embedded in three dimensions and was administered to 27 Malaysian investors and investment institutions. The Rasch model was used to examine the validity of items by two criteria; (1) point measure correlation (PTMEA CORR) and (2) fit statistics (infit/outfit MNSQ and z-std). The findings indicated that the reliability index for the respondents and items are high with (r=0.91) and (r=0.81) respectively with Cronbach alpha 0.93. At the same time, the item separation is 2.07 while the person separation is a value of 3.15. From the aspect of the item polarity, most of the item contributed to the measurement as all of the PTMEA CORR values are positive values between +0.44logit to +1.66logit except for the A03 item (0.17logit). The fit item testing indicated that the value of the sum of the mean of infit MNSQ and SD was between +0.68logit to +1.30logit. Only one item, A03, falls in the range of elimination due to negative value of PTMEA CORR and z-std>2.0. The results suggested the item to be removed, retaining the balance 32 items.

Keywords: gold investment; rasch model; shariah compliant

INTRODUCTION

A shariah-compliant gold transaction has been authentically justified in a few hadith, among them narrated by 'Ubadah ibn al-Samit in which the Prophet Muhammad SAW said: "Gold (exchanged) with gold, silver for silver, wheat for wheat, barley and barley, salt with salt, and they should be of equal weight scales, and shall be submitted in its entirety. If the types of goods exchanged are different, then sell without delay and submit the goods directly." (Muslim, 2010). The hadith pointed two conditions for a shariah-compliant gold investment; cash and on-the-spot transaction (al-Sharbini, 1978; al-Saddam, 2006).

In Malaysia, bothcriteria have been gazette as "Gold Investment Parameter", endorsed by the National Fatwa Association. It functions as guidance for investors as well as investment institutions. However, the parameters are too general. This has urged the Shariah Advisory Council of Malaysian financial institution to call for the parameters to be reviewed (Jakim, 2012). Recently, Najahudin et al. (2014) propose Shariah Compliant Gold Investment (SCGI) as a new guidance. Thus, this research aims to evaluate the validity and reliability of the SCGI via Rasch Measurement Model. The Rasch analyses will be focused on the interpretation of the data reliability, item polarity, fit statistics and the persons-items distribution map.

Shariah Compliant Gold Investment (SCGI)

The SCGI has been developed meticulously through systematic procedures involving relevant experts (Najahudin et al. (2014). It is more specific and consists of three dimensions; (i) investor and investment institutions; (ii) products and prices; and (iii) the contracts offered. These three dimensions and a total of 33 items have been unanimously agreed by 13 experts via two rounds of Delphi technique. Each round was implemented using a questionnaire with 4-Point Likert Scale; (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. Data collected from each round were analyzed using the Statistical Package for Social Science (SPSS) in order to attain the agreed dimensions and items. In the second round, the expert consensus had successfully obtained.All items indicated that the consensus were in the interquartile range of (IQR)=0 or 1,

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median=4.00 and mode=4, above the 95 percentage and the median frequency distribution of 3.8 (Green, 1981). The items which has been agreed upon is shown in Table 1.

Table 1. Dimension dan Items of SCGI.

Dimensions	Number of Items	Total
Investor and investment institutions	A01, A02, A03, A04, A05	5 items
Product and prices	B01, B02, B03, B04, B05, B06, B07, B08, B09, B10, B11, B12, B13, B14, B15, B16, B17	17 items
Contract deal	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11	11 items

METHOD

Source of Data

For the purpose of validating 33 items of SCGI, the researcher organizes a special seminar on 4 April 2015. The seminar attracted 27 participants. Fortunately, all of them are gold investors. Prior to administering the SCGI, the researcher thoroughly explained the dimensions and items to ensure the respondents' understanding correspond to the researcher's. At the end of the seminar, 27 valid responses were collected.

Rasch Measurement Model

The Rasch model is a measurement on the probability of interaction between the person and the item. Each person will be categorized based on their temporary skills whereas the items are categorized based on their difficulty. The Rasch model was formed by taking into consideration the ability of the person answering the questionnaire or the instrument and the difficulty posed by each of the question or the item. The ability of the person and the difficulty of the item was shown in the form of logits through the transformation of ordinal data into ratio measurements. This model would be able to predict the pattern of the response based on the different ability of each of the person and the difficulty of each of the item itself. (Rasch, 1980).The probability to succeed would depend on the difference of the ability of the respondent and the difficulty of the item itself. According to the Rasch model, (i) a smarter person would have a bigger probability to agree with the items; and (ii) items that are less difficult would have a higher probability to be agreed by all of the respondents (Bond & Fox, 2007).

The Rasch model is able to provide the accuracy of the validity and reliability as it focuses on the person and the item. Moreover, this model would be able to show which of the item or construct would fit, misfit, requires further research or eliminated (Azrilah, 2010) based on the established rating scale. This study utilizes the rating scale for the statistic data of the Rasch model as shown in Table 2.

Table 2.Rating Scale Instrument Quality Criteria using Rasch Model.

Criteria	Statistical Info	Results
Item Validity	a. Item Polarity	PTMEA CORR > 0.4 – 0.8 (Linacre, 2011; Azrilah, 2010)
Item Misfit	b. Item Fit	Total MNSQinfit and outfit of 0.5 - 1.5 (Linacre, 2011; Linacre, 2002)
	c. Separation	All items show ≥ 2.0 (Linacre, 2011, Fisher, 2007)
	d. Person Reliability	Value> 0.8 (Bond & Fox 2007)
	e. Item Reliability	Value> 0.8 (Bond & Fox 2007)

Source: Linacre (2011); Azrilah (2010); Bond & Fox (2007); Fisher (2007); Linacre (2002).

Data analysis

The data were analyzed using the Rasch analysis software, the WINSTEPS 3.72.3. Rasch predicts the probability of a person to evaluate item, and the probability for each item to be evaluated by a person. In Rasch Measurement Model, the validity of the instrument could be identified through several major analysis such as the item polarity, person-item fit, person-item misfit, the person-items distribution map, person-item separation, unidimensionality and scale calibration (Rasch, 1980; Bond & Fox, 2007; Linacre, 2011). Though, this study

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only reports on the reliability value, item polarity, fit statistics and person-items distribution map (PIDM). Figure 1 summarizes the types of analyses performed.

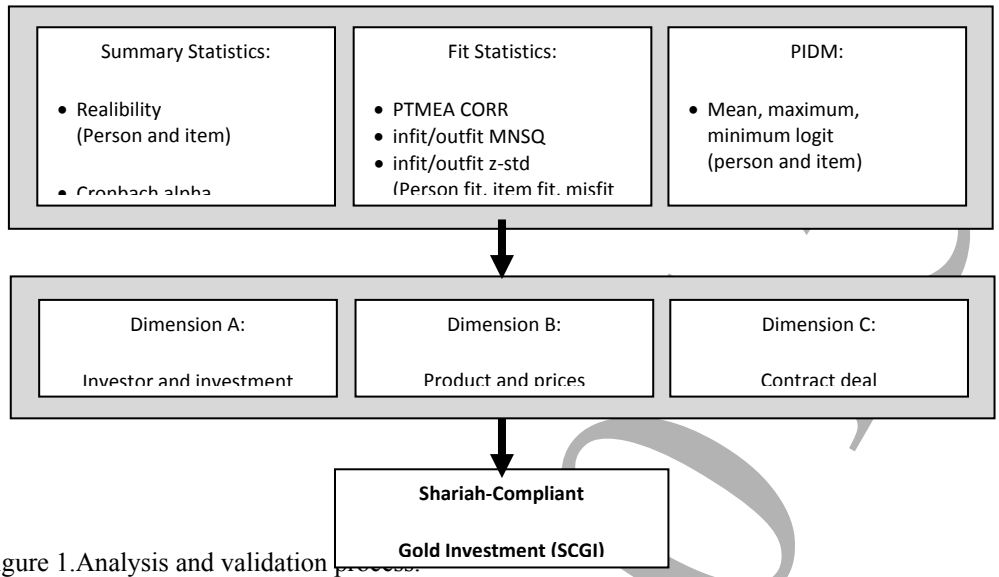


Figure 1.Analysis and validation process.

RESULTS AND DISCUSSION

Realibility

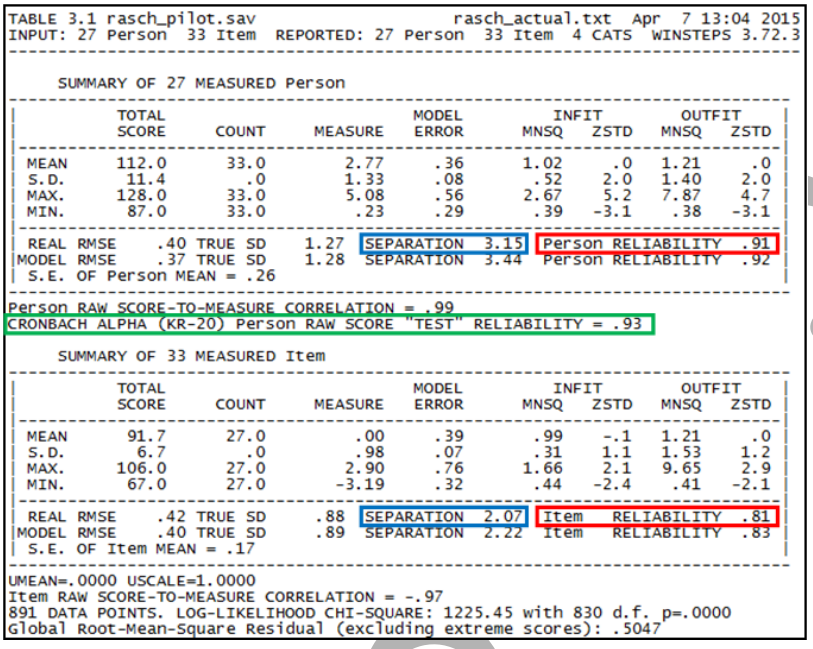
Reliability is the index that indicates the consistency of the position of the person and item in the logit scale. The person reliability index shows the consistency of the position of the respondent when given with another set of items that measures the same construct. Whereas the item reliability index showed the consistency of the set of items when answered by a different respondent who have similar abilities. The coefficient value that is closest to 1.00 denotes a high reliability (Nunnally & Bernstein, 1994).

According to Bond & Fox (2007) and Linarce (2011), the reliability of a person which exceeds the 0.80 (≥0.80) value indicates a strong acceptance towards the respondent or the item. Whereas Fisher (2007) divided the rating scale for the reliability of a person and item into "poor" (<0.67), "fair" (0.67 - 0.80), "good" (0.81 - 0.90), "very good" (0.91 - 0.94) and "excellent" (>0.94). The accepted separation value for a person and item must be at least 2.0 (≥ 2.0) (Linarce, 2011; Fisher, 2007).

Based on Figure 2, the summary statistic displays acceptable person and item reliability values. On top of that, the Cronbach-α of 0.93 is good, indicating the instrument is a valid measurement and capable of identifying the level of shariah-compliance of gold investment products. The reliability of the item recorded a value of 0.81, which indicates that there are sufficient items to measure what need to be measured (Nunnally & Bernstein, 1994).

The respondent reliability index is 0.91, indicating a strong probability of the items to measure the same goods when given to another similar respondent (Azrilah, 2010). In addition, the separation value for respondent and item were 3.15 and 2.07, respectively. A value of ≥ 2.0 is good, indicating the SCGI ability to segregate respondent ability and item difficulty.

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```
TABLE 3.1 rasch_pilot.sav                    rasch_actual.txt  Apr  7 13:04 2015
INPUT: 27 Person  33 Item  REPORTED: 27 Person  33 Item  4 CATS  WINSTEPS 3.72.3
-------------------------------------------------------------------------------

     SUMMARY OF 27 MEASURED Person
-------------------------------------------------------------------------------
|           TOTAL                          MODEL          INFIT        OUTFIT   |
|           SCORE     COUNT     MEASURE    ERROR       MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      112.0      33.0        2.77      .36       1.02     .0   1.21     .0 |
| S.D.       11.4        .0        1.33      .08        .52    2.0   1.40    2.0 |
| MAX.      128.0      33.0        5.08      .56       2.67    5.2   7.87    4.7 |
| MIN.       87.0      33.0         .23      .29        .39   -3.1    .38   -3.1 |
|-----------------------------------------------------------------------------|
| REAL RMSE    .40 TRUE SD    1.27  SEPARATION  3.15  Person RELIABILITY  .91   |
|MODEL RMSE    .37 TRUE SD    1.28  SEPARATION  3.44  Person RELIABILITY  .92   |
| S.E. OF Person MEAN = .26                                                   |
-------------------------------------------------------------------------------
Person RAW SCORE-TO-MEASURE CORRELATION = .99
CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .93

     SUMMARY OF 33 MEASURED Item
-------------------------------------------------------------------------------
|           TOTAL                          MODEL          INFIT        OUTFIT   |
|           SCORE     COUNT     MEASURE    ERROR       MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN       91.7      27.0         .00      .39        .99    -.1   1.21     .0 |
| S.D.        6.7        .0         .98      .07        .31    1.1   1.53    1.2 |
| MAX.      106.0      27.0        2.90      .76       1.66    2.1   9.65    2.9 |
| MIN.       67.0      27.0       -3.19      .32        .44   -2.4    .41   -2.1 |
|-----------------------------------------------------------------------------|
| REAL RMSE    .42 TRUE SD     .88  SEPARATION  2.07  Item   RELIABILITY  .81   |
|MODEL RMSE    .40 TRUE SD     .89  SEPARATION  2.22  Item   RELIABILITY  .83   |
| S.E. OF Item MEAN = .17                                                     |
-------------------------------------------------------------------------------
UMEAN=.0000 USCALE=1.0000
Item RAW SCORE-TO-MEASURE CORRELATION = -.97
891 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 1225.45 with 830 d.f. p=.0000
Global Root-Mean-Square Residual (excluding extreme scores): .5047
```

Figure 2.Person and item reliability coefficients.

Polarity of the Item

The item polarity is a precondition that must be referred to by reviewing the point measure correlation (PTMEA CORR) coefficient. Items are assumed as able to differentiate the ability of the respondents when the PTMEA CORR values are high. The value must be positive to indicate the item is moving in parallel (Bond & Fox, 2007). When the PTMEA CORR values are negative or zero, this indicates that the response of a person or item conflicts with the variables constructed (Linacre, 2011), an inverse direction of measurement and an uncommon decision making variable (Azrilah, 2010). Nunnally & Bernstein (1994) and Finlayson (2009), both believed that the PTMEA CORR item value of at least +0.30logit would be able to measure a construct systematically, whereas a value of +0.32logit would be able to merely measure in an average manner. However, this study uses the value between +0.4logit and +0.8logit ($0.4 < x < 0.8$) in order to prove that the constructed items would be able to be measured and to also be able to differentiate the respondents (Linacre, 2011; Fisher, 2007; Azrilah, 2010).

Figure 3 shows that all the items had positive PTMEA CORR values and small mean error measurement of SE (+0.39logit), except item A03, which reported a negative value of -0.17logit (SE=+0.76logit). This particular item was considered to be eliminated, as it did not measure what must be measured (Azrilah, 2010). Most of the values of the other items are between the values of +0.42logit to +0.77logit, except for 2 items that are outside the specified range that is A01 (+0.77logit) and A02 (+0.15logit). However, both items were retained, based on their acceptable infit MNSQ (+1.49logit and +1.48logit respectively) and z-std (1.7 and 0.6 respectively).

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TABLE 10.1 rasch_pilot.sav rasch_actual.txt Apr 7 13:04 2015
INPUT: 27 Person 33 Item REPORTED: 27 Person 33 Item 4 CATS WINSTEPS 3.72.3

Item STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	Item
3	106	27	-3.19	.76	1.27	.6	9.65	2.9	A-.17	.27	92.6	92.6	A03_redaP
19	91	27	.19	.37	1.66	2.1	1.60	1.8	B .42	.58	55.6	67.7	B14_laniH
1	79	27	1.66	.33	1.49	1.7	1.55	1.9	C .07	.61	63.0	59.7	A01_umurP
28	82	27	1.32	.34	1.51	1.8	1.46	1.7	D .56	.60	70.4	60.9	C06_Xsewa
14	90	27	.33	.37	1.51	1.7	1.42	1.4	E .55	.58	55.6	66.6	B09_laniE
2	91	27	.19	.37	1.14	.6	1.48	1.5	F .15	.58	55.6	67.7	A02_umurC
27	89	27	.47	.36	1.44	1.5	1.34	1.2	G .56	.58	66.7	65.8	C05_Xbyback
21	91	27	.19	.37	1.24	.9	1.19	.7	H .53	.58	74.1	67.7	B16_tunaiH
25	91	27	.19	.37	1.14	.6	1.23	.8	I .56	.58	63.0	67.7	C03_selangi
29	85	27	.97	.35	1.20	.8	1.19	.8	J .53	.60	59.3	63.4	C07_Xhibah
33	92	27	.05	.38	1.20	.8	1.18	.7	K .47	.57	66.7	68.3	C11_Xtrade
24	89	27	.47	.36	1.11	.5	1.17	.7	L .53	.58	63.0	65.8	C02_bertemu
31	94	27	-.24	.39	1.12	.5	1.07	.3	M .55	.56	70.4	69.7	C09_Xloan
7	98	27	-.91	.43	1.02	.2	.73	-.5	N .67	.51	77.8	73.0	B02_milikE
15	88	27	.60	.36	1.01	.1	.98	.0	O .64	.59	74.1	65.5	B10_QEblaku
32	95	27	-.40	.40	1.01	.1	.85	-.3	P .65	.55	85.2	70.4	C10_Xjudi
4	92	27	.05	.38	.90	-.3	.96	.0	Q .61	.57	66.7	68.3	A04_daftarC
5	67	27	2.90	.32	.95	-.1	.94	-.2	p .46	.63	63.0	58.8	A05_apsC
16	91	27	.19	.37	.94	-.1	.85	-.4	o .69	.58	70.4	67.7	B11_dapatE
30	90	27	.33	.37	.94	-.1	.88	-.3	n .58	.58	74.1	66.6	C08_Xsalaf
17	94	27	-.24	.39	.93	-.1	.87	-.3	m .58	.56	77.8	69.7	B12_tasarruf
22	86	27	.85	.35	.87	-.4	.84	-.5	l .72	.59	74.1	64.1	B17_kunciH
6	99	27	-1.10	.44	.85	-.4	.68	-.6	k .64	.49	81.5	74.0	B01_wujudE
26	93	27	-.09	.39	.82	-.6	.70	-.9	j .78	.56	81.5	69.0	C04_Xmilikan
8	95	27	-.40	.40	.67	-1.2	.73	-.7	i .61	.55	81.5	70.4	B03_pindahE
11	97	27	-.73	.42	.71	-1.0	.68	-.8	h .61	.52	74.1	71.6	B06_tautulen
10	97	27	-.73	.42	.67	-1.2	.58	-1.1	g .64	.52	81.5	71.6	B05_bentukE
18	97	27	-.73	.42	.64	-1.4	.58	-1.1	f .66	.52	81.5	71.6	B13_tahuH
12	95	27	-.40	.40	.60	-1.6	.59	-1.2	e .67	.55	74.1	70.4	B07_tmbangE
9	95	27	-.40	.40	.59	-1.6	.58	-1.3	d .67	.55	81.5	70.4	B04_tahuE
13	98	27	-.91	.43	.59	-1.6	.52	-1.2	c .68	.51	85.2	73.0	B08_beratE
20	93	27	-.09	.39	.51	-2.0	.57	-1.5	b .69	.56	88.9	69.0	B15_QHfull
23	95	27	-.40	.40	.44	-2.4	.41	-2.1	a .77	.55	88.9	70.4	C01_kontrak
MEAN	91.7	27.0	.00	.39	.99	-.1	1.21	.0			73.3	68.8	
S.D.	6.7	.0	.98	.07	.31	1.1	1.53	1.2			10.0	5.5	

Figure 3.Item Point Measure Correlation.

Fit statistics

The Rasch model provides fit statistics to detect item or person misfit. The fit statistics refer to; (i) infit and outfit mean square (MNSQ); and (ii) infit and outfit standardized (z-std); for both person and items. MNSQ is the ratio of an observation compared to the expectation. The ideal value for MNSQ is 1, when the observation correspondsthe expectation. The MNSQ value is excluded from the expectation when the total mean value of the MNSQ infit and the SD (mean iMNSQ +/- SD) is out of the specified range.

According to Bond & Fox (2007), the values of the MNSQ infit and outfit for each person and items for the likert scale must be between +0.6logitto +1.4logit. Fisher (2007) established that the fit item has a fair scale of within +0.34logit to +2.9logit, whereas a good scale has a value of within +0.50logit to +2.0logit. However, this study utilizes the range of values recognized by Linacre (2002) in which the values between +0.5logitto +1.5logit ($0.5 < y < 1.5$) in order to verify the fit and misfit for a person or an item. Usually the outfit would be more sensitive to the response compared to the infit (Linacre, 2002). The detection of the items that are misfit or outlier can be further confirmed with the z-std values that must be between the range values of -2.0 to 2.00 ($-2.0 < z < +2.0$). The ideal value for z-std would be 1.0 (Azrilah, 2010). The person or items that does not fulfil the criteria range will be considered to be eliminated, except if the PTMEA CORR values for the person and item is between +0.4logit and +0.8logit($0.4 < x < 0.8$).

This study will focus on the fit item compared to the fit person. The fit item here means that the given index has an item function and is able to measure the latent trait required. Misfit occurs when (i) the item does not measure the desired traits; (ii) the items are too difficult or too simple for the person; (iii) or there was an unstable response from the person. Figure 3 shows the sum of the MNSQ infit mean and (+/-) SD (0.99logit +(-) 0.31logit) are among the values between +0.68logitto +1.30logit, which is at an acceptable range of ($0.5 < y < 1.5$).

All of the items were accepted except for item A03 as it was outside the acceptable range of z-std (outfit 2.90) and has a negative PTMEA CORR value of (-0.17logit). Even though the infit MNSQ of item B14 (+1.66logit), C06 (+1.51logit) and B09 (+1.51logit) were beyond the acceptable range ($0.5 < y < 1.5$), allof them were accepted as their z-std outfit were within the acceptable range (B14=1.8; C06=1.7; B09=1.4). They were also

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measuring in the right direction as the PTMEA CORR values were positive (B14=+0.42; C06=+0.56; B09=+0.55). Therefore, all of the items (n=33) were retained except item A03.

The index for the statistics analysis after the A03 item was eliminated is as shown in Table 3. Overall, the findings showed that the instrument has a fair item reliability (+0.75logit), mean infit MNSQ (+1.02logit) and mean outfit z-std (0.00).

Table 3.Summary statistic after removal of misfit items.

Statistics		Measures (logits)	
		Before Item Removal	After Item Removal
Mean measure	erson	2.77	+2.70
	tem	.00	0.00
Separation	erson	3.15	+.19
	tem	2.07	+.75
Realibility	erson	0.91	+0.91
	tem	0.81	+0.75
Mean infit MNSQ	erson	1.02	+1.02
	tem	0.99	+0.99
Mean outfit MNSQ	erson	1.21	+0.96
	tem	1.21	+0.96
Mean infit z-std	erson	.00	0.00
	tem	.00	0.00
Mean outfit z-std	erson	0.10	-0.10
	tem	.00	0.00

Persons-Items Distribution Map (PIDM)

PIDM is the heart of the Rasch model analysis, which shows the hierarchical relationship of the ability of the person and the difficulty of the item (Bond & Fox, 2007). The person with a higher ability and a more difficult item is placed at the top, whereas a person with a lower ability and an easy item is placed at the bottom. Based on Figure 2, the mean value for the evaluation of a person is +2.77logit and for the item is 0.00logit. The minimum value for a person is +0.23logit whereas the maximum value is +5.08logit. The minimum value for the item is +2.90logit whereas its maximum value is -3.19logit. This makes the total ruler length of a person to be 5.31logit against the item value of 6.09logit. The gap that is lacking between the scale of the person compared to the item to be measured is about 0.78logit (6.09 - 5.31). This hierarchical value is shown in Figure 4.

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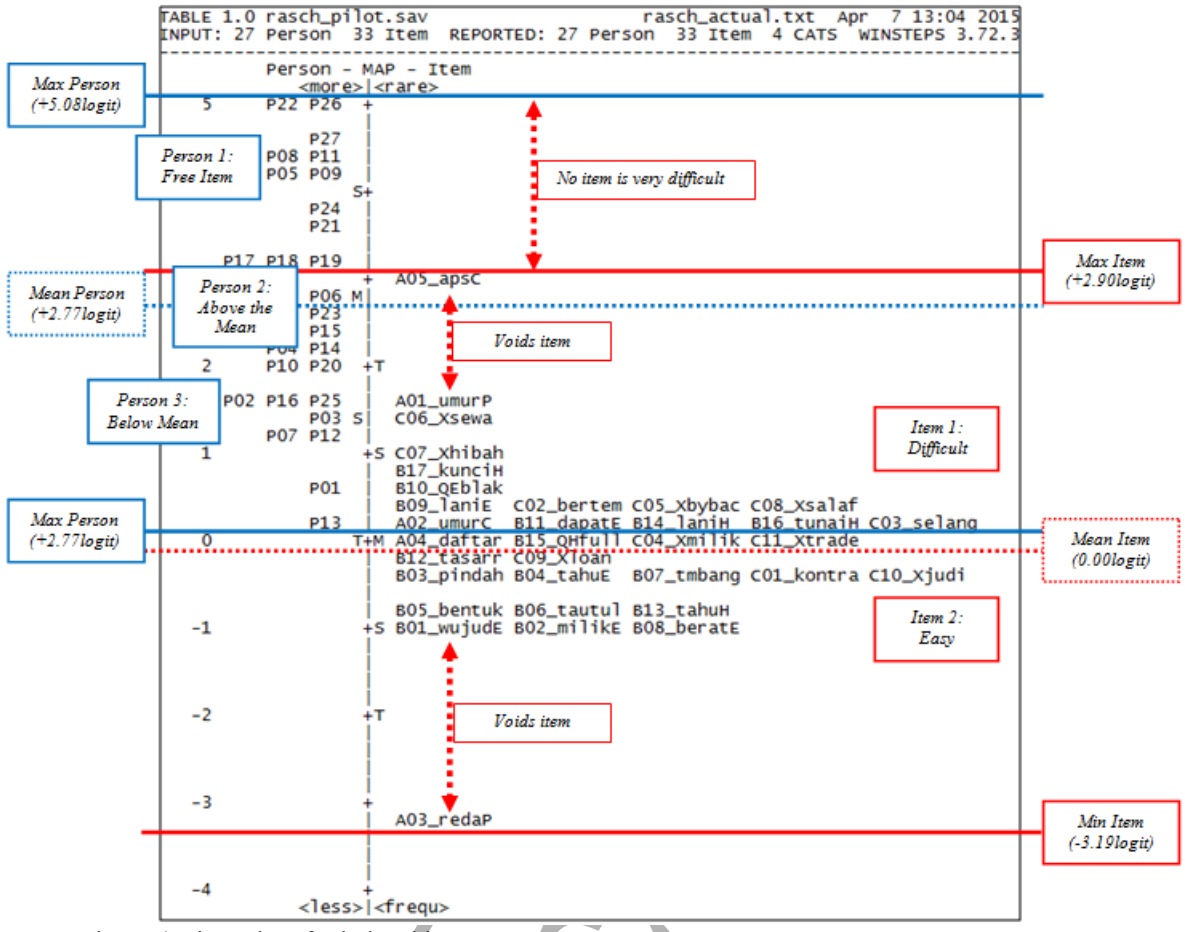


Figure 4.Hierarchy of relationship.

The PIDM above shows the ability of the item to separate the respondents into three categories that is the person free item, the person above the mean and the person below the mean. The items were divided into two categories, that is difficult and easy with the item mean (0.00logit) as the separation line. This division is aligned with the data separation of the person (3.15) and the item (2.07) as shown in Table 3. Out of the 27 respondents, Group 1 (excellent) contains 12 people that are located within the maximum item location at a range of values between +2.90logit to +5.08logit. Whereas the Group 2 (good) has 7 people located within below, at a range of +2.90logit to +2.07logit and the rest of the respondents are in Group 3 (mediocre) as they are within the range of below the +2.07logit to an item mean value of 0.00logit.

The map proves most of the respondents are item-free (person free item). More items are required to measure them. The respondents have high evaluation ratings, and had no problem to agree with most of items in the instrument. The item only measures the person in Group 2 and 3, whereas there was no complicated item to be used to measure the people in Group 1. Most of the items are easy and were below the respondent mean (+2.77logit). There were no respondents under the mean item (0.00logit). This is aligned with the view of Bond & Fox (2007) in which an easier item is more likely to be agreed upon by all of the respondents.

The easiest item to be agreed by most of the respondents was the A03 (-3.19logit) and the most difficult item to be agreed together was the A05 (+2.90logit). There are also large voids in two places that are between the items A01 and A05, and also the items B01 and A03. This made the item reliability to be at a value of 0.81.

CONCLUSION

The analysis of the Rasch model has proven that SCGI can be accepted and has a high reliability (person = 91; item = 81). Nevertheless, most of the items are too simple and easy compared to the high evaluation done by the respondents. There were no items too difficult enough to be used to measure most of the respondents. Out of the

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original 33 items, 1 of them was a misfit and was required to be eliminated in order to obtain a valid instrument under the Rasch model. The item A03 item (infit MNSQ=+1.27logit; z-std=2.9; PTMEA CORR= -0.17logit) was identified as a misfit and had to be eliminated, as it did not fulfil the validity requirements. The rest of the items were maintained due to their high validity characteristics (positive PTMEA CORR values; infit MNSQ=+0.44logit to +1.66logit; and z-std> -/+2). Therefore, the final instrument contained only 32 items.

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BASIC PREPARATION FOR PRACTICAL TRAINING IN PREACHING TO THE NON-MUSLIMS AMONG STUDENTS OF THE DEPARTMENT OF DAKWAH AND LEADERSHIP STUDIES, FACULTY OF ISLAMIC STUDIES, UKM

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ABSTRACT
Basic preparation in preaching to the non-Muslims has to be mastered by students especially those from the Department of Dakwah and Leadership Studies (DDLS) so that the goal of *dakwah* (the propagation of Islamic beliefs) in Practical Training in Preaching to Non-Muslims (PTPNM) is achieved. The objective of this paper is to present the basic preparatory steps used by students who undertook PTPNM at the Indigenous People's Village in Kampung Tanah Gembur, Ledang Johor in 2011. Apart from that, it also identifies whether the students' basic preparation during PTPNM was sufficient or not as an improvement for certain parties. This research involves both qualitative and quantitative methodologies. The qualitative method is carried out through observation by the researchers on students who undertook the course from the beginning of its implementation until the practical training session was over. It aims to observe whether the students had tackled their training equipped with physical, mental, emotional and managerial preparations. The quantitative method on the other hand, is based on questionnaire which aims to obtain feedback from the students after they have completed their PTPNM. A total of 65 second year 2011/12 session students have answered the Likert-scale questionnaire and the data gathered have been analysed using the SPSS software. Research findings show that the students had done sufficient basic preparation, among them are that the students had reacted positively towards the non-Muslims eventhough they had to face situations which were very different in terms of religion and local customs (63%), the courage shown by the students in befriending the non-Muslims (58%) and applying their knowledge of the approach in preaching to the non-Muslims according to the suitability of time, place and conditions (60%). Hence, PTPNM's basic preparation needs to be mastered as a solid preparation and subsequently enable the mission of spreading the Islamic beliefs (dakwah) to attain its objective.

Keywords : Basic preparation; propagation of Islamic beliefs or preaching (*dakwah*); Non-Muslims

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INTRODUCTION

Preaching to Non-Muslims (Code: PPPM 2023 Methodology of Preaching to Non-Muslims) is an obligatory course which students of the Department of Dakwah and Leadership Studies (DDLS), Faculty of Islamic Studies UKM have to enroll for. This course consists of lectures which are theoretical learning and also practical training as a complete learning package for the students. It is important for DDLS to offer this course to the students, given the need for the execution of preaching to the non-Muslim community, which involves a lot of challenges. It also guides the students on how to introduce Islam as a sacred and righteous faith. Apart from that, the students are able to foster good relationship between the muslims and non-Muslims. This type of relationship needs to be initiated as taught by Islam. People who live in a community are dependent on each other in fulfilling their every day needs (Andek Masnah Andek Kalewa 2009:47).

The aspect of a preacher's self-preparation while preaching or spreading the Islamic beliefs is the basis when interacting with the non-Muslims. The execution of a preaching (dakwah) task requires the students to be prepared and possess skills to enable them to carry out preaching in a harmonious environment and to be accepted by all parties. Eventhough the students are exposed to the theories and are given guidance as a preparation prior to their getting involved in the practical training, yet this guidance should be observed and monitored as to how far it is suitable for the students and is able to assisst the students. In order to attain the effectiveness of the practical training, the students would need to carry out the basic or fundamental preparations of the practical training. Therefore, this study presents the research findings on the preparations done while on a preaching task undertaken by 65 second year students of the 2011/12 session while undergoing PTPNM at an Indigenous People's Village in Kg. Tanah Gembur, Johor in 2011.

The Concept of the Propagation of Islamic Beliefs or Preaching (*Dakwah*) to the Non-Muslims

The word '*dakwah*' (the propagation of Islamic beliefs) comes from the word *da^{c}'a*. According to *Ibnu Manzur*, the propagation of Islamic beliefs (*dakwah*) is to call upon to something or to have the intention for something. For example, to implore or supplicate to Allah and to hope for goodness from it, to call upon to combat, to implore or to call upon to perform prayer, to call upon towards religion or its sects and to encourage for it to be believed in. On the other hand, Shaikh Ali Mahfuz in *Hidayah al-Murshidin* (t.th;17) states that the propagation of Islamic beliefs (*dakwah*) is to call upon and draw mankind towards good and guidance, to carry out *al-amru bi al-makruf* (good deeds) and to put a stop to *al-mungkar* (evilness) so that they attain happiness in this world and the hereafter.

As for the term non-Muslim as written by Abdul Karim Zaidan (1987) is *ghair muslim* under the topic of *al-isti'nah bi al-ghair* in the book *Usūl al-da^{c}wah*. In the Quran, the term non-Muslim is mentioned as '*kafir*' and '*mushrik*'. Whether the term is non-Muslim, *ghair muslim*, kafir or mushrik, each is correct in its own context (Abd.Ghafar Don & Ahmad Redzuwan Mohd.Yunus 2009:17). Therefore, preaching to the non-Muslims is to call upon all of them to accept or embrace the truth about the creation of mankind and in practising the harmonious code of life and the purpose of this is to strengthen their understanding so as to practise it properly in accordance with the requirements of Islam (Berhanundin Abdullah 2009:62).

In the context of Malaysia as a pluralistic and multi-racial country, the Muslims especially are required to do good deeds and to administer justice and kindness to the whole of mankind even though some of them may refuse to accept the religion, as long as they do not oppose it, fight against it, stage a war against its preachers or oppress its followers (Mat Saat Abd. Rahman 1989:5). This requisition is in line with the decree of Allah the Almighty which means:

> *"Allah forbids you not, respecting those who have not fought against you on account of* your *religion, and who have not driven you forth from your homes, that you be kind to them and act equitably towards them; surely Allah loves those who are equitable."*
>
> (al-Mumtahanah, 60:8,9)

FINDINGS AND DISCUSSION

The students were given lectures which introduced them to the methodologies of preaching to the non-Muslims as well as how to interact with them. The lectures were conducted for 5 weeks. Apart from that, the students were given guidance on how to deal with the target group and also the related organisations. A series of discussions were conducted between the lecturers, students and representatives of the organisations to expedite this practical training course. The students were also asked to continually discuss their planning of the programs to be implemented. In addition, they would regularly hold a special prayer asking for spiritual strength in facing their preaching task.

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For this study, questionnaires were distributed to the students to gather their feedback on the suitability of their preparations with the actual realities they had to face in their task. Table 1 shows the percentage and frequency of students' responses in relation to their preparations in undergoing Practical Training in Preaching to Non-Muslims (PTPNM)

Table 1 : Preparation While Undergoing Practical Training in Preaching to Non-Muslims

No	Item	Strongly Disagree (SD)	Disagree (D)	Unsure (U)	Agree (A)	Strongly Agree (SA)
1.	I am not shy to ask about preaching to non-Muslims to people who are more experienced than myself, such as my lecturers.	- -	1 (1.5%)	4 (6.2%)	38 (58.5%)	22 (33.8%)
2.	The presence of officials from the Department of Orang Asli Affairs helps me in terms of the information given in adapting myself with the indigenous people.	- -	3 (4.6%)	5 (7.7%)	38 (58.5%)	19 (29.2%)
3.	Involvement of the State Islamic Religious Department officers and JAKIM helped a lot in giving me guidance in preaching to the non-Muslims.	- -	2 (3.1%)	4 (6.2%)	38 (58.5%)	21 (32.3%)
4.	I was happy when I first met with the non-Muslims.	1 (1.5%)	- -	2 (3.1%)	31 (47.7%)	31 (47.7%)
5.	I felt clumsy or awkward when communicating with the non-Muslims.	10 (15.4%)	25 (38.5%)	13 (20.0%)	14 (21.5%)	3 (4.6%)
6.	I lacked the confidence in initiating a conversation with the non-Muslims.	10 (15.4%)	23 (35.4%)	14 (21.5%)	17 (26.2%)	1 (1.5%)
7.	During my first meeting with the non-Muslims, I was scared because of the different condition and environment.	6 (9.2%)	24 (36.9%)	11 (16.9%)	23 (35.4%)	1 (1.5%)
8.	I showed positive reactions while being together with the non-Muslims even if the situation happening in front of me was different in terms of religion and culture from my own place.	- -	1 (1.5%)	1 (1.5%)	49 (75.4%)	14 (21.5%)
9.	I braved myself to befriend a non-Muslim if he was shy and tried to avoid meeting me.	- -	3 (4.6%)	4 (6.2%)	45 (69.2%)	13 (20.0%)
10.	I would give up when my call in doing beneficial activity was rejected by the non-Muslims.	18 (27.7%)	33 (50.8%)	10 (15.4%)	3 (4.6%)	1 (1.5%)
11.	I would meet the demands or requests of non-Muslims which did not conflict with the teachings of Islam.	4 (6.2%)	8 (12.3%)	31 (47.7%)	18 (27.7%)	3 (4.6%)
12.	Knowledge of preaching to the non-Muslims gives me confidence in preaching properly.	- -	2 (3.1%)	3 (4.6%)	47 (72.3%)	13 (20.0%)
13.	I did not mind bringing along handbooks on preaching to the non-Muslims to obtain answers and related questions arising.	- -	6 (9.2%)	12 (18.5%)	35 (53.8%)	12 (18.5%)
14.	I practised my knowledge on non-Muslims preaching approach according to the suitability of time, place and circumstances of the non-Muslims.	- -	1 (1.5%)	4 (6.2%)	43 (66.2%)	17 (26.2%)
15.	I tried to guide the non-Muslims in their daily activities according to the teachings of Islam.	- -	1 (1.5%)	8 (12.3%)	41 (63.1%)	15 (23.1%)

Source : 2011 Questionnaire

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Basic preparation while undergoing practical training in preaching to the non-Muslims in Table 1 can be seen from a number of aspects namely;

First, the communication between the students and their lecturers, officials from the Department of Orang Asli Affairs and officials from the State Islamic Religious Department as well as the officers from Malaysia Department of Islamic Development (JAKIM) on duty while PTPNM was being conducted. Apart from communicating with friends, an aspect which needs to be prioritised by the students is to communicate in the form of queries, sharing of experience and discussion with the lecturers as well as the officials involved about the best and most effective approach when facing the non-Muslims' diverse attitude and behaviour. Based on the lecturers and officers' knowledge and vast experience, students were able to make them as important information and this would make it easier for them to preach to the non-Muslims. The students' communication with the lecturers and officers concerned is able to make the students more knowledgeable in planning their preaching strategies as well as to be more mature in acting according to time and situation.

The findings in Table 1 show that the students were not shy to ask about preaching to the non-Muslims to more experienced people such as their lecturers (A: 58.5% & S.A:33.8%), getting information from the officers of the Department of Orang Asli Affairs in adapting themselves to the indigenous people (A:58.5% & S.A:29.2%) and the involvement of State Islamic Religious Department officials helped the students in giving them guidance in preaching to the non-Muslims (A:58.5% & S.A:32.3%). This form of communication encourages the students to conduct meetings with other parties and this is the best way in creating results which are firm, stable and true. This is very crucial especially in safeguarding the interests and welfare of the target person or group (Mohd. Farhan Abdullah 2008:17).

Second, the students were ready in terms of their emotional aspect and feelings when facing the non-Muslims such as expressing their joy when meeting the non-Muslims, accepting the conditions of the non-Muslims, having confidence in initiating conversations and meetings as well as being courageous. Preparation in terms of their emotional aspect and feelings are really needed by the students as an early preparation in facing any type of situation, difference in background, religion, language, culture, custom and lifestyle of the non-Muslims. All of these could be obtained from lecture-based information, vast reading of reference sources such as the newspaper, magazines, journals, books and such. The advantage of seeking early information is that it eases the students in understanding the lives of the non-Muslims and subsequently to positively prepare their emotions and feelings without presenting their negative characteristics and attitudes. In reality, emotion is able to shape a person's attitude as well as his personality (Mahmood Nazar 2001:314).

According to Mohd. Farhan Abdullah (2008:20), a preacher needs to have certain basics such as to have faith and to practise what is being preached, to determine and organise methods or approaches which are suitable according to time and circumstances, knowledgeable as well as wise based on their religious experiences in mastering the knowledge of '*fardhu ain'* (individual responsibilities) and '*fardhu kifayah*' (responsibilities of the whole community), to have full confidence in what to be delivered, wise in solving problems which are expected to be asked by the target person or group of people and striving to find solutions to the problems. These basics are able to help the students in preparing themselves in terms of their emotions and feelings when facing the non-Muslims in any type of situation.

The findings in Table 1 show the students' preparation in terms of their emotions and feelings namely the students were happy when they first met the non-Muslims (A:47.7% & S.A:47.7%), awkward while communicating (SD:15.4 & D:38.5%), lacking in confidence to initiate a conversation (SD: 15.4% & D:38.5%), showing positive reaction in facing different situations in terms of religion and customs (A:75% & S.A:21.5%) and are courageous in befriending the non-Muslims (A:69.2% & S.A 21.5%).

Third, the aspect of the students' positive attitude while undergoing PTPNM is really emphasized because it helps the task of preaching to run smoothly. Examples of positive attitudes practised by the students are by showing commitment and diligence. A schedule of preaching activities was prepared for the students on a daily basis and they did their part by carrying out the tasks wholeheartedly even though they might have been tired and exhausted. For example, the activity of paying a visit to their foster families and joining the families in telematches. This type of action develops a sense of closeness and this causes the relationship between the students and their target group to have no obstacle in attaining the goal of preaching.

Next, the students tried to practise their knowledge in preaching to the non-Muslims which they had gained from the lectures. For instance, the various ways and approaches being performed in relation to the suggestion on strategies of preaching to the non-Muslims, understanding and adapting oneself to the non-Muslims' background, the technique on how to make the target group to understand the teachings of Islam, psychological methods and spiritual therapy when faced with obstacles while carrying out their preaching task and so on. Practising the knowledge of preaching

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to the non-Muslims in the field will give a significant impact on the students and this will give them priceless experience in strengthening their skills in preaching to the non-Muslims in the future.

Apart from that, students would refer to the preaching handbook as well as providing answers to queries on issues of the non-Muslims. In this matter, the students were equipped with modules on preaching to the non-Muslims as well as additional references about guides on effective preaching, specific guide on '*Fiqah Muallaf', 'Fiqah'* in interacting with the non-Muslims and so forth. For example, when the issue regarding the regulation of shaking hands with non-Muslims of the same gender is asked, it is not against Islam since their physiques are not filth, instead it is their faith which is not based on the worship of Allah the Almighty.

In this regard, the students were prepared to guide the non-Muslims on the teachings of Islam in terms of their understanding, appreciation and practice of Islam. For example, in explaining that Islam is simple where all the necessities in our lives are permitted by Islam. While the ones that are forbidden by Islam are just a few since they could cause infamy to mankind. Islam is able to solve marital problems between husbands and wives. If a divorce takes place, they are then still allowed to go back to living together (Abdullah Muhammad Zin & Padzal Mokhtar 2009:98). Apart from that, the students would explain about the duty in performing the obligatory prayers as a sign of worship or devotion and gratitude of a Muslim for all of Allah's benevolence.

The students would also carry out their roles and responsibilities as preachers by making it easy to deal with the non-Muslims, for example by fulfilling requests which are not against Islamic regulations, such as entertaining the foster families in having meals, joining in the performances during their cultural night, getting involved in activities of mutual assistance and so forth (Abdullah Muhammad Zin & Padzal Mokhtar 2009:90).

The findings in Table 1 show the percentage of students who had given up hope in performing beneficial activities (SD: 27.7%, D:50.8%). This means that the students had not given up hope, instead they had given their commitment and diligence in carrying out beneficial activities. The students also practised their knowledge of preaching to the non-Muslims (A:72.3%, S:A20%), made reference to preaching handbooks as well as providing answers to queries on issues of the non-Muslims (A:53.8%, S.A:18.5%), guided the non-Muslims in the teachings of Islam (A:63.1%,S.A:23.1%) and fulfilled the non-Muslims' requests which were not against Islamic regulations (A: 27.7%, S.A:4.6%). In reality, the aspects of commendable attitudes and behaviour need to constantly be shown by the students as preachers in proving the truth about the teachings of Islam which demands its followers to do good deeds. This could attract the non-Muslims in approaching Islam and subsequently wanting to embrace the religion voluntarily (A'dawiyah Ismail 2011:160).

SUMMARY AND SUGGESTION

Thorough preparation is needed in approaching the target group, especially in terms of culture and customs. This could be seen from the interaction with the targets. Although majority of them did not feel awkward, nonetheless the number of those who agreed and strongly agreed in feeling awkward were more than 26%. The same goes for the question related to initiating a conversation, a total of 27.7% agreed that they were not confident and 36.5% were scared in starting a conversation. This matter needs to be addressed by enhancing the students' understanding about the target group's culture and customs. DDLS needs to invite representatives of the indigenous people who have embraced or converted to Islam to give exposure to the students about the basic preparations in preaching if their target group is the indigenous people, likewise if the target is other races.

The aspect of early preparation while undergoing PTPNM requires attention from both the students and DDLS so that the students are able to face their preaching tasks systematically apart from having the capability to face various obstacles and challenges with courage and perseverance in achieving the honourable goal of the propagation of Islamic beliefs (*dakwah)*, which is to call upon mankind towards the religious guidance of Allah the Almighty which is sacred and righteous and also to practise it consistently.

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BELIEFS ABOUT PERSONAL COMPETENCE AMONG PEDAGOGICAL FORMATION STUDENTS WITH REGARD TO THE TEACHING PROFESSION

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ABSTRACT
This research was conducted with the purpose of analyzing the levels of sense of personal competence regarding the teaching profession, based on gender, by students receiving pedagogical formation training at the Inonu University Faculty of Education and the faculty of graduation. Four hundred four students receiving pedagogical formation training were included in the study. The "Teacher's Sense of Personal Competence Scale" developed by Tschannen - Moran and Hoy (2001) and adapted to Turkish by Çapa, Çakıroğlu, and Sarıkaya (2005) was used as a data collection tool in the study. The average ($\bar{X}$), t-test, and one way analysis of variance (ANOVA) tests were used in the data analysis. As a result of the research, the sense of personal competence felt by pedagogical formation students in regard to the teaching profession were found to be at a sufficient level, while their perceptions of personal competence were observed to show significant variance depending on the faculty of graduation and gender.

INTRODUCTION
Qualified trained manpower is the most important resource for the future of society. Great responsibility falls on teachers in providing this (Gömleksiz, 2002, p. 150). Because of this, people and individuals have expected outstanding accomplishments from teachers with respect to their profession and have given teaching a high status and value in order to achieve these expectations (Başaran, 1994, s.77). It is important for the teaching profession, given such value, to be pursued by enthusiastic individuals who love what they do (Yılman, 2006, s. 181). For this reason, the human skills necessary for teachers to embrace their profession require a positive sense of personal competence (Bandura, 1989, p. 1176).

Concepts such as the duties, responsibilities, roles, and qualifications of teachers, who are ascribed quite a comprehensive role in education, the most common purpose of which is to turn individuals into persons beneficial to society (Küçükahmet, 2012, p. 180), are critical factors in shaping the classroom environment in a fashion fit for its purpose (Helvacı, 2010, p. 297). In the profession of teaching, which at its core is the first and oldest profession based on the cultivation of individuals (Çelikkaya, 2014, p. 6,8), these competencies refer to the qualities possessed in order to be able to deliver education and training in the most effective way; and the knowledge, understanding, skills, and attitude that must be present in order to be able to fulfill the tasks and duties required by the teaching profession (Şahin, 2009, p. 291).

With the increase today in teachers' duties and responsibilities, professional competency, a concept associated with the specialized knowledge, skills, and the power to do a job and to maintain that job, has gained importance in relation to raising the quality of education (Çelebi, 2014, p. 127). The ability of teachers to appropriately meet these qualifications depends not just on their having received a good training, but also on their belief that they can perform their tasks and duties as required (Gürol, Altunbaş, and Karaaslan, 2010, p. 1396).

The concept of competency, defined as the power of a person to hold rights, to be able to use their rights, to be able to perform a job, to be able to take on duties and responsibilities (TDK, 2015), and which includes certain cognitive and intuitive processes, is based on a social-cognitive theory that was first formed by Bandura (Bandura, 1993, p. 117). Teacher competency, on the other hand, can be described as a factor explaining individual differences in effective training (Gibson and Dembo, 1984, p. 569). In terms of the teaching profession, it means having the capability to effectively fulfill such functions as being planned, speaking properly, and being able to use various tools for the application of methods (Açıkgöz, 2000, p. 82). Also, having a positive impact on student learning and being directly proportional to student achievement indicates that not everyone is capable of teaching (Kushner, 1993, p. 1). Aside from this, factors such as student motivation,

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adoption of innovation, classroom management techniques, and the efficiency of the teaching are also concepts that comprise competency (Woolfolk and Hoy, 1990, p. 81).

The belief of personal competence is the confidence or judgments held by a teacher as to their ability to achieve critical educational missions (Wolters and Daugherty, 2007, p. 181). It is their belief that they can successfully demonstrate the behaviors needed to achieve the desired result (Bandura, 1977, p. 193). The self-confidence of teachers as to their ability to demonstrate the behaviors that will enable students to learn is one of the few personal traits providing reliable predictions about student outcomes and teacher practices (Poulou, 2007, p. 192). This faith and level of confidence by the teacher in their ability to organize learning depends on their past experiences and school culture (Protheroe, 2008, p. 42).

Personal competence is a basic concept that is believed to have an effect on behavior. It is the perception, belief, and judgment of an individual as to their ability and their capacity to cope with different situations, and to succeed in a certain activity (Senemoğlu, 2012, p. 228). The belief of self-competence, on the other hand, is the capacity of individuals to organize and successfully put forward the necessary activities to demonstrate ascertain performance in events that affect their lives. Belief in self-competence is a determinant of how an individual feels and thinks, their personal motivation, and their behaviors. A strong sense of self-competence improves many aspects of human well-being and personal success. In this sense, individuals with high confidence about their capacities, rather than treat difficult tasks as a threat to be avoided, see them as challenges providing new learning opportunities. Such an effective outlook reduces stress during activities and nurtures deep concentration and basic interest (Bandura, 1994, p. 71). Expectations directly affecting the perception of self-competence constitute an important factor that affects the teacher's choice of behavior and the efforts they make to achieve certain results. In this sense, the expectation of competence is a teacher's belief that they can successfully perform the activities required to reach a particular outcome (Bandura, 1977, p. 193).

According to Bandura (1997, p. 1), people with a high sense of personal competence possess cognitive features such as willingness, a broad horizon, straight thinking, readiness in the face of adversities, and a stable commitment to overcoming obstacles. By shaping their beliefs as to what they can do, they can predict possible outcomes beforehand. They can plan their course of action by organizing goals. Owing to risk management, they feel less under pressure. They are in control of disturbing thoughts.

Jerald (2007, p. 1) argues that a teacher with a high sense of self-competence has a high level of planning and organization. He or she is more open to new ideas to better meet student needs and is more willing to try new methods. (S)he is more patient and flexible when things go wrong. (S)he is less critical of student errors. (S)he is less willing to refer difficult students to special education.

Teacher perception of self-competence was first conceptualized in 1976. In a study performed in a school's elective reading program, a strong and significant relationship was found between the reading test scores of students and teachers' sense of self-competence (Armor, et al., 1976, p. 24). A positive correlation was determined in another study between teachers' sense of self-competence and the rate of reaching goals, teacher innovation, and increased student performance (Ashton, 1984, p. 30). It has emerged as a powerful explanatory variable in increasing student and teacher performance, sustaining educational activities, and reaching goals (Bergman et al., 1977, p. 11). It has been observed that confident teachers who deemed themselves highly competent at teaching were quite effective in new educational practices requiring skills; also, these were the teachers who were most understanding and open to innovation (Guskey, 1987, p. 10). Teachers with a high sense of personal and instructional competence were more passionate than their counterparts and had higher end-of-year goals (Allinder, 1995, p. 251; Poulou 2007, p. 191; Bulut and Oral, 2011, p. 1); that a healthy school climate incorporating an effective administrative control and academic effectiveness contributed to the teachers' development of the sense of self-competence that may have an impact on students' learning (Hoy and Woolfolk, 1993, p. 355). A significant relationship was found between a teacher's self-competence in terms of classroom management and observed classroom organization and educational and emotional support. In other words, the teachers who considered themselves more competent at reducing and managing unwanted behaviors were observed to effectively manage behaviors, use the time allotted for education in a productive way, and to provide a variety of types of support to the students in the educational and emotional sense (Ryan et al., 2015, p. 152). The willingness to utilize more interesting and challenging teaching techniques and creative programs, and classroom management practices directed at developmental, affective, and cognitive aims have also been determined to be associated with a high sense of self-competence (Ross, 1994, p. 2). Female teacher candidates were found to deem themselves more competent with respect to student participation and class management, while male teacher candidates found themselves more competent about teaching strategies (Aydemir et al., 2014, p. 164). In addition to this, prospective teachers were seen to have fears of miscommunication with the students

during class (Morgil et al., 2004, p. 70), to have a more positive attitude than teachers on duty (Arslan, 2013, p. 71), and no differences were observed between the sense of self-competence between education faculty graduates and graduates of the arts and sciences faculty receiving formation training (Elkatmış et al., 2013, p. 41).

RESEARCH AIM

The aim of this study was to determine levels of sense of self-competence on the part of pedagogical formation students with respect to the teaching profession. Furthermore, the analysis of their sense of self-competence based on gender and the faculty of graduation was aimed.

METHODS

This section includes the model of the research, the characteristics of the group included in the study, the data collection tool, and the statistical methods used in data analysis.

The Model of the Research

The correlational survey method was used in this study. Survey researches are a model of research aimed at describing a condition existing in the past or at the present as it is (Karasar, 2009, p. 77). In addition to this, determining the relationships enables the researcher to make an estimate. The aim is to better understand the phenomenon. Research examining relationships and connections is called correlational research (Büyüköztürk, Çakmak, Akgün, Karadeniz, and Demirel, 2010, p. 22).

The Working Group

This study was conducted with data collected from Inonu University pedagogical formation students. The aim was to access all the students who received pedagogical formation training in 2014. Within this scope, 404 teachers were included in the study. Characteristics of the study population are given in Table 1.

Table 1. Characteristics of The Study Population Participating in Research

		Faculty				
		Arts and Sciences	Theology	Health Sciences	Fine Arts	Total
Gender	Woman(N)	181	58	9	14	262
	Man(N)	98	34	1	9	142
Total		279	92	10	23	**404**

Two hundred sixty-two of the pedagogical formation students participating in the study were female, while 142 were male. Two hundred seventy-nine were arts and sciences graduates, 92 were theology graduates, 10 were health sciences graduates, and 23 were fine arts graduates.

The Data Collection Tool

The "Teacher's Sense of Personal Competence Scale," developed by Tschannen - Moran and Hoy (2001) and adapted to Turkish by Çapa, Çakıroğlu and Sarıkaya (2005), was used as a data collection tool. The scale, which consists of 24 items in total, consists of three subscales, including "student participation," "teaching strategy," and "classroom management." The scale reliability is 0.94 for the total self-competence score, 0.87 for student participation, 0.91 for teaching strategies, and 0.90 for classroom management (Tschannen-Moran and Woolfolk Hoy, 2001). In the study they conducted in Turkey on teaching candidates, Çapa, Çakıroğlu, and Sarıkaya (2005) found the reliability values to be 0.93 for the total self-competence score, 0.82 for student participation, 0.86 for teaching strategies, and 0.86 for classroom management. The items included in the scale were classified into categories as follows: (1) "incompetent"; (2) "slightly competent"; (3) "somewhat competent"; (4) "fairly competent"; and (5) "very competent".

Data Analysis

The average ($\bar{X}$), the t-test for independent variables with two categories, and the single factor analysis of variance (ANOVA) for independent variables with more than two categories was used in the analysis of the data obtained. Data were analyzed by SPSS. The Scheffe test was used to determine the differences between the groups. The level of significance in the analysis of data obtained was accepted as $p<0.05$.

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RESULTS

In this section, the findings obtained from the analysis of data collected from students of pedagogical formation are given in as tables and reviewed.

Table 2. Average Score of Pedagogical Formation Students Self- Competence About The Teaching Profession

		$(\bar{X})$	Sd
Subscale	Provide student participation	3,88	,43
	Teaching strategies	3,91	,44
	Class management	3,92	,48
	Beliefs Of Self-Competence About The Teaching Profession	3,90	,38

As shown in Table 2, the sense of self-competence of pedagogical formation students with respect to student participation ($\bar{X}$= 3.88), teaching strategy ($\bar{X}$= 3.91), and classroom management ($\bar{X}$= 3.92) can be said to be at a sufficient level. Beliefs of self-competence about the teaching profession ($\bar{X}$= 3.90) also seem to be at a sufficient level.

Table 3. Pedagogical Formation Students Self- Competence Beliefs About The Teaching Profession by Gender T- Test Results

		Gender	N	$\bar{X}$	df	Sd	t	p
Subscale	Provide student participation	Woman	262	3,87	402	,42	,252	,80
		Man	142	3,88		,44		
	Teaching strategies	Woman	262	3,87	402	,45	2,367	**,02**
		Man	142	3,98		,41		
	Class management	Woman	262	3,88	402	,50	2,058	**,04**
		Man	142	3,98		,44		
	Total score	Woman	262	3,88	402	,40	1,841	,57
		Man	142	3,95		,35		

$p < .05$

Upon examining Table 3, the self-competence beliefs of pedagogical formation students about teaching strategies [t _ ((402)) = 2.367, p<0.05] and classroom management and [t _ ((402)) = 2.058, p<0.05] indicated a significant difference based on gender. When considering the mean averages, it can be stated that male students perceived themselves to be significantly more competent with respect to teaching strategies ($\bar{X}$= 3.98) and classroom management ($\bar{X}$= 3.98) compared to women. However, beliefs of self-competence about student participation did not indicate a significant difference based on gender [t _ ((402)) = 0.252, p>0.05]. Additionally, the average scores obtained from the entire scale did not indicate a significant gender based difference [t _ ((402)) = 1.841, p>0.05]. When overall scores are taken into consideration, there was no significant difference between female and male formation students as to their sense of self-competence with respect to the teaching profession.

Tablo 4. Pedagogical Formation Students Self- Competence Beliefs About The Teaching Profession by Faculty of Graduation ANOVA Results

	Faculty	N	$\bar{X}$	Sd	f	p	Significant difference
Provide student participation	Arts and Sciences (A)	279	3,91	,41	3,55	**,015**	A-T
	Theology (T)	92	3,77	,45			
	Health Sciences (H)	10	3,70	,43			
	Fine Arts(F)	23	3,94	,45			
Teaching strategies	Arts and Sciences (A)	279	3,95	,44	6,77	**,015**	A-T F-T F-H
	Theology (T)	92	3,78	,44			
	Health Sciences (H)	10	3,61	,41			
	Fine Arts(F)	23	4,12	,36			
Class management	Arts and Sciences (A)	279	3,97	,48	3,96	**,008**	A-T
	Theology (T)	92	3,79	,46			
	Health Sciences (H)	10	3,73	,44			
	Fine Arts(F)	23	3,98	,47			

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Total score	Arts and Sciences (A)	279	3,94	,37	6,33	**,000**	A-T
	Theology (T)	92	3,78	,38			
	Health Sciences (H)	10	3,68	,41			
	Fine Arts(F)	23	4,01	,35			

$p < .05$

According to Table 4, a significant difference is observed between the self-competence beliefs of pedagogical formation students with respect to the teaching profession including the subscales of ensuring student participation [F _ ((3-400)) = 3.55, p<0.05], teaching strategies [F _ ((3-400)) = 6.77, p<0.05] and classroom management [F _ ((3-400)) = 3.96, p<0.05] based on their faculty of graduation. In other words, the beliefs of pedagogical formation students as to their self-competence with respect to the teaching profession vary significantly depending on the faculty of graduation. Based on the results of the Scheffe test, which was conducted to determine between which groups the varying self-competence perceptions based on faculty of graduation revealed themselves, graduates of the faculty of arts and sciences ($\bar{X}$= 3.91) viewed themselves as more competent in promoting student participation compared to graduates of the faculty of theology ($\bar{X}$= 3.77). At the scale of teaching strategies, arts and sciences graduates ($\bar{X}$= 3.95) viewed themselves as more competent compared to theology graduates ($\bar{X}$= 3.95) and fine arts graduates ($\bar{X}$= 4.12), and more competent than theology graduates ($\bar{X}$= 3.95) and health sciences graduates ($\bar{X}$= 3.61). A comparison of the total mean scores of the scale revealed, in accordance with the results obtained at the sub scale level, that the self-competence beliefs of arts and sciences graduates ($\bar{X}$= 3.94), with respect to the teaching profession, were higher than those of faculty of theology graduates ($\bar{X}$= 3.78).

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were reached, based on the findings obtained from the research.The belief of self-competence of pedagogical formation students with respect to the teaching profession, together with the scales of promoting student participation, teaching strategies, and classroom management are at a sufficient level. Male students perceive themselves to be more competent at teaching strategies and classroom management than female students do. However, in terms of self-competence beliefs with regard to student participation, female and male students are similar. When considering the overall scores, there was no difference between the self-competence beliefs of male and female students with respect to the teaching profession. Arts and sciences graduates deem themselves more competent than graduates of theology do with respect to the teaching profession in general, including aspects like promotion of student participation, teaching strategies, and classroom management. Fine arts graduates view themselves as more competent at the scale of teaching strategies, which is one of the requirements of professional competence, than did their counterparts in the faculty of theology and the faculty of health sciences.

Classroom management, teaching principles, and methods courses should be given more weight in order to increase the level of belief in self-competence of female students receiving pedagogical formation education with respect to teaching strategies and classroom management.

More applied and practice-oriented educational activities could be provided to faculty of theology graduate formation students on the undergraduate course content they received during their undergraduate education.

The on-the-job training courses, which are to be provided to teachers who take up duty after completing pedagogical training, should be established according to the deficiencies observed in these areas of competency.

Silinmiş: ¶

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BESLENME EĞİTİMİ ALAN ÜNİVERSİTE ÖĞRENCİLERİNİN BESLENME ALIŞKANLIKLARI

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ÖZET
Günümüzde gençler biyolojik ve psikososyal pek çok sağlık sorunu ile karşı karşıyadır. Ancak bunların arasında sağlıksız ve dengesiz beslenme alışkanlığı ve buna bağlı olarak gelişen hastalıklar ilk sırada yer almaktadır. Bu çalışmada beslenme eğitimi almış üniversite öğrencilerinin beslenme alışkanlıklarının saptanması ve bu doğrultuda beslenme eğitiminin değerlendirilmesi amaçlanmıştır. Bu amaçla Bartın Üniversitesi Turizm ve Otel İşletmeciliği programında öğrenim gören ve beslenme eğitimi almış 127 öğrenciye anket uygulanmıştır. Öğrencilerin BKİ ortalaması 22,07 kg/m^2'dir, öğrencilerin % 76,4'ü öğün atlamakta, en fazla atlanılan öğün ise kahvaltıdır, fast food tüketimi çok fazla olmamakla birlikte, sigara ve alkol tüketim oranları yüksektir.

Anahtar Kelimeler: Beslenme Eğitimi, Beslenme Alışkanlığı, Bartın Üniversitesi.

ABSTRACT
Nowadays, young people face many health problems including biological and psychosocial problems. However, among these problems unhealthy eating habits and malnutrition and the diseases that develop as a result of these unhealthy eating habits rank on the top. This study aimed to determine the eating habits of college students have received nutrition education and evaluation of nutrition education in this direction. For this purpose, a questionnaire given to 127 students who study at Tourism and Hotel Management Programme at Bartın University and who attended to nutrition education. Students's body-mass index average is found as 22,07 kg/m^2; 76.4 % of the students skip meal; and the meal that is skipped is mostly breakfast; while the students do not eat too much fast food, consumption of alcohol and smoking rates are high among the students.
Key Words: Nutrition Education, Nutrition Habits, Bartın University.

GİRİŞ
Beslenme, insanın büyümesi, gelişmesi, sağlıklı ve üretken olarak uzun sure yaşaması için gerekli olan besin öğelerini yeterli miktarda alıp vücutta kullanılmasıdır. Yeterli ve dengeli beslenme ise; vücudun büyümesi, dokuların yenilenmesi ve çalışması için gerekli olan tüm besin öğelerinin her birinin yeterli miktarda ve gerekli oranda alınması ve vücutta uygun biçimde kullanılmasıdır. Beslenme büyüme, yaşamın sürdürülmesi ve sağlığın korunması için zorunludur (Süren ve Soysal, 2002; Müftüoğlu, 2004; Spark, 1998).
Teknolojide ulaşılan yüksek düzeye, bilimsel çalışmalara ve uluslararası kuruluşların gösterdiği büyük çabalara rağmen, dünyanın bazı bölgelerinde yetersiz ve dengesiz beslenme sorunu, halen büyük bir ağırlıkla kendini duyurmakta ve kamuoyunu sürekli meşgul etmektedir.
Hatalı beslenme bilgi ve alışkanlıkları bireyi obeziteye götüren ve yaşam kalitesini bozan en önemli nedenlerden biridir. Toplam enerji alımının uzun süreli olarak harcanandan fazla olması sonucunda obezite gelişmektedir. Genetik yatkınlık, enerjiyi oluşturan besin öğelerinin oranı, öğün atlamak, öğün aralarında sürekli yağlı, karbonhidratlı besinlerin tüketimi, hızlı yemek,yemek hazırlama, pişirme, saklama yöntemlerinin bilmemek, alkol tüketimi, yetersiz su ve posa tüketimi gibi hatalı beslenme davranışları obezite oluşumunda etkin olmaktadır (Yurttagül, 1995; Seidell, 1998).
Gençlerin beslenme alışkanlıklarının oluşmasında birincil faktörler; kişisel yeme seçimleri, ailenin yeme biçimi, anne ve babanın yeme seçimi konusunda model olması, medya ve toplum normlarıdır. Ancak beslenme alışkanlıklarına etki eden kişisel faktörler; davranışlar, inançlar, bilgiler, özsaygı, öğün ve atıştırmalık örüntüsü, ağırlık kontrolünde etkilidir. Yeme alışkanlıklarına etki eden sosyal çevresel faktörler ise aile, arkadaşlar ve diğer yakın çevredir (Story vd., 2002).
Beslenme toplumun her kesimi için önemi olmakla birlikte, üniversite gençliği açısından farklı bir öneme de sahiptir. Üniversitelerde eğitim gören öğrencilerin bir çoğu hayatlarında ilk defa aile ortamından uzakta yaşamak durumunda kalmaktadır. Üniversite öncesinde öğrencilerin beslenme alışkanlıkları aile yaşamının gerektirdiği şekilde devam ederken, üniversite ile birlikte farklılaşan yaşam şekli öğrencilerin beslenme davranışlarını da değiştirebilmektedir. Değişen beslenme davranışları üniversite öğrencilerinin sahip oldukları beslenme bilgilerinin ve alışkanlıklarının saptanması ve duruma uygun önerilerin geliştirilmesi oldukça önemlidir (Erten, 2006).
Bu çalışmada, Bartın üniversitesi Meslek Yüksekokulu (BMYO) Turizm ve Otel işletmeciliği programında öğrenim gören ve beslenme eğitimi almış öğrencilerin beslenme alışkanlıklarının saptanması ve bu doğrultuda beslenme eğitiminin değerlendirilmesi amaçlanmıştır.

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ARAŞTIRMANIN YÖNTEMİ

Araştırmaya 2013-2014 eğitim öğretim yılında BMYO Turizm ve Otel İşletmeciliği Programında öğrenim gören ve beslenme eğitimi alan öğrenciler katılmıştır. Veriler anket tekniği kullanılarak toplanmıştır. Literatür ve uzman görüşleri alınarak hazırlanan anket soruları pilot çalışmayla test edilmiş, sorular tekrar gözden geçirilip gerekli düzeltmeler yapılmıştır.

Araştırmanın evrenini BMYO Turizm ve Otel İşletmeciliği Programında öğrenim gören 237 öğrenci oluşturmaktadır. Araştırmada tam sayım tekniği kullanılarak 127 öğrenci ile görüşülmüştür. Araştırmanın veri girişleri ve sonuçları istatistiksel paket programlarından yararlanılarak gerçekleştirilmiştir. Veriler yüzde ve frekans yöntemiyle analiz edilmiştir. Ayrıca öğrencilerin vücut ağırlığı/boy^2 formülü ile beden kitle indeksleri (BKİ) hesaplanmış, kız ve erkek öğrencilerin BKİ arasında anlamlı bir fark olup olmadığı intependent-samples t testi ile analiz edilmiştir.

BULGULAR

Araştırmaya 78 erkek, 49 kız öğrenci olmak üzere toplam 127 öğrenci katılmıştır. Araştırmaya katılan öğrencilerin % 49.6'sı 20 yaş ve altında (yaş ortalaması 20.56±1.69 yıl), % 73.2'sinin babası % 77.2'sinin annesi lise altı eğitim düzeyine sahip, % 37'si yurtta ve % 31.5'i ailesinden ayrı bir evde kalmaktadır (Tablo 1).

Tablo 1: Katılımcıların demografik bilgilerine göre dağılımı

Cinsiyet	***Frekans (f)***	***Yüzde (%)***
Bay	78	61,5
Bayan	49	38,5
Yaş	***Frekans (f)***	***Yüzde (%)***
20 yaş ve altı	63	49,6
21-23 yaş arası	56	44,1
24 yaş ve üzeri	8	6,3
Annenin Eğitim Durumu	***Frekans (f)***	***Yüzde (%)***
Lise altı	98	77,2
Lise	23	18,1
Üniversite	6	4,7
Babanın Eğitim Durumu	***Frekans (f)***	***Yüzde (%)***
Lise altı	93	73,2
Lise	21	16,5
Üniversite	13	10,2
Öğrencinin Kaldığı Yer	***Frekans (f)***	***Yüzde (%)***
Aile ile birlikte	30	23,6
Aileden ayrı evde	40	31,5
Yurtta	29	22,8
Pansiyonda	18	14,2
Diğer	10	7,9
TOPLAM	**127**	**100**

Araştırmaya katılan öğrencilerin % 49,9'u günde 2 öğün yemek yemektedir (öğün ortalaması 2.68±0.71), % 79.4'ü gün içerisinde öğün atlarken en fazla atlanılan öğün % 43.3 ile kahvaltıdır. Öğün atlayan öğrencilerin % 43.3'ü canı istemediği için, % 23.7'si alışkanlığı olmadığı için % 21.6'sı vakti olmadığı için % 7.2'si maddi imkansızlıklardan ötürü öğün atladıklarını belirtmişlerdir. Araştırmaya katılan öğrencilerin kahvaltıda klasik kahvaltıyı tercih ettikleri (% 67.7) bunu da poğaça, simit ve tostun (% 25.2) takip ettiği tespit edilmiştir. Öğrencilerin % 35.4'ü akşam yemeğini 18.30-19.30 saatleri arasında tüketirken, % 64.6'sı gece yemek yeme alışkanlığına sahiptir. Araştırmaya katılan öğrencilerin %589.3'ü haftada 3 ve daha az sayıda fast food tüketirken (fast food tüketim ortalaması 3.06±3.19), % 27.6'sı süt ve süt ürünleri, % 25.2'si beyaz eti, % 18.9'u kırmızı eti, % 33.1'i sebzeyi, % 38.6'sı meyveyi, % 17.6'sı tahıl grubunu besin türü olarak tercih etmektedir. Araştırmaya katılan öğrencilerin % 34.7'si günde 4 ve daha az bardak su tüketirken % 41.8'i 5 ve 8 bardak arası, % 23.7'si 10 ve daha fazla bardak su tüketmektedir (su tüketim ortalaması 6.67±4.56) (Tablo 2).

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Tablo 2: Katılımcıların beslenme alışkanlıkları

Günde tüketilen öğün sayısı	*Frekans (f)*	*Yüzde (%)*
2 öğün	57	44,9
3 öğün	56	44,1
4 öğün	12	9,4
5 öğün	2	1,6
Öğün atlama nedeni	***Frekans (f)***	***Yüzde (%)***
Vakit olmadığı için	21	16,5
Alışkanlığım olduğu için	25	19,7
Canım istemediği için	44	34,6
Maddi imkansızlık nedeni ile	7	5,5
Diğer	5	3,9
Kahvaltı tercihi	***Frekans (f)***	***Yüzde (%)***
Klasik kahvaltı	86	67,7
Poğaça, simit, tost	32	25,2
Çorba	5	3,9
Mısır gevreği, müsli	1	0,8
Diğer	2	1,6
Akşam yemeği saati	***Frekans (f)***	***Yüzde (%)***
18.30'dan önce	19	15
18.30-19.30 arası	45	35,4
19.30-20.30 arası	38	29,9
20.30'dan sonra	25	19,7
Gece yemek yeme alışkanlığı	***Frekans (f)***	***Yüzde (%)***
Sık sık	21	16,5
Bazen	82	64,6
Hiç	24	18,9
Haftalık Fast food tüketimi	***Frekans (f)***	***Yüzde (%)***
Hiç tüketmiyorum	14	11
1-3 defa	74	58,3
4-6 defa	28	22
6 ve daha fazla	15	11,8
Günlük su tüketimi	***Frekans (f)***	***Yüzde (%)***
4 bardak ve daha az	44	34,7
5-8 bardak	50	39,4
9-12 bardak	18	14,2
13 bardak ve daha fazla	15	11,7
TOPLAM	**127**	**100**

Araştırmaya katılan öğrencilerin % 29.9'u arada bir % 7.1'i düzenli olarak vitamin kullanmaktadır. Araştırmaya katılan öğrencilerin % 51.2'si düzenli olarak % 9.4'ü arada bir sigara kullanmaktadır, % 39.4'ü hiç alkol tüketmemektedir % 60,6'sı ise 15 günde bir, ayda bir ya da haftada bir de olsa alkol tüketmektedir. Öğrencilerin spor yapma alışkanlıkları değerlendirildiğinde % 18.1'i düzenli olarak % 64.6'sı ara sıra spor yaptıklarını, % 17.3'ü ise hiç spor yapmadıklarını belirtmişlerdir. Spor yapmama nedeni olarak ise üşenmek ve vakit yetersizliği gösterilmiştir (Tablo 3).

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Tablo 3: Katılımcıların vitamin, sigara, alkol tüketimi ve spor alışkanlıkları

Vitamin kullanımı	*Frekans (f)*	*Yüzde (%)*
Hiç	9	7,1
Arada bir	38	29,9
Düzenli olarak	80	63
Sigara kullanımı	***Frekans (f)***	***Yüzde (%)***
Hiç	50	39,4
Arada bir	12	9,4
Düzenli olarak	65	51,2
Alkol tüketimi	***Frekans (f)***	***Yüzde (%)***
Hiç	50	39,4
Çok nadir	51	40,2
Ayda bir	10	7,9
Haftada bir	9	7,1
Sık sık	7	5,5
Spor yapma sıklığı	***Frekans (f)***	***Yüzde (%)***
Hiç	***22***	***17,3***
Arada bir	***82***	***64,6***
Düzenli olarak	***23***	***18,1***
Spor yapmama nedeni	***Frekans (f)***	***Yüzde (%)***
Vakit olmadığı için	23	18,1
İhtiyaç olmadığını düşünüyorum	9	7,1
Sağlıkla ilgili engeller nedeni ile	6	4,7
İmkanlarım yetersiz olduğu için	10	7,9
Üşendiğim için	51	40,2
Cevapsız	28	22
TOPLAM	**127**	**100**

Araştırmaya katılan öğrencilerin BKİ ortalamaları 22.07±2.96, kız öğrencilerin BKİ ortalamaları 21,39±2.92 ve erkek öğrencilerin BKİ ortalamaları 22.49±2.92 olarak bulunmuştur. Kız ve erkek öğrencilerin BKİ ortalamaları arasındaki fark istatistiki açıdan anlamlı bulunmuştur (t=2,052, df=125, p=0,042). Araştırmaya katılan öğrencilerin % 72.4'ü kilosunu normal, % 12.6'sı şişman, % 15'i ise zayıf olarak değerlendirdiklerini, % 75.6'sı hiç diyet yapmadığını % 24.4'ü ise diyet yaptıklarını belirtmişlerdir. Dünya Sağlık Örgütünün (WHO) yetişkinlerdeki BKİ sınıflamasına göre yapılan değerlendirmede araştırmaya katılan öğrencilerin % 9.4'ü düşük kilolu (BKİ<18.5), % 77.2'si normal kilolu (18.5<BKİ<24.9), % 11.8'i fazla kilolu (25.0<BKİ<29.9) ve % 1.6'sı obez (BKİ>30.0) olarak bulunmuştur.

SONUÇ

Bartın üniversitesi Meslek Yüksekokulu (BMYO) Turizm ve Otel işletmeciliği programında öğrenim gören ve beslenme eğitimi almış öğrencilerin beslenme alışkanlıklarının değerlendirildiği bu çalışmada; öğrencilerin çok yüksek oranda öğün atladığı (% 79.4), en fazla atlanan öğünün kahvaltı (% 43.3) olduğu, % 43.3'ünün canı istemediği için öğün atladığı, çoğunun (%64.6) gece yemek yeme alışkanlığına sahip olduğu, çoğunun (% 69.3) haftalık fast food tüketiminin 3'ü geçmediği bulunmuştur. Yeterli ve dengeli beslenmede temel ilke süt ve süt ürünleri, beyaz et, kırmızı et, sebze ve meyve ile tahıl grubundaki besin türlerine beslenmede yer vermektir. Araştırmaya katılan öğrencilerin bu besin gruplarını tüketmeye dikkat ettikleri ancak yeterli olarak tüketmedikleri belirlenmiştir. Beslenme de önemli olan bir konu da günlük su tüketimidir. Öğrencilerin % 41.8'inin günlük su tüketimi 5 ve 8 bardak arasındadır ve önemli bir kısmı (% 60.6) sigara ve alkol tüketim alışkanlığına sahiptir. Araştırma grubu BKİ'lerine göre sınıflandırıldığında % 77.2'si normal kiloludur ki bu da öğrencilerin kendi kilolarını algılamaları ile örtüşmektedir.

Beslenme bilgisinin yetersizliği mevcut besin ve ekonomik kaynakları yeterli olsa bile, bunların hatalı kullanımına yol açmaktadır. Örgün ve yaygın eğitim programlarında temel beslenme, besin örüntüleri, gıda

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güvenliği, sağlık, vb. bilgilerinin güncellenmesi, programların yaygınlaştırılması, yürütülen eğitim uygulamalarının izlenmesi, değerlendirilmesi ve geliştirilmesi, yaşam döngüsü boyunca büyük öneme sahip olan, bireylerin sağlıklı beslenme konusunda eğitimi ve bilinçlendirilmesi açısından faydalı olacaktır.

Öğrencilerin doğru beslenme alışkanlıkları edinmeleri yaşamlarının ileriki döneminde sağlıklarını korumaları açısından önemli olup, bunun için de beslenme bilgi ve alışkanlıklarındaki yetersizliklerin etkin ve sürekli verilecek beslenme eğitimi ile arttırılması gerekmektedir. Öğrencilerin müfredat kapsamında aldıkları beslenme eğitiminin içeriği ve ağırlık verilmesi gereken konular açısından elde edilen bulgular önemlidir. Özellikle sigara ve alkol tüketim oranının yüksek olması, öğrencilere sigara ve alkolün zararlarının daha etkili bir şekilde anlatılmasını zorunlu kılmaktadır. Bu kapsamda düzenli aralıklarla hem yeterli ve dengeli beslenme ile ilgili hem de sigara ve alkolün zararlarıyla ilgili konferans, panel, söyleşi gibi etkinliklerle beslenme eğitiminin desteklenmesi faydalı olacaktır.

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BİLGİSAYAR VE İNTERNET TEKNOLOJİLERİNİN ÖNLİSANS ÖĞRENCİLERİNİN OKUMA ALIŞKANLIKLARINA ETKİSİ

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Bu araştırmanın amacı bilgisayar teknolojilerinin önlisans öğrencilerinin okuma alışkanlıklarını nasıl etkilediğini incelemektir. Bu araştırmada, nitel araştırma yöntemi kullanılmıştır. Tam yapılandırılmış görüşme formu ile 2014-2015 akademik yılı güz döneminde Kocaeli Üniversitesi Kocaeli Meslek Yüksekokulunun 15 farklı programında öğrenim gören her bir programdan bir öğrenci olmak üzere toplam 15 öğrenci ile görüşmeler yapılmıştır. Görüşmeler sonucu elde edilen veriler, betimsel analiz ve içerik analizi teknikleri kullanılarak analiz edilmiştir. Araştırma sonucunda önlisans öğrencilerinin İnternette en çok okudukları web sayfalarının basın haberleri, medya platformları ve elektronik maillerle ilgili olduğu söylenebilir. Ayrıca, İnternet kullanmaya başladıktan sonra, basılı materyalleri okumaktan tamamen vaz geçmediklerini ifade etmişlerdir. Bununla birlikte, yeterli sayıda kitap okumadıklarını, bilgisayar ortamındaki okumalarının verimli olarak görmediklerini ve İnternet ortamındaki bilgilerin güvenilirlikleri konusunda kaygılarının olduğunu belirtmişlerdir.

Keywords: Bilgisayar, internet, önlisans, okuma alışkanlığı

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BINARY LOGISTIC REGRESSION AS A TOOL FOR ANALYSING STUDENT'S PREFERENCES CHOOSING ONLINE OR TRADITIONAL COURSE FOR A REPEATED EXAM

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ABSTRACT
In this study students' preferences are analyzed when they could freely choose between the traditional form of learning in a classroom and the online form of learning. The focus of the study was to find out whether there are significantly different characteristics of those students who prefer to choose the online course compared to those preferring the traditional frontal technic teaching in a classroom. We used statistical methods to establish those features of the students which might influence their choices between the different versions of teaching and learning. We tried to establish those characteristics (variables) which work as „layer-maker" variables.
The findings of the study served some expected and some rather surprising results. As we expected their ages, ICT skills, distance from the campus, etc., influence their choice. We regard as a surprise that their attitude to learning (based on their self-evaluations) severely affect their choice too. The „lazier" they regard themselves the larger the chance to choose the online video lessons instead of the classroom work.

INTRODUCTION
Student attrition has been a continual topic of concern in distance education research. There have been few research explicitly studying the preferences for (asynchronous) online courses versus traditional classroom courses.
Drop rates for distance classes have been consistently higher than those of traditional classes (Cookson 1990; Parker 1999; Phipps and Merisotis 1999; Ridley and Sammour 1996). In fact, many educators have implied that the high drop rates—and the resulting lower success rates—of such courses should disqualify online education as a high-quality option to traditional education (Perspective 2001). However large studies have been conducted to compare the effectiveness of the different forms of course delivery and to establish key factors to build up successful online courses with relatively low drop rates (The NMC Horizon Report: 2012; The Efficacy (and Inevitability) of Online Learning in Higher Education. 2010; Evaluation of Evidence-Based Practices in Online Learning: 2009).
The reasons of students' attrition have been intensively investigated.
Four categories of factors have emerged to explain and predict attrition in distance education (Garland 1993; Gibson 1998):
Student situation: events that arise from life circumstances such as changes in family and employer support, employment or financial status, educational status, health, and academic self-concept.
Student disposition: personal characteristics including learning style, motivation, and perception-of-obligation (i.e., feelings of being obligated to a specific instructor or classmates to remain enrolled in the class) as well as other demographic variables such as academic preparation, GPA, ethnicity, gender, Web and e-mail competency, family size, number of dependents, and socio-economic status.
Institutional system: factors relating to the quality of the course such as the instructor's planning, preparation and delivery, and the quality of student support provided by the instructor, other faculty, staff, administrators, and the institution.
Course content: the difficulty, or perceived difficulty, of the subject matter.

Diaz (Diaz 2000, 2002) noted that given the differences in populations, online students may drop for different reasons than traditional students and that those reasons may have little or no relationship to students' academic abilities.

Although there have been few research explicitly studying the preferences for online courses versus traditional classroom courses, there have been several investigations of students' preferences for important components of these formats, namely face-to-face interactions and asynchronous discussions. Support for the idea that students would prefer, and learn more from, face-to-face communications comes from a variety of theoretical perspectives including social presence (Short, Williams, & Christie, 1976), media naturalness (Kock, 2005; Kock, Verville, & Garza, 2007), and especially, media richness (Daft & Lengel, 1986). Media richness theory suggests several advantages of face-to-face communications including body language, auditory cues, other non-

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verbal cues, and immediacy of feedback.

There has been a lack of research studying the factors – known or unknown to the students – which affect their preferences in choosing the different course formats. In this study statistical methods have been applied to establish those features of the students which might influence their choices between the different versions of teaching and learning.

THE STUDY

In this study students' preferences were investigated at the College of Dunaújváros in Hungary among those 128 students who enrolled to the course of Mathematics 2 in the academic year 2013/14. All these students have failed to pass the exam of this subject previously at least once and they were obliged to take the course once again. Both full-time and correspondence students were allowed to freely choose between the traditional or the online form of the same course.

The classroom course was taught according to the time schedule of the correspondence education, 20 contact hours a semester. The online course was available through the institutional Moodle LMS system. It was built up as a stream of short video lessons with quizzes and self-tests and it was supported by optional synchronous consultation with the instructor. Both courses ended up with oral examination, however in both courses students could earn 40 % of total scores by midterm tests.

73 students enrolled to the traditional classroom course and 55 students chose the online form. In the third week of the semester they were asked to take part in a survey related to this study. 80 students answered to the 36 questions, 44 traditional and 36 online students. The questions were organized into 3 main groups. 1. *Personal data, place of residence.* 2. *ICT related questions*. 3. *Motivation, learning habits, attitude related questions.*

We used statistical methods to evaluate the answers and to establish those features of the students which might have influenced their choices. Commonly used t-tests, Mann-Whitney tests, Fisher exact tests were performed to compare the corresponding means or proportions in the two populations (traditional, online) to check the significance of the difference between the two population parameters. Chi square test was used to check independency between variables. The applied assumptions of the tests (normality, randomness) were also thoroughly investigated. We tried to establish those characteristics (variables) which work as „layer-maker" variables, which influenced (consciously or not) their choices.

To try to measure the chance of choosing a specific version of learning in the different layers of students we applied binary logistic regression.

FINDINGS

Some of the findings are below.

Gender

The first we investigated was the genders of students in the two courses. Figure 1 shows that the proportion of women preferring online learning is 4/36=0.111 while this proportion among traditional group is 13/44=0.295.

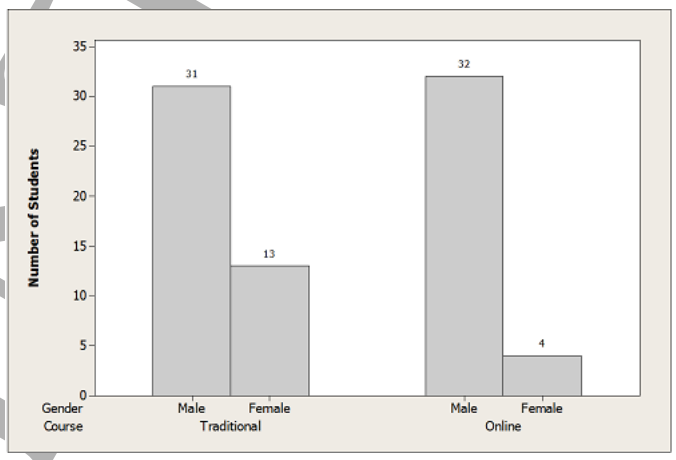


Figure 1: Distribution of genders in the traditional and in the online courses

To conduct a hypothesis test we performed the Fischer exact test when as a null hypothesis we assumed that the proportions of female students are equal in the traditional and in the online courses. The p-value, the observed

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significance level, proved to be 0.057 just above the usually accepted 5% level. Considering the relatively small sample proportions we think that additional research is needed to claim that significant differences could be established between the gender proportions in the two populations of the courses.

Ages

In Figure 2 the frequency histogram, in Figure 3 the cumulative empirical relative frequency diagram of the ages are depicted in the two course formats. The graphs suggest some differences in the distributions, and the fact that the p-value of the performed Mann Whitney test is below 5% is also an evidence that there is significant difference between the two population's medians. In our study the mean of the traditional and the online course students were 27.6 and 24.78 years respectively.

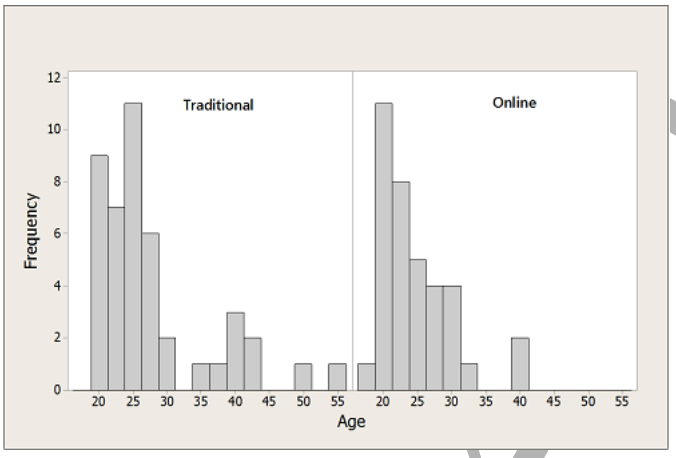


Figure 2: Histograms of the ages in the traditional and in the online courses

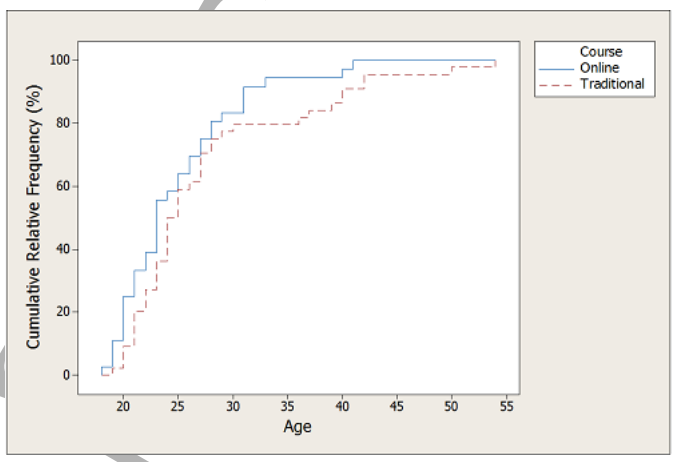


Figure 3: Cumulative empirical relative frequency diagram of the ages in the traditional and in the online courses

ICT

The familiarity with ICT was also investigated. The students scored their own preferences on a 5 grade scale to use communication technology in their studies and in their private life, mainly the social media on a daily basis. Figure 4 shows the histograms of the preference scores for daily use of ICT in the two groups.

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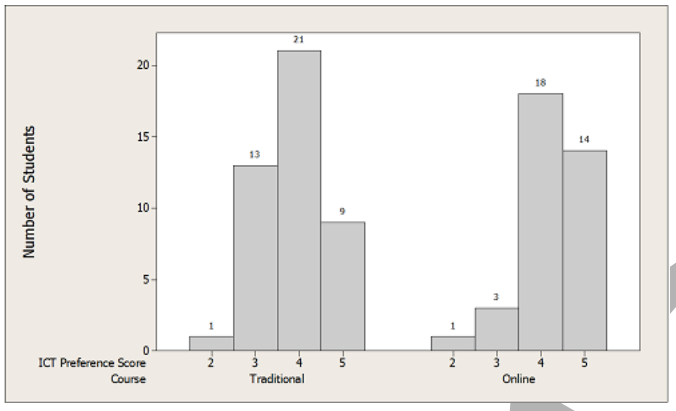


Figure 4: Histogram of the preference scores for ICT in the traditional and in the online courses

The observed significance level of the Mann Whitney test is 0.029, which serves convincing evidence that those students, who use ICT more frequently are tendentiously willing to choose online course rather than the traditional classroom work.

Distance

The comparison of the average distances from the campus site in the two groups served a surprise. We compared the differences measured in km and in minutes to reach the campus and both showed significant differences. Those who took the online courses are located closer to the campus than those taking the traditional classroom training. In Figure 5 the cumulative empirical relative frequency diagram of the times are drawn in the traditional and in the online courses.

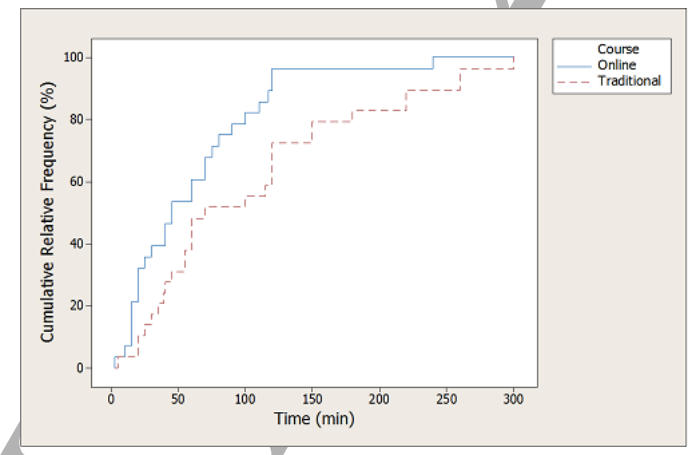


Figure 5: Cumulative empirical relative frequency diagram of the times to reach the campus in the traditional and in the online courses

The average times to reach the campus for traditional and online students were 70 and 45 minutes respectively. In the Mann Whitney test when the times to reach the campus were compared, the observed significance level was 0.025, which indicates that really the online students live closer to the university, which is rather unexpected.

Student status

To figure out some explanation to this unexpected tendency, the proportion of the full-time and the correspondence students were compared. In Figure 6 the distributions are depicted.

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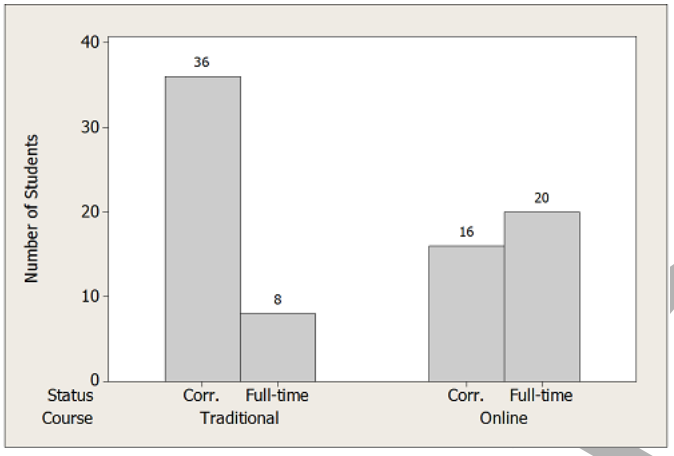


Figure 6: Distribution of full-time and correspondence students in the traditional and in the online courses

The figure is rather self-explanatory. Full time students dominantly prefer the online version of the course. To measure the strength of this tendency binary logistic regression has been conducted. As a result the "odds ratio" was 5.62. It means that the probability of choosing the online course is 5.62 times greater in case of full-time students than in case of correspondence students. It raises the question: what are those characteristics of the full-time and correspondence students which might cause this dominant differences.

Motivation, learning habits, attitude

In the Mann Whitney comparison how much burden it meant to take part in the contact hours the observed significance level was 0.1, which raises doubts to claim that there is significant difference between the attitude of traditional and online students in that question.

On the other hand the p-value in the comparison of the full-time and the correspondence students was 0.004, which served a strong evidence to claim that full-time students feel the contact hours more burdensome than the correspondence students. In Figure 7 the cumulative empirical relative frequency diagrams of the scores given by the full-time and the correspondence students convincingly support that conclusion.



Figure 7: Cumulative empirical relative frequency diagrams of the scores for the "contact hours are burden" question given by the full-time and correspondence students

In the answers to the question "Why did you fail at this exam before?" the majority of the full-time students blamed themselves while the correspondence students think that outer circumstances influenced their poor performances. In Figure 8 the bar charts well represent the results of their self-evaluations. To measure the strength of this tendency binary logistic regression has been conducted. As a result the "odds ratio" was 5.4. It means that the probability of finding the reason of failure in him/herself attitude to learning is 5.4 times greater in case of full-time students than in case of correspondence students.

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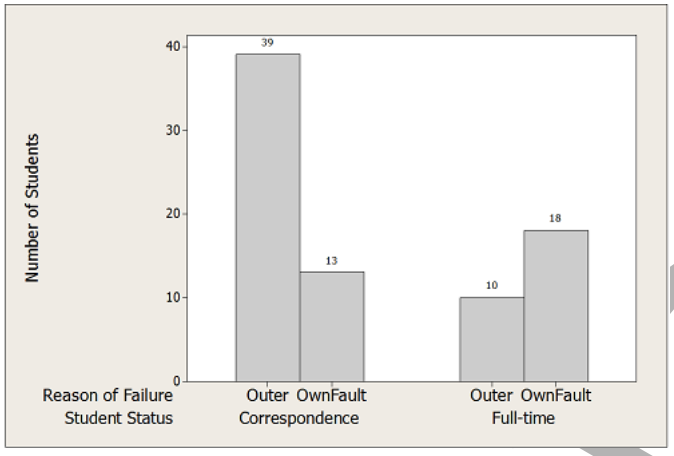


Figure 8: Distribution of the reason of failure within the full-time and the correspondence students

Table 1 shows the distribution of the self-evaluations of the full-time and the correspondence students to the question "How would you characterize yourself?

Student status	Attitude			Total
	rather lazy	sometimes lazy	diligent	
Correspondence	22	13	17	52
Full-time	23	2	3	28
Total	45	15	20	80

Table 1: Two-way contingency table of the number of students according to the "Attitude" and the "Student status" variables

Performing a chi-square test for the independence of the variables "Attitude" and "Student status" it can be shown that convincing evidences prove that these two variables are not independent. The p=0.002 observed significance level is a strong indication that full-time students consider themselves much lazier than the correspondence students.

CONCLUSIONS

In this study students' preferences were analyzed when they could freely choose between the traditional form of learning in a classroom and the online form of learning. We found some characteristics, which seem to influence students' preferences and serve as "layer-maker" variables. Their ages and their familiarity with ICT are the two most significant layer-maker variables, they dominantly influence students' choices.

Their gender did not prove to be significant. The distances between their residence and the campus are significantly different for the traditional and the online students but surprisingly the online students live closer to the campus. The explanation to this unexpected result is that the online course is preferred mainly by the full-time students. Analyzing the difference in the attitude to learning of the full-time and the correspondence students it can be shown that the full time students feel the contact hours as a burden, they regard themselves rather lazy and they are aware that the reasons of their failure at the exam are mainly attributable to their own fault.

However it should be emphasized that this study is about those students who are obliged to repeatedly take the course after an unsuccessful exam, so it needs further investigations to generalize these findings for different circumstances.

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THE ANALYSIS OF THE POSTS IN AN ON-LINE COMMUNITY OF PRACTICE BY MEANS OF DISCOURSE ANALYSIS

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ABSTRACT
This study analyzed the messages in an on-line discussion forum in which Information Technologies teachers and academicians participate based on the concept of community of practice. This forum is a platform where members discuss the developments in their subject area, share their resources and materials, and conduct joint studies. The participation patterns of the members and types of posts in the forum by doing discourse analysis were exposed in the study. The study findings revealed that the categories in which members shared posts were personal problems, sharing files and resources, help and support, recent news and developments, common issues and discussion. The results also showed that the experienced members contributed to the subject titles most often, and the members' sharing lasted from one day to 91 months. The authors argued that the online community of practice analyzed in the study had a dynamic process of sharing and along with a repertory of resources. Moreover, new participants were able to find solutions for their professional problems. Finally, the members felt responsible to each other.

Keywords: On-line community of practice, sharing knowledge, discourse analysis

INTRODUCTION

Teachers participate in groups that are related to their professions, share their knowledge and resources, and cooperate each other in varying issues. Communities of practice provide opportunities to teachers for lifelong learning and contribute to their professional development by creating an environment of learning and sharing, and also provide advantages indirectly for their students (Brouwer, Brekelmans, Nieuwenhuis & Simons, 2012; Baran & Cagiltay, 2006; Chalmers & Kehown, 2006; Schlager & Fusco, 2003). A community of practice is different from other groups due to three main characteristics. These are the "domain" which keeps individuals together, the "community" which provides the interaction and sharing between the members and the "practice" which means the experience, equipment and resources created through this interaction and active participation (Wenger, 2006). The other characteristics of the communities of practice are:

Reification: It is described as concretion, namely, transforming experiences into tangible objects and concepts. Some concepts based on experiences, tools, symbols, stories and terms were generated in communities of practice (Wenger, 2006). Herring (2004) said that virtual communities of practices have some certain observable characteristics. Some of these characteristics are active participation, shared target, culture, norms and values, mutual cooperation and support, criticism, conflict and subsequent resolution, group awareness, supervision, hierarchy and the distribution of roles. Participation, which is described as the social initiatives by means of membership and active participation, is a concept that includes all kinds of personal and official relationships in the community, such as harmony and conflict, and cooperation and competition (Wenger, 2006). Individuals' active participation in the group by knowledge-sharing provides the development and maintenance of the community. It is necessary to analyze the elements of participation and reification together in order to understand how a community of practice operates (Henri & Pudelko, 2003). In addition to these two elements, Wenger (2006) explained the other characteristics of communities of practice as:

Mutual engagement: includes the interaction of the members about the practices, solving problems cooperatively, discussing subjects and making creations. A strong cooperation and an intense sharing of knowledge are the indicators of mutual engagement (Murillo, 2008). **Shared repertoire**: a number of resources created by the cooperation and sharing among the members in the community. The repertoire created by the community includes concepts, stories, and symbols, created materials, files, practice methods and common works. **Joint enterprise**: it is the shared target and the initiatives for this target that keep the members together, provide harmony and the freedom to share things. The joint enterprises of the individuals shape the community. Guldberg and Pilkington (2006) did a content analysis of the asynchronous discussions and interactions in a community of practice and put forwards certain evidences about the mutual engagement, joint enterprise and shared repertoire dimensions of that group. Sing and Khine (2006) said that teachers participated in the group

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they studied actively and made frequent interactions; on the other hand, they stressed that there was a need for more reflective and deeper interactions in order for the on-line environment to become an information community. Baran and Cagiltay (2010) examined the personal, interpersonal and environmental factors of the development of on-line community of practice which help teachers enhance professional development. Being informed about the subject they share, having an interest for that subject, the desire for lifelong learning, recognition, and reputation are the motivating factors that encourage teachers to actively participate in communities of practice and to share knowledge. Alakurt and Keser (2014) examined the knowledge sharing practices and the types of knowledge shared by teachers from a variety of study fields and found that the main types of sharing were sharing knowledge, opinion/conversation, wish and appreciation/thankfulness. In this study, the authors analyzed the records of an on-line environment where information technologies teachers share knowledge by using discourse analysis method. The authors also discussed the characteristics of the community of practice based on the types and features of the posts shared by the members.

STUDY DESIGN

This study analyzed the types of posts shared by Information Technologies teachers and academicians in an on-line discussion forum by using the discourse analysis method. The authors considered the messages sent to the titles in the forum as well as the sharing periods of the subjects' participation patterns of the members when collecting the study data regarding the characteristics of the community. In this respect, the research questions are:

- What are the participation patterns of the community members?
- What are the types of posts shared by the community members?

METHODOLOGY

On-line Discussion Environment

The on-line discussion forum analyzed in this study (http://www.bilgisayarbilisim.net/) was established with the purpose of bringing information technologies teachers together to share knowledge, initiate new projects, and discuss the latest technological developments (site administrator). The posts shared on the forum were classified into sub-forums according to their topics. Of these sub-forums, the authors selected and analyzed "*School counselor in information technologies,*" including up-to-date developments, discussions and comments which concern counselors and information technologies teachers. Of 7,768 threads and 115,744 messages in the sub-forum, the authors analyzed 12 topics and 566 messages.

Data Analysis

This study analyzed the messages posted to the on-line discussion forum by using discourse analysis method. Discourse analysis is a technique that requires analyzing the chronologically ordered written or verbal messages and revealing the underlying meanings (Creswell, 2007). Discourse is a suitable technique for revealing the inter-conceptual relations and relationship patterns in on-line practice groups (Hafeez & Alghatas, 2007; Sing & Khine, 2006). The authors read all of the messages (566 in total) under the titles in the forum and identified their underlying meanings. To identify the underlying meanings of the messages (discourse types), a researcher in computer education and instructional technologies not included in the study and experienced in qualitative studies, encoded one of the titles (Topic#3) in the forum. In order to ensure the reliability of the measurements, the authors calculated the percentage of agreement (Stemler, 2001) and found it to be 85%.

FINDINGS

Participation Patterns of Members

The forum classified the members according to the numbers of messages they posted. The types of members were *new member*, *site traveler*, *active member*, *elite member*, *experienced member*, *super member*, and *hyperactive member*. Member types and numbers of messages they posted were determined by forum administrators. Numbers and percentages of the posts that members sent to the 12 topics analyzed in this study were calculated by the authors and are shown in Table 1.

Table1: Types of membership and contributed messages

Type of membership	Total contributed messages	Contribution to analyzed topics	
		f	%
New member	0-24	43	8
Site traveler	25-99	69	12
Active member	100-249	90	16
Elite member	250-499	91	16
Experienced member	500-999	101	18
Super member	1000-1999	90	16
Hyperactive member	2000+	76	13

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Admin	-	6	1

As Table 1 shows, the members were given member type names according to the total number of messages they had sent to the forum. Members graduated to upper levels of member types as their message number increased. An analysis of the total number of messages sent by each member to 12 titles in the forum showed that *experienced member*s contributed to the forum the most while the "*admin*" (administrator) contributed the least. The numbers of messages sent by *active*, *elite*, and *super member*s were comparable. *New member*s, *site traveler*s, and *hyperactive member*s made less contribution to the forum than the other members. In the message segment of the forum web site, the content of the message, nick name of the member, type of membership, registration date, total number of sent messages, and the location of the member (optionally) are viewable.

Types of Posts Shared by the Community Members

The topics started on the forum were presented under a relevant title. One of the rules in the forum required that the titles provide information about the content of the message and the titles which misled the readers would be deleted by the forum administrators. The membership type of the member who started the title, number of the responses written on the subject and the duration from the date of the first message to that of the last one was all calculated and are presented in Table 2.

Table 2: Threads and characteristics

Number and type of thread	Starter of thread	Number of reply	Discussion period
(Topic#1) Search for solution to a personal problem	Active member	45	41 months
(Topic#2) Starting discussion for a shared problem	Experienced member	29	3 months
(Topic#3) Search for solution to a personal problem	Elite member	54	8 days
(Topic#4) Sharing documents	Active member	65	91 months
(Topic#5) Searching for help and asking about the way something was done	Experienced member	38	28 months
(Topic#6) Sharing recent news and developments	Active member	51	1 day
(Topic#7) Sharing knowledge and resources	Super member	30	79 months
(Topic#8) Search for solution to a personal problem	New member	53	6 months
(Topic#9) Sharing a common issue and arranging a meeting	New member	69	19 days
(Topic#10) Information about an opportunity	Site traveler	45	57 months
(Topic#11) Searching for help and asking about the way something was done	Site traveler	24	27 months
(Topic#12) Sharing knowledge and resources	New member	63	4 months

As Table 2 shows, the topics shared in the forum are search for solution to a personal problem, starting discussion for a shared problem, sharing documents, searching for help, asking how something was done, sharing recent news and developments, sharing knowledge and resources, sharing a common issue, arranging a meeting, and information about an opportunity. The topic that received the biggest number of responses was sharing a common issue and arranging a meeting (Topic#9). The topics that received the smallest number of responses were searching for help and asking about the way something was done (Topic#11). Three topics were started by *active member*s and three other topics were started by *new member*s. Members shared posts under the topics lasting from one day (Topic#6) to 91 months (Topic#4).

The authors analyzed 566 messages under 12 titles. The authors read each message segment under the titles and identified their discourses, which provided the types of discourses (codes). There might be multiple discourses of a message in the forum. Thus, the number of discourses identified by the authors is bigger than the number of analyzed messages. The authors then brought the relevant discourses together and created the categories. Discourse types and categories are shown in Table 3.

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Table 3: Discourse types and related categories

Category	Discourse type	f	%
Personal problems	Search for solution to personal problem (4) Sharing own problems about the topic (9) Search for recent solution to same problem (2) Making suggestion (44) Asking question about suggestion (2) Asking question about problem(13) Comments about the problem (57) Asking question about solution(4) Emotional support (17) Liking suggestion (5) Informing about the results (9) Giving thanks (5) Providing information (26) Sharing experiences (18)	215	34
Sharing files and resources	Sharing files and resources (20) Asking for document (1) Sharing own work (2) Asking question about using document (9) Comments about the document (26) Providing information (12) Reviewing the document and re-sharing (2) Giving thanks (47) Making suggestion (11) Sharing experiences (10)	140	22
Help & support	Asking about the way something is done (4) Informing about the results of description (10) Asking question about the description (5) To describe alternative way (3) Asking for document (2) Asking for information and help (6) To describe (10) Suggesting help (2) Suggesting cooperation Giving thanks (25) Providing information (25) Sharing experiences (4)	97	15
Recent news and developments	Sharing information and news (4) Asking question about topic (13) Follow-up (27) Re-opening the topic 2) Comments (37) Providing information (8)	91	14
Common issues	Sharing a common issue Arranging meeting (2) Asking for support (2) Details of meeting (7) Informing about the results of meeting(2) Making suggestion (14) Providing information (5) Sharing experiences (6) Comments (3)	42	7
Discussion	Agreeing (16) Redirecting discussion (2) Disagreeing (14) Criticizing (8) Warning (3) Defense (2)	45	7

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Total	**630**	**100**

As Table 3 indicates, the most frequently shared topic in the forum started by the teachers was personal problems (34%). The messages sent to this title included comments about the problem, making suggestions, providing information, sharing experiences, and offering emotional support. Of all the messages sent to the forum, 22% were in the category of sharing files and resources. In this category, members sent messages of gratitude, comments about the document, and sharing files and resources. The discourse types frequently shared in a variety of categories are: providing information, making suggestions, giving thanks, making comments, and sharing experiences. The descriptions of some discourse types and quotations from messages are given below.

Search for solution to a personal problem: Sharing a problem and asking for help and different opinions about the problem

Our new principal wishes to close down the information technologies classroom and use it as an ordinary classroom. He also does not want the İnformation Technologies course to be elective. Does he have the right to do that? How can I get myself out of this situation?

Informing about the results: Sharing the results after the problem was solved or what they had done taking the suggestions into consideration along with the outcomes.

...unfortunately it failed, an error occurred at step 4...

Thank you for your attention and responses...I talked to the sub-manager of the unit. Two top managers who came to the school will send me a letter tomorrow...

Sharing experiences: Telling about a similar personal experience or an event observed before.

...recently another member shared about their problems about the duties...and the problem was solved.

Sharing own problems about the topic: Information about facing the same problem or being in a difficult situation.

This year I also experienced the problem you told about. I came to this school in June and now I am out of the permanent staff.

Making suggestions: Both making suggestions to solve the problem and using statements such as "*If I were you, I would do it this way.*"

If they appoint one personnel to each school without considering weekly hours of lessons, this problem will be solved.

Providing information: Giving specific information about the topic.

...mobbing is the psychological assault to a person by disturbing...

According to the extra hours legislation, teachers are not given any free days.

Follow-up: Asking for the latest phase of the solution to the problem and statements showing that the member follows the topic.

...this is an important issue, we would like to be informed when it concludes.

I will look forward to your post about the result; my situation is the same as yours...

Asking about the way something is done/searching for help: Asking about the way something is done or about the details of the operation.

Hello, I connected the smart board to the Internet by using a cable. Now I want it to be used in the classroom with a wireless connection. I know that this function is available but I don't know how to do it...

Suggesting cooperation: Suggesting doing something together or making a contribution.

46...questions have been uploaded to the on-line examination web site. If anyone has...test questions, I would like them to share with me. In return, I can send you an iFrame code that will help you upload on-line questions to your web site.

Re-opening a topic: Sending a post to a topic and reviving it a certain period of time after the last message was posted.

What is the latest situation of this problem? I guess we will face this kind of a problem. The articles I have been researching all belong to a very old date.

Arranging a meeting/Details of a meeting: Arranging a face-to-face meeting to solve a shared problem and sharing the details of the meeting.

...Let's get organized in here and go ask the Directorate of National Education on January 13 at 11 a.m.

I believe we should meet a little bit earlier.

CONCLUSION & DISCUSSION

This study analyzed a discussion forum comprised of teachers and academicians in Information Technologies based on communities of practices (Lave & Wenger, 2007). The authors analyzed the types of posts sent to the forum along with the participation patterns of the members, discussing the characteristics of the forum as a community of practice. In order for the teachers to improve them and obtain professional skills and knowledge learning new practices, they should give up an isolated attitude and cooperate with their colleagues (Lieberman & Pointer-Mace, 2010). Certain professional practices can be obtained by participating in the process of sharing

information in communities of practices. The participation patterns in on-line discussion and sharing environments is identified by different indicators. Sing and Khine (2006) expressed the participation rates of the teachers in an on-line forum by calculating the numbers of read and sent messages and the numbers of words in the sent messages. Zhang and Storck (2001) calculated the participation patterns of the peripheral members of the community by considering the number of sent messages, number of topics opened by them, the number of topics they contributed to, and measuring their duration of participation. In the forum analyzed by this study, members were given names according to the number of messages they sent to the forum. The members entitled *new member* and *site traveler* shared fewer posts than the other members. However, the authors observed that the topics started by *new member*s (Topic#8 and 9) were also discussed for a long time and obtained a big number of responses. Therefore, peripheral members interact with core members and the masters transfer knowledge to the apprentices (Lave & Wenger, 2007; Jimenez-Silva & Olson, 2012). The authors determined that the number of responses given to the topics was not related to the membership type of the member starting the topic but with the attraction of the topic and content. Different membership types started the topic of asking for help with a personal problem (Topic#1, 3 and 8). Regardless, it obtained similar numbers of responses. This shows that new members and members who didn't contribute much to the forum also found solutions to their problems. As peripheral members participate in knowledge-sharing and move onto core membership, they gain an identity and learn more. Peripheral members look for solutions to their problems by joining the community and contributing to the expansion of the group at the same time (Zhang & Storck, 2001).

The discourses in the personal problems category in the forum indicated that the problem was deeply analyzed while the discourses of making suggestions and sharing experiences indicated that different viewpoints were also evaluated. By searching for a recent solution for a continuing problem, members could revive the subject and view the suggestions and experiences addressed to the occupational problem. Sharing the result is another type of post and indicates that members feel responsible to each other. Henderson (2007) said that this kind of responsibility provided sustainable participation in communities of practice.

In the help and support category, teachers asked for help from their colleagues about the way certain things were accomplished and received support. With the participation of better-informed members, more successful operations were carried out and some cooperative groups were even created. In communities of practice, members improve their own practical skills by helping others, which creates a process of evaluation regarding the techniques of a certain subject (Cambridge, Kaplan & Suter, 2005). In the category of sharing files and resources, members shared their own work or documents other members could benefit from. Participating members then reviewed the shared documents, revised them, and discussed the details of its utilization. The posts sent under these categories created a repertory of experiences, files, descriptions of operations and work, information about the relevant subject, and suggestions for the solution to the problem (Murillo, 2008).

Other types of posts shared by the members were recent news and developments. Members also tried to solve their common occupational problems in this forum, and arranged to meet face-to-face when necessary. These shared initiatives enabled the creation of both cooperative and face-to-face groups. In the discussion category, members shared opposing ideas, criticism of each other's thoughts, expressed warnings, and defended themselves against these warnings. Members do not always support each other in on-line discussions and sometimes threats and criticism occurs. This situation is also observed in face-to-face relationships and indicates a realistic communication environment in the community. The most frequently seen discourses, though, were; offering solutions for problems (making suggestions), sharing personal experiences, providing information and giving emotional support. Deryakulu and Olkun (2007) conducted a similar study with teachers and found that these kinds of messages indicated serious reflection, crucial to professional development. In this study, members could obtain responses when they shared their problems or asked for help by the aforementioned discourses. This sharing of information caused the members to continue to use the forum for problem-solving. The repertory of knowledge in the community can only be created by members' sharing the information necessary for solving the problem and participating in the practices actively (Ardichvili, Page & Wentling, 2003).

In order for the patterns of on-line conversations and discussions to be revealed by discourse analysis and the study to be reflective, there should be a dynamic process of participation in the community that is spread over time (Hafeez & Alghatas, 2007; Sing & Khine, 2006). The time lapse of the topics analyzed in this study range between one day and 91 months. When necessary, members could send posts to old topics and revive them. For instance, the authors observed that one member sent a message to a topic of which the last message was sent four years prior, and requested that the members discuss the problem again to find a solution. This showed that the community had an active process of sharing.

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To conclude, the discussion forum analyzed in this study met the criteria of the concept of communities of practice. The discourses of the messages in the forum revealed by the discourse analysis showed that the relationships between the community members were based on mutual engagement. Members developed joint enterprise by organizing cooperative groups and meetings. Among the observable characteristics of virtual communities of practices suggested by Herring (2004) were: recent news and developments, personal problems, and the discourse types in the help and support and discussion categories.The posts sent by the members created a repertory and became a resource to be used by members when needed. This shared repertory makes the community of practice discussions a unique source of information that teachers cannot access by formal education and in-service training. The authors suggest that future studies analyze other types of communities of practice by applying different methods of analysis and approaching them from different perspectives.

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BİR EĞİTİM YÖNTEMİ OLARAK KAMU SPOTLARININ SÖYLEM ANALİZİ

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ÖZET
Kamu spotu kavramı, kamu kurum ve kuruluşları ile dernek ve vakıf gibi sivil toplum kuruşları tarafından hazırlanan ve RTÜK tarafından yayınlanmasında kamu yararı olduğuna karar verilen bilgilendirici ve eğitici nitelikteki film ve sesler ile alt bantlar anlamında kullanılmaktadır. Ücretsiz olarak yayınlanan kamu spotları, sivil toplum kuruluşlarının dikkat çekmek istediği konularda farkındalık yaratma ve iletişim çalışmalarında kullanılabilecek etkili araçlar arasında yer almaktadır. Çevre, eğitim, sağlık, kadın hakları, fiziksel ve zihinsel engellilere dikkat çekmek gibi amaçlarla hazırlanan kamu spotları son yıllarda çok fazla kullanılmaktadır. Türkiye'de kamu spotu hazırlamakla kamuoyunu eğitme ve yönlendirme hedeflenmektedir. Bu çalışmanın amacı, bireyleri doğru davranışlara yönlendirme amacıyla hazırlanan kamu spotlarını söylemsel açıdan incelemektir. Çalışmada söylem analizi yöntemi kullanılmış olup Türkiye'de yayınlanmış olan tüm kamu spotları incelemenin içine alınmıştır.

Anahtar Kelimeler: Kamu spotları, eğitim, söylem analizi.

THE DISCOURSE ANALYSIS OF PUBLIC SERVICE ANNOUCEMENTS AS AND EDUCATIONINAL METHOD

ABSTRACT
The concept of the public service announcements (PSA) is prepared by the civil society organizations such as public institutions and organizations. Public service announcements mean informative and educational sub-bands, movies and sounds which are published by RTÜK for public benefits. Public service announcements (PSA) published for free of charge are among the effective tools that can be used in communication base. These draw public attention of civil society organizations and are used to raise public awareness. A great number of public service announcements have been recently published with the aim of drawing attention to such areas as environment, education, health, women's rights and physically and mentally disabled people.The aim of preparing PSA in Turkey is to guide and educate the public. The purpose of this study is to examine public service announcements, which are made to give the public a message of true behaviour in terms of discourse. In this study, discourse analysis method was used and all of the public service announcements published in Turkey so far wereexamined.

Keywords: Public service announcements, education, discourse analysis

GİRİŞ

Televizyon, radyo, sinema gibi araçlarda görülebilen kamu spotları, kamu yararı göz önünde bulundurularak hazırlanan yayınlardır. Kamu spotlarının genel amacı, insanların dikkatini bir takım toplumsal konulara çekerek onları eğitmek ve yönlendirmektir. Kamu spotları; sigarayı bırakma, randevulu hasta, obeziteyi engelleme, tarım alanlarının korunması, trafik kuralları, alkolizmi önleme, okullarda süt dağıtımı, şiddeti önleme gibi pek çok alanda hazırlanmaktadır. Tüm topluma ulaşarak sorunlu konular, dikkatsizlikler, yanlış davranışlar gibi konularda insanları duyarlı ve bilinçli davranmaya yönlendiren kamu spotları, kitle iletişim araçları ile herkese ulaşabilmektedir.

Bu çalışmada, eğitimin önemini kamu spotlarıyla vurgulama ve bireyleri doğru davranışlara yönlendirmek için hazırlanan kamu spotlarının söylemini analiz etmek amaçlanmıştır. Türkiye'de eğitmeye yönelik tüm kamu spotlarının evren olarak kabul edildiği çalışmada en çok gündemde olan konularla ilgili 11 örneklem alınmıştır.

Kamu Spotlarının Eğitim Rolü

Kişileri sosyal, toplumsal, ekonomik, sağlık, çevre, yardım gibi alanlarda doğru davranışlara sevk etmek bir eğitim sürecinde gerçekleşmektedir. "Eğitim, bireyin yaşadığı toplumda yeteneğini, tutumlarım ve olumlu değerdeki diğer davranış biçimlerini geliştirdiği süreçler toplamı" (Tezcan, 1985: 4) şeklinde tanımlanmaktadır. Aile içerisinde başlayan eğitim süreci daha sonraki evrelerde okul sıralarında devam etmektedir. Eğitim sürecine sosyal hayatın yanında kitle iletişim araçları da önemli bir işlev üstlenmektedir.

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Son yıllarda medyada eğitme ve yönlendirme işlevini yerine getiren en önemli eğitim formatları radyo, gazete, televizyon gibi kitle iletişim araçlarında yayınlanarak kamuoyuna ulaşan kamu spotlarıdır. Kamu spotu, Kamu Spotları Yönergesinin 3(c) maddesine göre "kamu kurum ve kuruluşları ile dernek ve vakıf gibi sivil toplum kuruluşlarınca hazırlanan veya hazırlatılan ve Üst Kurul tarafından yayınlanmasında kamu yararı olduğuna karar verilen bilgilendirici ve eğitici nitelikteki film ve sesler ile alt bantları" anlamına gelmektedir (Kamu Spotu ve STK'lar Vaka Analizi, t.y.: 2). Spotlar, iktidar olma ve güç uygulama yollarından biri olarak, zorunlu bir şekilde medyada daha çok görsel olarak televizyonda, işitsel olarak da radyo kanallarında yayınlattırılmaktadır (Şeker ve Tiryaki, 2013: 239). Toplumun her kesimine en kolay yoldan ulaşılabilen bir araç olan televizyon etkin bir biçimde kullanılması ve kamu spotları ile vatandaşların bilgilendirilmesi (Demir, 2014: 11) gerekmektedir.

Kamu spotu uygulaması, Sivil Toplum Kuruluşları(STK)'nın dikkat çekmek istediği konularda farkındalık yaratma ve iletişim çalışmalarında kullanabilecek etkili araçlardan biridir. Çevre, eğitim, sağlık, kadın hakları, fiziksel ve zihinsel engelliler gibi çeşitli alanlarda çalışan STK'lar proje ve kampanyalarını daha geniş kitlelere duyurarak farkındalık yaratma ve kaynak geliştirme çalışmaları kapsamında kamu spotu başvuruları yapmaktadır. Duyuru ve tanıtımlarını televizyon ve radyo kanallarında reklam olarak yayınlamak için yeterli kaynaklara sahip olmayan birçok kuruluş, Radyo ve Televizyon Üst Kurulu'na (RTÜK) başvurarak bu duyuruların kamu spotu olarak yayınlanması için tavsiye edilmesi yoluna başvurabilmektedir. Kamu spotu olarak tavsiye edilen yayınlar reklam süresinden yani ticari yayından sayılmamakta, bu nedenle kamu spotu ibaresi taşıyan yayınların ücretsiz yayınlanması teşvik edilmektedir (Kamu Spotu ve STK'lar Vaka Analizi, t.y.: 2). Kamu spotlarının kontrolünün tümüyle savunucuların elinde olmayışı, masraflı bir araç olması, kamu spotlarının sınırlılıklarından bazılarını oluştursa da (Sezgin, 2008: 157), kamu spotlarının ücretsiz yayınlaması ve reklam sürelerine dâhil edilmemesi bu sınırlılıkları bir nebze de olsa ortadan kaldırmaktadır.

Bir Eğitim Yöntemi Olarak Kamu Spotlarının Söylem Analizi

Bu çalışmada, son yıllarda hem işitsel hem görsel hem de yazılı kitle iletişim araçlarında yaygın olarak yer almakta olan kamu spotlarının bir eğitim aracı olarak kullanılması üzerinde durulmuştur. Uygulama kısmında analize tâbi tutulan kamu spotları, konu açısından sadece eğitimle ilgili olanlar seçilmemiş olup geniş bir konu yelpazesi üzerinde uygulama yapılmıştır.

YÖNTEM

Eğitimin önemini kamu spotlarıyla vurgulama ve bireyleri doğru davranışlara yönlendirme amacıyla hazırlanan kamu spotlarını söylemsel açıdan inceleme amacını taşıyan çalışmada yöntem olarak van Dijk'ın söylem analizi yöntemi kullanılmıştır. "Söylem analizi içinde disiplinler arası yaklaşımlarla gelişen ve ideoloji yüklü olduğu öne sürülen dilsel yapıları dilbilimin yöntemlerinde yararlanarak sistemli bir biçimde açıklamayı amaçlayan çalışmalardır" (Büyükkantarcıoğlu, 2012: 166). Söylem analizi, gündelik yaşamdaki dili gazetelerin, dergilerin, sınıfların, ailelerin dilini konu almakta ve uzun düz yazılar ile sıradan sohbetlerdeki cümle örüntülerini incelemektedir. Daha az başarılı bir biçimde, dilin bir etkinlik biçimi olması temelinde bu örüntülerin güç ilişkilerini yansıttığını savunmaktadır ve birçok etkinliğin de bir dil olarak yorumlanabileceğini öne sürmektedir (McLellan, 2009: 75-76). Bu yönüyle de söylem analizi, yorumlayıcı ve açıklayıcıdır; eleştirel okuma, sistematik metodoloji ve bağlamın mükemmel bir biçimde araştırılmasına ihtiyaç duyar (Sözen, 1999: 143). "Çeşitli amaçlar ve yaklaşımlarla genişleyen çerçevesi, farklı söylem türleri, iletişim ortamları, iletişim amaçları, katılımcılar ve toplumsal değişkenler bağlamında yürütülen çalışmaları ile söylem analizi, bugün, dilbilimin çok yönlü ve belki de en geniş kapsamlı inceleme alanı kabul edilmektedir" (Büyükkantarcıoğlu, 2012: 163). Söylem analizi, aynı zamanda bir okumadır. Söylem analizi gerçeğe dayalı değil, anlama dayalı bir sonucu amaçlamaktadır (Atabek, 2007: 152). Bu anlamda analizin konusu olan söylemler; metinler, mesajlar, konuşmalar, diyaloglar ve haberleşmeler tarafından belirlenmektedir (van Dijk, 1988: 24). Medya söylemi, metin ve okuyucu, konuşmacı ve dinleyen arasında etkileşimi gerekli kılarken (Sözen, 1996: 1543) bu bağlantıların birbiriyle bir bütün olarak irdelenmesini de gerekli kılmaktadır.

BULGULAR

Araştırmada en çok gündeme gelen konulara ilişkin 32 kamu spotu analiz edilmiştir. İncelenen kamu spotlarının konulara göre dağlımı şöyledir: Eğitim (4), trafik emniyeti (5), ekmek israfı (5), sigara alışkanlığını bırakma (2), şiddet (3), sosyal yardımlaşma (1), engelliler (3), sağlık (3), organ bağışı (2), kan bağışı (2), çevreye karşı duyarlılık (2).

Eğitimle İlgili Kamu Spotlarının Söylem Analizi

Eğitimle ilgili hazırlanan kamu spotlarında genel anlamda eğitimin önemi, kız çocuklarının okutulması gerektiği ve eğitimin onların da en doğal hakkı olduğu yönünde olmuştur.



Kamu spotu 1

"Baba beni okula gönder" projesi kapsamında hazırlanan bu kamu spotunda bir sınıfta öğretmen yoklama almaktadır. Sadece erkek öğrencilerin olduğu sınıfta, kız öğrencilerin ismi okunduğunda ise, okulda olmaları gereken kız öğrencilerinden kiminin tarlada çalıştığı, kiminin odun taşıdığı, kiminin tavuklara yem verdiği, kiminin süt sağdığı görülmüştür. Her biri ayrı bir işle uğraşan kız çocuklarının görüntülerinin ardından, en son karede ise, 'Fatma' olarak seslenilen kız çocuğunu, gelinlik içinde gerdek odasında yansıtılmaktadır. Duygusal bir müziğin kullanılarak "Onların yeri burası değil, okul! Baba beni okula gönder kampanyasına verdiğiniz destekle 5 yılda 10 bin kızımız okullu oldu. Gelin ayda sadece 40 liraya sizde bir kızımızın eğitimine destek olun. 10 bin kızımızı daha okullarına gönderelim" ifadeleri vurgulanmaktadır. Bu spot, tüm kamuoyunu kız çocuklarına eğitim hakkı tanıması için bir çağrı niteliği taşımaktadır. Görsel olarak sınıfta sadece erkek çocuklarının olması, kız çocuklarının ise, ev, bahçe, tarla gibi işlerde çalıştıklarının gösterilmesi ve en son aşamada ise, toplumun kanayan 'çocuk gelin' yarasına vurgu yapılması spotun vermek istediği mesaj, daha dokunaklı olarak yansıtılmıştır.



Kamu spotu 2

Bu spotta, iki ekmekle evine gelen babaya kapıyı açan bir kız çocuğu görülmektedir. Seslendirmeyi de yapan bu kız çocuğu, *"Çok görmezdik babamın gülümsediğini. Annem söylerdi de inanmazdım. Babalar pek belli etmezmiş hislerini. Benim canım babacım! Beni okutabilmek için, az mı çalıştı? Ben de ona layık olabilmek için… Benimle gurur duymadığını sanırdım. Yanılmışım. 'Kızlar okutulur mu' diyenlere karşı durduğun için, benimle gurur duyan babacığım, asıl ben seninle gurur duyuyorum"* demektedir. Spot, Cumhurbaşkanı Recep Tayyip Erdoğan'ın babalara *"kız çocuklarımız okusunlar, eğitim hakkından mahrum kalmasınlar, okuyup meslek sahibi olsunlar, anne babalar kızlarıyla kızlarda anne babalarıyla gurur duysunlar. Evlatlarınız kıymetimiz okumaları geleceğimizdir"* şeklindeki ifadeleriyle bitmiştir. Genel anlamda bakıldığından kızların okula gönderilmesiyle ilgili olan bu spotta, babanın aile reisi olması nedeniyle ona bir sesleniş niteliği taşımaktadır. Böylelikle babaların kızlarıyla gurur duyabilmeleri için eğitimlerine destek olmaları gerektiği mesajı verilmiştir.



Kamu spotu 3

"Okullar hayat olsun" başlığıyla verilen spotta "Daha dün salonumuz, kütüphanemiz yokken. Şimdi okullu olduk, sınıfları doldurduk. Sevinçliyiz hepimiz yaşasın okulumuz" ifadeleri müzik eşliğinde kullanılmıştır. Spotun sonunda yapılan seslendirmede *"Yediden yetmişe herkes, kütüphane, spor salonu, bilgi teknolojileri, hobi ve meslek eğitimlerinden faydalanacak. Okullar hayat bulacak. Herkes okullu olsun okullar hayat olsun"* sözleriyle bitmektedir. Görsel olarak bakıldığında ise, kahvaltı masasında, mutfakta, kasapta, manavda herkesin mutlu olduğu ve müziğe eşlik ettiği görülmektedir. Bu spotta, okullara yapılan yatırımlar hakkında kamuoyuna bilgilendirici bir spot niteliği taşımakta ayrıca hükümetin eğitimle ilgili icraatını da övmektedir.

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Kamu spotu 4

Bu spotta elindeki eşyalarla kırsal kesimden olduğu belli olan bir kız çocuğu okula giden öğrenciler arasından geçmektedir. "Kızlarımız kıymetimiz okumaları geleceğimizdir" mesajıyla verilen spotta kız çocuğunun öğrencilere imrenerek bakması ve aynı durumda olmadığı için duyduğu hüzün yüzüne yansımıştır. Spotta, "Geleceğin güçlü bireyleri, hayatın külü değil, bilginin gücüyle yetişir" ifadelerinin ardından aynı kız çocuğunun okul elbiseleri içinde anne ve babasının elinden tutarak okula götürdükleri görülmektedir. Spotun sonunda dönemin Milli Eğitim Bakanı Ömer Dinçer'in *"Cumhuriyetimizin 100'üncü yılında 100'de 100 üreten Türkiye için, çocuklarımızı, özellikle kız çocuklarımızı okutalım. Unutmayın ülkemiz, ancak kızların eğitim görmesi ve meslek sahibi olmasıyla kalkınabilir. Evlatlarımız kıymetimiz okumaları geleceğimizdir"* ifadelerine yer verilmiştir. Bu spotta da eğitimin ülkenin geleceği açısından ne kadar önemli olduğuna ve iktidarın eğitimle ilgili çalışmalarına vurgu yapılmıştır.

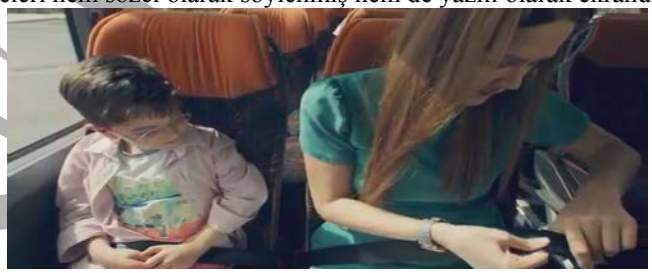
Trafik Emniyetiyle İlgili Kamu Spotlarının Söylem Analizi

Türkiye'de her gün çok sayıda trafik kazası meydana gelmektedir. Bu kazalar genellikle sürücülerin dikkatsizliğinden ve tedbirsizlikten kaynaklanmaktadır. Bu konuyla ilgili hazırlanan kamu spotları, trafik kurallarını ihlal etmenin ne türden olumsuz sonuçlar doğurabileceğini göstermektedir.



Kamu spotu 5

Emniyet kemeri kullanımının gerekliliğiyle ilgili olan bu spotta, genç bir adam gözükmektedir. Genç adam, *"Aslında aklıma geldi. Ama üşendim. 'Zaten yakın mesafe. Hemen gider dönerim' dedim. Takmadım, 'bir şey olmaz' diye düşündüm, ama oldu. Şimdi 'keşke o kemeri taksaydım' diyorum"* ifadelerini kullanırken genç adamın engelli sandalyesinde oturduğu spotun sonunda görülmektedir. Spotun sonunda ise, "Keşke dememek için, emniyet kemerinizi takın' ifadeleri hem sözel olarak söylenmiş hem de yazılı olarak ekranda yansıtılmıştır.



Kamu spotu 6

Bu spotta, ilkokulda tatil sonrası öğretmenlerin yazdırdıkları kompozisyona yer verilmiştir. Tahtaya çıkmış elindeki kâğıda yazdığı tatil anılarını okuyan bir çocuk gözükmektedir. Çocuk, *"Tatilde annemle, kuzenlerimin yanına gitmek için evden çıktık. Çok heyecanlıydım. Yolculuğumuzu otobüsle yapacaktık. Annem günler öncesinden biletlerimizi almıştı. Ben de çantamı hazırlamıştım. Otobüse bindiğimizde annem önce benim sonra da kendisinin emniyet kemerini bağladı. 'Neden?' diye sorduğumda 'Bizi her türlü kaza riskinden koruyacağını' söylüyordu. Seyahatimizin ortasında ani bir frenle durduk. Kemerimizi takmamış olsaydık yaralanabilirdik. Sonunda kuzenime kavuştum ve annem haklıydı. Teşekkürler anne"* derken sınıf onu alkışlamıştır. Görsel olarak desteklenen spottun sonunda "Şehirlerarası otobüs yolculuklarınızda emniyet kemerinizi takmayı unutmayınız" mesajı verilmiştir. Bu spotta, toplu taşıma araçlarında kemer takılmasının önemi çocuk ağzıyla anlatılarak daha anlamlı kılınmıştır.

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Kamu spotu 7

Kırmızı ışık ile ilgili spotta bir kadının kırmızı ışıkta duramayıp bir adama çarpması üzerine duyduğu pişmanlık anlatılmaktadır. *"Tek bir şansım olsa, sadece tek bir şans o anı geri getirmek isterdim"* diyen kadının pişmanlığına yer verilen spotta görsel bir canlandırma yapılmıştır. Spotun sonunda "Pişmanlık yaşamamak için 'Keşke' dememek için kırmızı ışıkta durun" ifadeleri vurgulanmıştır.



Kamu spotu 8

Ünlü şarkıcı Mustafa Sandal'ın oynadığı spotta Sandal'ın eşi ve çocuğu da rol almıştır. "Trafik hayattır, hayata bağlı kal" adıyla verilen spotta Sandal evinin içinde bir trafik kazası canlandırması yapmaktadır. Direksiyonun başında araba kullanıyormuş gibi hareketler yapan Mustafa Sandal'ın bir anda kaza yapması üzerine eşi ve oğlu yerlerinden kalkarak Sandal'ı arkadan bir kemer gibi sarar. Bunun üzerine Sandal'ın ayağı bir tekme atar gibi önündeki sehpaya gelir ve tüm gücüyle sehpayı devirir. Ancak Sandal'a hiçbir şey olmaz. Bu spotun sonunda "Emniyet kemerini tak, hayata bağlı kal" ifadeleri hem sözlü hem de yazılı olarak yansıtılmıştır.



Kamu spotu 9

"Trafikte bilinçli davran' adlı kamu spotunda yine ünlü bir isim olan Murat Dalkılıç'a yer verilmiştir. Dalkılıç'ı trafikte sürekli yanlış davranması noktasında sürekli yanıltmaya çalışan 'şeytan' tiplemesini çağrıştıran siyah giysili bir adam vardır. Murat Dalkılıç, arabaya binmekte kötü adam onu önce emniyet kemerini takmaması için, sonra çalan telefona seyir halindeyken cevap vermesi için ve en sonunda da sarhoş halde bir gece kulübünden çıkarken o halde arabayı kullanması için yönlendirmeye çalışmaktadır. Ancak Dalkılıç, kemerini takmış, telefona durduğunda cevap vermiş ve sarhoşken kendi arabasını kullanmak yerine taksiye binmiştir. Spotun sonunda, "Trafikte risk almaya değmez. Bilinçli davranın, kurallara uyun. Trafik hayattır" ifadeleri yer alırken, trafikte kötü alışkanlıkları bırakmak ve kötü duyguları yok etmek gerektiği yönünde bir vurgu yapılmıştır. Spotun dini çağrışımları i "şeytana uymayın" yönündeki mesajı geleneksel kültüre ve dini inanışa yönelik bir ikna söylemi olarak dikkat çekicidir.

Ekmek İsrafıyla İlgili Kamu Spotlarının Söylem Analizi

Ekmek, Türk toplumunda kutsal kabul edilen bir yiyecektir. Ekmek israfıyla ilgili hazırlanan spotlarda genellikle bir lokma ekmeği bulamayan insanlar üzerinden gösterilerek ekmeğin ne kadar önemli bir nimet olduğu, ülke ekonomisine katkısıyla ilgili vurgulamalar söz konusudur.

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Kamu spotu 10

"Her şey bir tohumla başladı. Küçük eller toprakla tanıştı. Toprak umudu yeşertti. Günlerce su taşıdı. Sabırla bekledi. Toprak cevap vermedi. Çöpe atılan ekmeği küçük kalbine dert etti. Atılan ekmeklere hayat vermekti gayesi. Çünkü ekmek nimetti. Değer verilmeliydi. Ekmek, nimet demek, nimete hürmet gerek" ifadelerinin kullanıldığı spotta ekmek israfına dikkat çekilmiştir. 'Ekmek nimet demek, nimete hürmet gerek' ifadeleriyle ekmeğe bir kutsallık atfedilmektedir ve çöpe atılmaması gerektiği mesajı verilmiştir. Yine kültürel ve dini öğelere gönderme yapan bir söylem söz konusudur.



Kamu spotu 11

Bu spotta, "Temel gıdamız geleneksel ekmeğin hammaddesi olan buğday, toprak, su ve güneşle beraber hayat bulur" ifadeleriyle ekmeğin nasıl elde edildiğini belirtirken bir beslenme ve diyet uzmanı tarafından ekmeğin sağlık için önemi vurgulanmıştır. Görsellerde buğday tarlası ve fırından çıkan ekmekler de kullanılmıştır. Bu spot, ekmek israfına dikkat çekmenin yanında ekmekle ilgili bilgilendirici bir söylem de içermektedir.

Kamu spotu 12

Ekmek israfıyla ilgili diğer bir spotta, oluşturulmasından bayatlama aşamasına kadar gösterilen bir ekmek üzerinden mesaj verilmeye çalışılmıştır. Spottaki, *"Ülkemizde her gün milyonlarca ekmek israf ediliyor. Kaybedilen milli kaynak yıllık yaklaşık 1,5 milyar lira! Bu kayıp onlarca hastane ve okul demek! Ekmeğimizi israf etmeyin"* ifadelerinde ekmek israfının küçümsenmemesi gerektiği kayıplarla ilgili rakamsal veriler kullanılarak gösterilmiştir.



Kamu spotu 13

"Ülkemizde her gün milyonlarca ekmek israf ediliyor. Bu israf, ülkemizi milyonlarca lira zarara uğratıyor ve dünyada milyonlarca insan aç uyuyor. Onlardan biri de siz olabilirdiniz. Bir lokma ekmeğe muhtaç olmamak için ekmeğimizi, geleceğimizi israf etmeyin" ifadeleriyle birlikte yoksul insanların görüntülerinin yansıtıldığı spotta, herkesin böyle bir duruma düşebilme riskinin olduğu ve bundan dolayı ekmeği israf etmemesi gerektiği ifade edilmeye çalışılmıştır.



Kamu spotu 14

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"Hiç düşündünüz mü neden sofralarımızın vazgeçilmezidir o? Neden sımsıcak bir sevgiyi çağrıştırır onun tadı?" sorularıyla başlayan spotta, fırından ekmek alarak eve gelen bir çocuk yansıtılırken *"Çünkü onun hamurunda emek, umut, kazanç, paylaşım var. O bunca değeri bize sunarken hiç düşündünüz mü biz ne yapıyoruz? Neleri çöpe atıyoruz? İsraf ettiğimiz her dilimde bir kez daha düşünmeliyiz"* şeklinde cevap verilmektedir. Ekmek israfıyla Türkiye ekonomisine zarar verildiği vurgulanmaya çalışılan spotta, ekonomik anlamdaki kayba ve bu kayıp olmazsa ne türden kazançlar elde edileceğine işaret edilmiştir.

Sigara Alışkanlığıyla İlgili Kamu Spotlarının Söylem Analizi

Sigaranın zararlarını anlatmak ve sigara tüketimini azaltmak amacıyla hazırlanan spotlar önemli bir yer tutmaktadır. Konuyla ilgili hazırlanan spotlarda, sigaranın bireysel anlamda kullanıcısına olan zararlarının yanında çevredeki insanları da pasif içici durumuna sokarak onlar için de bir tehlike olduğu vurgulanmaktadır.



Kamu spotu 15

"Pasif içici" başlığıyla verilen spotta, doktor bir kız çocuğunu tedavi etmektedir ve "Sigarayı acil bırakman gerek" demektedir. İlk etapta bu sözleri çocuğa söylediği düşünülerek insanların içi ürperirken, bir anda arkada anne ve babanın görüntüsü görülmektedir. Bu söz üzerine anne ve baba hüzünlenmektedir. Daha sonrasında hem sözlü olarak hem de yazılı olarak *"Sigara sadece sizin hayatınızı tehdit etmez. Tütün dumanına maruz kalan çocuklarda astım ve ağır solunum yolu hastalıkları görülme oranı, diğer çocuklara oranla 1,2- 2 kat daha yüksektir. Çocuklarınızın yanında sigara içilmesine asla izin vermeyin"* ikazı yapılmaktadır. Ailelere çocuklarını korumak için sigaradan vazgeçmeleri çağrısı yapılmaktadır.



Kamu spotu 16

Sağlık Bakanlığı tarafından hazırlanan spotta 45 yıl sigara kullanan bir adamın sigarayı bırakma aşamaları anlatılmaktadır. Adamın yanında torunu bulunmaktadır. Adam çevresindeki birçok kişinin sigarayı bıraktığını ve sigaranın tiksinti yaratan bir kokusunun olduğunu ifade etmektedir. Adam, sigarayı bırakmasında torunun çok etkisi olduğunu vurgularken spotun sonunda, "Seçim senin! Sağlığı seçmek için 171 sigara bırakma hattı" duyurusu yapılmaktadır. Böylelikle sigarayı bırakmanın zor olmadığı aksine mümkün olduğu gösterilmiştir. Bu spotta da insanlar için en değerli varlıklar olan çocukların kullanıldığı görülmektedir.

Şiddetle İlgili Kamu Spotlarının Söylem Analizi

Türkiye'nin önemli sorunlarının başında şiddet gelmektedir. Toplumun dokusunda bulunan şiddet özellikle ikincil konumdakilere yöneliktir. Bu nedenle spotlarda kadınlara ve çocuklara yönelik şiddetin önlenmesi için biri söylem kurulmuştur.



Kamu spotu 17

'Şiddete yeter artık' mesajı verilmek için hazırlanan spotta, ekranda havada açık olan bir el gözükmektedir. Parmakların her biri, *"bu tutmuş, bu çekiştirmiş, bu sürüklemiş, bu aşağılamış, bu vurmuş, bu yeter demiş. Yakınlarınızdan şiddet görüyorsanız hemen arayın"* ifadeleriyle birlikte aramaları gereken numara ekrana yansıtılmıştır. 'Bu yeter' ifadesi kullanılırken başka bir el diğer eli sıkı bir şekilde tutarak aşağı indirmiştir. Bu

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durum ‘şiddete yeter artık’ anlamı da taşırken herkesin el birliğiyle bu olumsuz durumu durdurması gerektiği iması çizilmiştir.



Kamu spotu 18

Aile içi şiddete dikkat çekmek amacıyla hazırlanan bu spotta, önce ekrana, el kızartmaca oynayan iki çocuk yansıtılmaktadır. İlk etapta oynanan oyun, daha sonrasında kapının arkasından gelen benzer sesler üzerine kesilmekte ve çocukların yüzünde hüzün ve korku belirmektedir. Daha sonrasında kameranın odak noktası sesin geldiği kapı olarak gösterilmektedir. Bu durum, şiddete vurgu niteliği de taşımakla birlikte *“Ne yazık ki Türkiye’de her üç aileden birinde şiddet yaşanıyor. Bu şiddetten çocuklar da etkileniyor. Şiddet mağdurlarına yardım eli uzatan ‘aile içi şiddet acil yardım hattını arayarak’ şiddete ‘dur’ diyebilirsiniz”* ifadeleri bu durumu daha net göstermektedir.



Kamu spotu 19

Aile ve Sosyal Politikalar Bakanlığı tarafından hazırlanan spotta, şiddetle ilgili silinemeyen kötü anılar bir damla içinde yansıtılmaktadır. Şiddeti engellemek için bir destek mesajı niteliği taşıyan bu spotun asıl mesajı *“Geçmişte kalan mutluluklarımızı geri getiremeyiz, ama yenilerini ekleyebiliriz. Yeter ki, bize ulaşın. Şiddete karşı birlikte olalım”* ifadelerinde yer almaktadır. Bu mesajda şiddet mağdurlarının yalnız olmadığını, güvenebilecekleri ve sığınabilecekleri bir adreslerinin her zaman için var olduğunu vurgulanmaktadır.

Sosyal Yardımlaşmayla İlgili Kamu Spotlarının Söylem Analizi

Sosyal hayatta, insanların kimi zaman toplumdan soyutlandıklarını, yalnız kaldıklarını, çaresiz hissettikleri dönemler bulunmaktadır. Bireylerin her anlamda yalnız, çaresiz olmadıklarını anlatan kimi spotlar söz konusudur.



Kamu spotu 20

Bu spot tek bir mesaj verse de çok fazla farklı olaylar tek videoda kurgulanmıştır. Duvarlarla örülü kara ve ürkütücü bir labirentin içinden değişik hayatlar yansıtılmıştır. İlk olarak elinde oyuncak ayısıyla kaybolmuş halde gözüken bir kız çocuğu yansıtılmıştır. Gök gürültüsünün duyulduğu görüntüde, şaşkın bir şekilde dolanan küçük kız bir duvarda yemek sofrasına oturmuş olan sıcak bir aile yuvası görmektedir ve o ailenin içinde kendi de yer almaktadır. Bu durum küçük kızın hoşuna gider ve ayısına bakarak gülümser. Bu olaydan farklı bir olaya geçilir. Burada engelli sandalyesinde bir genç belirmektedir. Genç, karşısına çıkan duvarda üniversiteden mezun olduğunu gösteren bir kep ve cüppeyi üzerinde görmektedir ve çevresinde onunla gururlanan ailesi yer almaktadır. Bu tablo karşısında genç mutlu olmaktadır. Başka bir kurguda, kucağındaki bebekle nereye gittiğini bilmemenin ürkekliğini yaşayan bir anne gözükmektedir. Karşısına çıkan duvarda genç anne, büyümüş olan kızını okula gönderdiğini görmekte ve mutlu olmaktadır. Başka bir karede, koltuk değneğiyle yürüyen bir gazi, karşısına çıkan duvarda evlendiğini görmektedir. En son karede ise, yaşlı bir kadın, karşısına çıkan duvarda, oğlu ve geliniyle ona koşan torunun görmektedir. Torununa kollarını açan yaşlı kadının yüzünde mutlu bir huzur belirmektedir. En son

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aşamada karelerde yer alan tüm kişilerin çevresini kırmızı bir ışık sarmakta ve hepsini ortak bir yerde birleştirerek yeşiller içinde onlara doğru kalabalıklara doğru gidip "*Kimsenin kaybolmasına izin vermeyiz. Çünkü biz büyük bir aileyiz"* sözleri eşliğinde kucaklaşmaktadır. Bu spotta, hiç kimsenin yalnız olmadığı ve ne olursa olsun karamsar olmaması gerektiği, böylelikle umuda yelken açıp hayallerini gerçeğe dönüştürebileceği mesajı verilmiştir.

Engellilerle İlgili Kamu Spotlarının Söylem Analizi

Engellilerle ilgili hazırlanan spotlarda, engellilerin umutsuz olmamaları gerektiği ve her türlü başarının onlar için de söz konusu olduğu, engelli kişiler için yaşam alanlarının biraz daha duyarlı hazırlanması gerektiği vurgulanmıştır.



Kamu spotu 21

"Engel engel değildir aşıldığında" başlığıyla verilen spotta, *"Bir kelebek kadar mutlu, bulutların üstünden bakıyormuş gibi coşkulu, topraktan fışkıran tohum gibi umut doludur yaşamak. Ortaktır özlemimiz. Mutluluktur düşümüz. Aynıdır hislerimiz. Farklılıklarımızla, bizi biz yapan yanlarımızla buluştuk hayatın ortasında. İnsan olma rüyasında, coşkularımızda, korkularımızda, unutulduğumuzda, yok sayıldığımızda hep aynıyız aslında. Güneşin her doğuşuyla, başlarız engelsiz bir hayata. Engellere engel demez, sınırsız gücü içimizde buluruz. Eksikliğimizi tamamlama arzusuyla hayatı mucizeye dönüştürürüz. Engel yoksa nefes almaya kimsenin özrü olmaz özgürce yaşamaya. Göremeyen sanılan, bilinmeyen bir dünyayı gösterir. Gönülden dökülen sözleri hiç duymayan işitir. Dansların en güzeli, hissedenle edilir. Engel yoksa güneşin doğmasına, hazırsa her sabah yeniden doğmaya ben engelsizim, yapamadıklarıma aldırmayıp yapabileceklerimizle anılmaya, zihnimdeki ve yüreğimdeki engelleri kaldırdığımda engelsizim; umuda, coşkuya, sevince, aşka. Engelsizim; insanlığa değer, hayata anlam katmaya, engellerimle mucizeler yaratmaya. Hiçbir engel, engel değildir aşıldığında…"* ifadeleri yer alırken görsellerle bu sözler desteklenmiştir. Engelli yaşamanın bir engel olmadığı vurgulanmış ve engelli olanlara bir umut aşılama söz konusu olmuştur.



Kamu spotu 22

"Engelleri aşın" başlığıyla verilen spotta, 1998 yılında İzmir'de trafik kazası geçirerek bir bacağını kaybeden genç bir şampiyon gösterilmektedir. Şampiyonun, "Hastane odasındaki hedeflerimden biri 'gidene üzülmeyip var olanı güçlendirecektim'" sözlerine vurgu yapılırken bu sözlerin ardından verilmek istenen asıl mesaj, *"O engelleri aştı, imkânsızı başardı. Var olanı güçlendirmek için çok çalıştı. Tüm Türkiye'nin gururu oldu. Şimdi sıra sende"* şeklinde dile getirilmektedir. Burada öğretilen mesaj, engeller karşısında umutsuz olmamak ve engellerle mücadele etmek şeklinde görülmektedir. Spotta, bir şampiyon örnek gösterilerek 'o yaptıysa sen de yapabilirsin' mesajı verilmiştir.



Kamu spotu 23

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"Otizmin farkındayım, onların yanındayım" başlığıyla verilen spotta, *"Çocuğunuz el çırpma, sallanma gibi takıntılı davranışlar sergiliyorsa, kendisine seslenildiğinde bakmıyorsa, konuşmasında belirgin bir gecikme varsa, yaşıtlarıyla oynamıyorsa, hızla dönen bir şeyi saatlerce izliyorsa otizmli olabilir. Eğitim otizmin tek çaresi. Türkiye'de 100 binin üzerinde otizmli çocuğumuz eğitim bekliyor. Onlar da erken tanı ve eğitimle okula gidebilir, arkadaşlarıyla oynayabilir. Siz de 'otizmin farkındayım onların yanındayım' diyorsanız..."* şeklinde ifadeler kullanılmıştır. Bu spotta, otizmli bir çocuğun görüntüsü eşliğinde otizmin belirtileri anlatılmış ve bunun tek çözüm yolunun eğitim olduğu vurgulanmıştır.

Sağlıkla İlgili Kamu Spotlarının Söylem Analizi

Sağlığın çok önemli olduğuyla ilgili spotlarda, anne sütünün bebekler için önemi, doğru ilaç kullanımı, "Alzheimer" hastalığı gibi konular üzerinde durulmuştur.



Kamu spotu 24

"Temel besin anne sütü" başlığıyla verilen spotta, anne sütünün çocuk sağlığı açısından önemi anlatılmıştır. Annelerin çocuklarına her zaman daha fazla katı gıda vermek istemelerinin sakıncalı bir durum teşkil ettiği ifade edilen spotta, bebekler için temel gıdanın anne sütü olduğu, altı aydan sonra bebeklere verilebilecek en fazla katı gıdanın iki çay bardağını geçmemesi gerektiği, aksi takdirde bebeklerin anne sütünün faydalarından mahrum kalacağı anlatılmaktadır. Konuyla ilgili bir uzmanın görüşlerinin yansıtıldığı spot, *"Çocuğunuzu mümkün olduğunca anne sütüyle besleyin. Doymadıysa beslenmesini devam sütüyle tamamlayın. Unutmayın temel besin anne sütüdür. Katı gıda, ektir"* şeklinde uyarıda bulunularak anne sütünün çocuklar için ne kadar önemli olduğu anlatılmıştır.



Kamu spotu 25

"Alzheimer" hastalığına dikkat çekmek adına hazırlanan spotta Haldun Dormen, Ayla Algan, Cahit Berkay gibi ünlülere anılarıyla ilgili bazı noktaları hatırlayıp hatırlamadıkları soruluyor ve her biri hayatlarında önemli olan bu anıları çok net bir şekilde hatırladıklarını ifade ediyor. Spot, "Onlar hatırlıyor. Peki ya siz?" sorusunun sorulduğu ifadelerin devamında 'unutkanlığı' gidermenin çaresi, *"Demek ki unutmak kader değil. Üreterek, sosyal yaşama katılarak, güçlü aile ve dostluk bağları kurarak, doğru beslenme ve düzenli takiple Alzheimer'dan korunabilirsiniz. Anılarınıza sahip çıkın! Başarılı yaşlanmak sizin elinizde"* ifadeleriyle sunulmuştur. Bu spot, söz konusu hastalıkla mücadele yollarını öğretmesi açısından önemli bir spottur.



Kamu spotu 26

Yanlış ilaç kullanıma dikkat çekmek amacıyla hazırlanan spotta, iki kişi arasında bir ilaç diyalogu söz konusudur. Kullandığı ilacın işe yaramadığını söyleyen birine diğeri kendi ilacını vererek 'al bir de benimkini dene' demektedir. O sırada kapıdan çıkan ünlü oyuncu Altan Erkekli, bu kişilere, *"İlaç kullanmak bir oyun değil. Doktora danışmadan ilaç kullanılır mı? Doktorun yazdığı reçetedeki ilacı kullanacaksınız ve tavsiyelerine mutlaka uyacaksınız"* uyarısında bulunur ve kameraya dönerek bu sefer tüm kamuoyuna *"Yanlış ilaç kullanarak*

sağlığınıza zarar vermeyin! İlaç israfında bulunmayın! Sağlığınızla oynamayın! İlacınızı akılcı kullanın!" şeklinde seslenerek öğretici bir mesaj vermekte ve yanlış ilaç kullanımının yol açabileceği kötü sonuçlar vurgulanmaktadır.

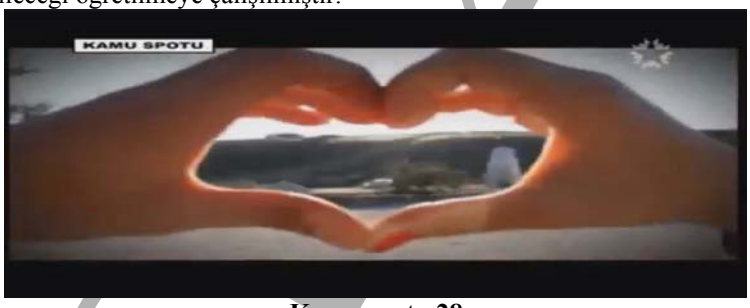
Organ Bağışıyla İlgili Kamu Spotlarının Söylem Analizi

İnsanların hayatını kurtarmaya yönelik hazırlanan organ bağışıyla ilgili spotlarda organ bağışının toplumsal anlamda ne kadar önemli olduğu üzerinde durulmuş ve toplumun bu konuda duyarlı olması gerektiği vurgulanmıştır.



Kamu spotu 27

Organ bağışına dikkat çekmek amacıyla hazırlanan spotta, "Her Bağış Yeni Bir Hayattır. Organ Bağışla, Hayat ver!" başlığını taşımaktadır. Spotta ünlü isimler, "Hülya Koçyiğit: 'Bağış sevgidir. Sevgi hayattır. Her bağış yeni bir yaşam', Aslı Tandoğan: 'Toprağa bencilliğini ve korkuyu göm! Bedenin hayat vermeye devam etsin', Sema Keçik: 'Yaşam senden sonra da devam etsin', Naz Elmas: 'Senin son nefesin onun canı olsun'" şeklinde organ bağışına dikkat çekmektedir. En sonda ise, Organ Nakilleri Bilinçlendirme ve Geliştirme Derneği Başkanı Prof. Dr. K. Yalçın Polat'ın, *"Ülkemizde her yıl binlerce insan organ nakli beklerken hayatını kaybediyor. Gelin organlarımızı bağışlayalım. Çünkü organ bağışı hayat kurtarır"* ifadeleri damga vurmuştur. Bu spotta üzerinde durulması gereken önemli konulardan biri de her bir görüntü de siyah ve beyaza vurgu yapılması olmuştur. Siyahın mutsuzluğu beyazın ise, mutluluğu simgelemesi bu spotta da ölüm gibi mutsuz bir olaydan organ nakliyle mutlu bir olayın gerçekleştirilebileceği öğretilmeye çalışılmıştır.



Kamu spotu 28

"En büyük mirasım organlarım" mesajının verildiği spotta, *"Gün gelecek benim bu gözlere ihtiyacım kalmayacak. Kalbim, akciğerim, böbreklerim hiç birine ihtiyacım olmayacak. Gözlerimi bağışlıyorum, dünyanın güzelliklerle dolu olduğunu görerek mutlu olanlar için. Kalbimi bağışlıyorum, seven kalplerin yalnız kalmaması için. Akciğerimi, böbreklerimi, karaciğerimi, tüm organlarımı bağışlıyorum, başkalarının yaşamını kurtarmak için"* ifadeleriyle organ bağışının önemine vurgu yapılmış ve kamuoyuna, "Benim en büyük mirasım organlarım" şeklinde anlamlı bir mesaj verilmiştir. En sonda verilen söz esnasında giden bir adamın ardından kalan ayak izleri yansıtılmış ve böylelikle iyi bir iz bırakılması gerektiği mesajı verilmiştir.

Kan Bağışıyla İlgili Kamu Spotlarının Söylem Analizi

İnsanın başına gelmeden kan bağışının önemini çok net anlamayacağı üzerine kurulu spotlarda, 'bugün ona yarın sana' şeklinde bir mesaj verilerek herkesin kan bağışında bulunması gerektiği ifade edilmektedir.



Kamu spotu 29

Kan bağışına vurgu yapmak amacıyla "Hiç aklıma gelmedi" başlığıyla verilen spotta, iki adamın *'Hiç aklıma gelmedi başıma geleceği. Bir eşe, dosta da gerekmedi. Yani aklıma gelmedi. Ama şimdi hiç aklımdan çıkmıyor"* ifadeleri kullanılarak en başta neyden bahsettikleri verilmeyerek kamuoyunun merak etmesi sağlanmıştır. Daha

sonra yansıyan seste *"Küçük bahaneler, büyük iyiliklere engel olmasın. Türk Kızılay'ına kan bağışı yapın, hayat kurtarın. Unutmayın bağışlanan her kan kurtarılan üç can"* ifadeleri yansımaktadır. Burada kan bağışının ne kadar önemli olduğu ve her insanın bir gün kana ihtiyaç duyabileceğinin bilinmesi gerektiği uyarısı yapılmakta ve bu nedenle kan bağışının yapılması gerektiği ifade edilmektedir.



Kamu spotu 30

"Korkuyorum" başlığıyla verilen spotta iki farklı durum ifadeler vasıtasıyla karşılaştırılmıştır. İlkinde genç bir kadın, kan vermemek için *"Korkuyorum. Kan vermek denince aklıma iğne geliyor. Canım acıyacak diye çok korkuyorum maalesef"* şeklinde sunmuş olduğu küçük bahanelere karşılık hasta yatağında yatmakta olan yaşlı bir kadının korkusu ise, *"Korkuyorum, çocuklarımı, torunlarımı göremeyeceğim diye çok korkuyorum"* şeklindeki ifadelerle yansıtılmıştır. İğneden korkan genç bir kadına karşılık ölüm korkusu yaşayan yaşlı bir kadının korkusu daha önemli gösterilmiştir. Spot, "*Küçük bahaneler büyük iyiliklere engel olmasın! Türk Kızılay'ına kan bağışı yapın, hayat kurtarın. Unutmayın bağışlanan her kan kurtarılan üç can"* ifadeleriyle son bulmuş ve hayat kurtarmakta kan bağışının önemi bir kez daha vurgulanmıştır.

Çevreye Karşı Duyarlılıkla İlgili Kamu Spotlarının Söylem Analizi

Çevreye karşı herkesin bir sorumluluğunun olduğunu anlatan spotlarda, çevreyi temiz tutmanın önemi, enerjiyi tasarruflu kullanmanın gerekliliği, çevreye zarar verilmemesi gerektiği gibi konular üzerinde durulmaktadır.



Kamu spotu 31

Çevre sorumluluğuyla ilgili hazırlanan spotta, *"Dünyamızı seviyoruz ama dünyamızı koruyabiliyor muyuz? Yaşamın doğal bir dengesi vardır. Bu dengeyi buluyoruz. Sonra onu yok ediyoruz. Zaman hızla akıp gidiyor. Eğer bu sorumluluğu taşıyabilirsek gelecek nesillere dengesini yitirmemiş bir dünya bırakabiliriz. Dünyamızı korumak için gelin sorumluluklarımıza sahip çıkalım. Geleceğiniz için, temiz bir dünya için üreticiler ve tüketiciler birlik olalım. Sizce sorumluluk alma zamanı gelmedi mi"* ifadeleri dikkat çekmektedir. Özellikle 'Sizce sorumluluk alma zamanı gelmedi mi?' ifadeleri görsel olarak yansıtılan çöp yığınlarıyla ardında bulunan gençlerle desteklenmiştir. Çevreye karşı duyarlı olunması gerektiği ve bu gerekliliğin geleceğe temiz yarınlar bırakmak adına çok önemli olduğuna işaret edilmiştir.



Kamu spotu 32

Enerji tasarrufu ile ilgili olan spotta, enerjinin verimli ve tutumlu kullanımı sonucunda ülke ekonomisine nasıl katkıda bulunabileceği, ev hanımının ev içinde uygulamış olduğu enerji tasarrufu üzerinden anlatılmıştır. Ev hanımının ağzından anlatılan tasarruf önlemlerinde kadının ev içindeki rolü de tam olarak yansıtılmıştır. Ev hanımı enerji tasarrufu için önlemleri, *"Evinizde yapacağınız küçük uygulamalarla büyük kazançlar elde edeceğinizi biliyor musunuz? Çamaşır makinenizi tamamen doldurup çalıştırın. Elektriğin akşam 10'dan sabah 6'ya kadar daha ucuz olduğunu unutmayın. Gereksiz yanan lambaları söndürün. Elektrik süpürgenizin torbasını sıkça boşaltın. İşiniz bitmeden beş dakika önce ütünün fişini çekip mevcut ısıyla devam edin. Fırınınızı pişirme*

süresinden birkaç dakika önce kapatın. Bulaşık makinenizi tam doldurup çalıştırın. Buzdolabınızın kapağını uzun süre açık tutmayın. Televizyonunuzu düğmesinden kapatın. İşte bu kadar basit. Hem ailenizin hem Türkiye'nin ekonomisine katkı yapmak elimizde. Biz kadınlar için küçük Türkiye için büyük bir adım" şeklinde sıralayarak bir eğitme süreci söz konusudur. Spotun sonunda 'enerji hanım' şeklinde bir amblem de kullanılarak tüm ev hanımlarının bu şekilde davranmaya davet edilmektedir.

SONUÇ

Kamu spotları yaygın eğitim açısından önemli bir işlev üstlenmektedir. Ülkenin sorunlu görülen alanlarına ilişkin arak hazırlanan spotlar, medya aracılığıyla geniş kitlelere ulaştırılmakta ve eğitim yoluyla sorunların çözümü amaçlanmaktadır. Farklı konulara ilişkin 32 kamu spotunun incelendiği çalışmada, bu spotların içeriği bakımından didaktik, sorunlu alanlara ilişkin önerilerde ve uyarılarda bulunan, zaman zaman da korkutucu, risklere dikkat çeken bir söyleme sahip olduğu saptanmıştır.

Genel anlamda bakıldığında kamu spotlarının bazı konulara dikkat çekmek için eğitme ve yönlendirme işlevini yerine getirirken, bilgilendirme ve ikna etme taktiklerini uyguladığı görülmüştür. Bilgilendirme taktiğinde, çok fazla duyguya seslenmeden sadece var olan durumla ve olması gereken durumla ilgili bilgi verilmiştir. İkna etme taktiğinde ise, toplumun hassasiyet gösterdiği, rahatsız olduğu sorunlu konular duygusal yöntemlerle dile getirilmiş ve izleyenlerin tutum ve davranış değişikliğini sağlamaya yönelik müzik, söz, veciz ifadeler gibi ikna yöntemlerini içeren söylemler kurulduğu görülmüştür.

Eğitimle ilgili yayınlanan kamu spotlarında eğitimin kız ve erkek ayrımı yapmadan herkesin hakkı olduğu, ideal bir geleceğe herkese yönelik bir eğitim anlayışıyla kavuşulabileceği vurgusu yapılmıştır. Kız çocuklarının okutulmasının gerekliliği üzerinde durulmuştur. Trafikle ilgili spotlarda ana tema sürücülerin dikkatsiz ve tedbirsiz davranışlarıdır. Ekmek israfıyla ilgili hazırlanan spotlarda, ekmeğin bazı insanlar tarafından bulunamayan bir nimet olduğu ve israf edilmemesi gerektiği belirtilmiştir. Sigara alışkanlığıyla ilgili kamu spotlarında bireyin kendi sağlığına vermiş olduğu zarardan çok , sevdiği insanlara özellikle çocuklara yönelik sağlık tehdidi öne çıkarılmıştır. Şiddetle ilgili kamu spotlarında, şiddetin ailenin tüm bireylerine zarar verdiği, bu nedenle de engel olunması gerektiğinin altı çizilmiştir. Sosyal yardımlaşmaya yönelik kamu spotlarında, kimsenin yalnız ve çaresiz olmadığı üzerinde durulmuştur. Fiziksel ve zihinsel engellilerle ilgili hazırlanan kamu spotları bir moral ve motivasyon niteliği taşımakta ve onların yaşamlarını kamusal alanlarda da kolaylaştırılmasının gerekliliğine dikkat çekilmektedir. Kamu spotlarının en çok kullanıldığı alanlardan biri sağlıktır. Özellikle anne sütünün öneminin vurgulandığı spotlarda, herkesin başına gelebilecek hastalıklara dikkat çekilmekte ve önlem alınması gerektiğinin altı çizilmektedir. Organ ve kan bağışıyla ilgili hazırlanan spotlarda insan hayatı kurtarmak açısından organ bağışının önemi, kan bağışının da gerekliliği belirtilmiştir. Çevre duyarlılığıyla ilgili verilen spotlarda, çevreyi temiz tutmanın önemi ile ona zarar verilmemesi ve enerjiyi tasarruflu kullanmanın gerekliliği gibi konular üzerinde durulmaktadır. Sonuç olarak, çalışmayla yapılan analiz sonucunda kamuoyunu bilgilendirmek amacıyla hazırlanan tüm kamu spotlarının hem eğitici hem de yönlendirici işlevi taşıdığı görülmüştür.

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CONTRIBUTIONS OF VILLAGE INSTITUTES TO SOCIAL STRUCTURE AS AN ENCULTURATION INSTRUMENT

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INTRODUCTION

Education had priority in government policies in the Early Republican Period. The idea of creating contemporary individuals and a contemporary society in accordance with the principles of the Republican administration and the nation-state ideology was one of the objectives lying at the bottom of nation-building. (Ülkü, 2008). The purpose of establishment of village institutes was to make regulations in the economic and social structure of villages through education while struggling with the common illiteracy in villages. The desire to carry the endeavor of the country, which is in a struggle for modernization with the Republican revolution, to rural area led to the establishment of the institutes. Village institutes made great contributions to the regions they were established in the fields of education, culture, art and economy. While the institutes taught the villagers how to read and write, introduced technological innovations to the villages and provided a modern agricultural structure, they also raised nation awareness of the villagers in the framework of a cultural education model by cutting loose the conventional ties in rural areas, breaking the feudal structure and wiping out the efficiency of traditional dominant structure. Village institutes, which can be defined as the reflection of the Republican village project of Atatürk, were the project of "Grassroots Development" of the Turkish State. They were established under the aegis of İsmet İnönü, the Prime Minister of the current period, by Hasan Ali Yücel, the Minister of National Education, with the efforts of İsmail Hakki Tonguç with the intention that primary school graduate intelligent children would be trained in these schools and go to villages and work as teachers considering that almost entire Anatolia lacked schools or teachers. The most important fact about village institutes is that they were institutions emerged as a result of trials, which Turkey achieved naturally and compulsorily for the education problem, and joint efforts (Meydan, 2012, p.90-91). The young Turkish Republic had important motives to open these schools according to the current conditions. The philosophy of village institutes was to train teachers of village origin who could be beneficial for villages with pruning shears, picks, shovels, etc. in their callous hands rather than pencils and books (Akyüz, 1994, p.339). The need for raising the awareness of Turkish villagers, who held an important place in winning the War of Independence, through the institutes and making them gain the qualification of "**Republican Citizenship**" was one of the leading motives.

It was aimed to introduce village people to the republican regime and make them participate in the modernization process (Akşin, 1989, p.428). Village Institutes Law was enacted on 17 April 1940 during the ministry of H.Ali Yücel and institutionalization was provided (Yamaner, 1999, p.136).

The New Republican Government aimed to take urgent measures to solve the education problem standing in front of modernization and resorted to invite experts from abroad and determine the situation. In 1924, the American educator J. Dewey was invited. Dewey stayed in Turkey for 2 months and prepared a report about the structuring of education (Dewey, 2010, p,1). Following these studies, village institutes project was put into practice in order to raise a new intellectual type having a way with the villagers to solve not only the literacy problem but also the problems such as fighting against contagious diseases, saving production from primitive techniques (Erdal, 2013).

A- Village Institutes as an Enculturation Model and Culture Policies

What lay behind village institutes, primary objectives of which were development of the new social values, creating and developing the national culture, specialization of economic life and increasing the production and performance, was the republican ideology having the idea of "foundation of culture centers everywhere in order to secure the national unity by remolding millions of people living in Turkish territories in Turkish culture. The nation-state, achieved after uphill struggles in battlefields, was now face to face with the fight of becoming a nation with its land and the sociological fight of being a human with its people (Kafkas, 2008, p.42).

Educational institutions especially in the East had great responsibilities for the inclusion of citizens from every origin in the awareness of "Turkishness", which is an unbreakable whole. The focus of culture policy of Hasan Ali Yücel, the National Education Minister of the period, was the attempt to introduce the most famous literal and philosophical works into Turkish in order for the modernization to be based on strong foundations. The international and national policy of Hasan Ali Yücel was based on the grounds of;

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a) Recognizing, understanding and respecting all the nations of the world; b) Reaching universal cultural resources without being captured in a closed culture; c) Not having race, religion, language and class discrimination among citizens. The state equipped schools with technical facilities, capital and immovable properties and sent teachers to make radical changes in villages. The environmental change desired to be realized through the institutes was not a superficial change, but changes in social and natural environment, human relations, education life and basic structure. The institutes became successful as they were a whole (Başgöz,1999, p.229).

B- Culturally Targeted Objectives of the Education Policies Implemented in the Institutes

1. It was necessary for masses of people to pay attention to their longings and expectations shaped in their own culture for the settlement of the culture created by contemporary technology and developments. The new cultural activities were required to be qualified to meet this demand. Use of folk based proper artistic habits of their own culture and the elements of universal art in education was the most important objective in village institutes to influence the healthy development of the individuals and the society.
2. While aiming to reach universal education and culture, paying sufficient attention to local values, developing public values, which had a long history, with universal standards in education and reintroducing them to public with their contemporary structuring were considered as a socio-cultural requirement.
3. Training well-equipped institute students, who would transmit this cultural structuring to villages, was adopted as a compulsory duty in terms of culture and education policies. In terms of education, it was aimed that students actually experienced these cultural activities, learned them by "doing-experiencing" and including them in their life and were trained in this way (Özyüksel, 2007).

Education had an important role and function in the change and development of social structure as a social development instrument. Village Institutes were an educational and cultural movement fed on socio-economic conditions specific to Turkey (Şeker, 2014).

C-Fields on Which Village Institutes were Effective as a Cultural and Educational Model

1. Their Effects in the Field of Education and Training

*Development of problem solving skills related to current moment and environment,
* Creation of a democratic environment for education and training by giving responsibility and authority to everybody in an expedient environment,
* The village institute implementation becoming an "ecole",
*Preference of educational principles tested in village institutes in modern teacher training schools (learning by doing-experiencing),
*Revealing the necessity for teacher candidates being connected with villages,
*Orientation to educational campus construction integrated with nature instead of big cities,
*Establishment of gender equality through coeducation successfully implemented in village institutes,
*The principle of "equal opportunity in education" implemented in village institutes being included in the primary objectives of national education.

2. Their Effects in the Field of Culture and Art

*Reaching the public resource, revealing the creativity and cultural values of the people through the institutes,
* Folk dances, folk songs, language and art of people spread country-wide through collective works between the institutes and created a new basis for folk culture.
* Public-intellectual classification disappeared and "public intellectuals" were started to be raised.
* Providing reach to "national" by revealing the values of nature, culture and history belonging to immediate environment.

3. Their Effects in Social and Economic Fields

*The riches of Anatolia were protected and the principle of "total independence" was tried to be realized with a sense of development based on work through village institutes.
*The institutes provided the formation of an intelligentsia coming from the public and became the symbol of "public revival" in a sense (Özyüksel, 2007).
*The education given in the field of agriculture and livestock breeding led them to be reflected as a means of livelihood.

D-Principles Constituting the Education System of Village Institutes

1. Holism:
The village institute system targeted the entire village life.
2. Versatility
Village institutes were based on the implementation of artistic-cultural training highlighting individual differences and capabilities as well as vocational training.

3. Coexistence of Theory and Practice
Prior to every action and activity in the institutes, there was thinking, theory and planning. The implementations were performed going through these phases in accordance with the plan.
4. Coeducation
Coeducation in the institutes was perceived as maintenance of village life in its own nature and girls were also given a role in management and leadership.
5. Being Planned
6. Reaching Universal Culture from Local Culture
In the institutes, village based authentic cultural materials were retreated with universal principles, methods and means. Folk melodies, dances and literature materials were reformed with advanced techniques. World classics translated by the ministry being taught primarily in village institutes and presence of at least one hour reading time every day provided opening to national and universal culture starting from immediate environment. Higher Village Institute pioneered it with "the Journal of Village Institutes" (1945- 1947) it published.
7. Productivity
Students' learning by seeing, experiencing and practicing was the basic philosophy of village institutes.
8. Use of Technology
Village institutes aimed the use of the most advanced technology especially in agriculture and daily life while giving service to villages. Thus, acculturation of students about the new technology was realized.
9. Self-management
In village institutes, the students were required to be given individual and social roles in class, at work and in life. The administrative tasks were given by turns and for a short time to avoid some students' being managing and some being passive and managed and "the concept of managing and managed" was targeted.

E. Higher Village Institute:
The most important of village institutes was Hasanoğlan Higher Village Institute. Playing an active role in the organization and development of the new education system as well as being in the Capital Ankara made Hasanoğlan Higher Village Institute, which was the brain and hearth of the institutes", important. Hasanoğlan Higher Village Institute was founded to train lecturers or inspectors for the institutes (Pınarcı, 2013). The students studying in Higher Village Institute had the right to select one of the eight branches below (Atakul, 2008).

Fine Arts (Both for female and male students),
Construction branch (For male students), Mining affairs branch (For male students),
Animal husbandry branch (Both for female and male students),
Poultry raising branch (Both for female and male students),
Field and garden agriculture branch (Both for female and male students),
Agricultural management branch (Both for female and male students),
Handicrafts and domestic crafts branch (For female students)

This three-year Higher Institute gave its students the opportunity to specialize in one of these branches. The students needed to make an academic research in order to graduate from the Higher Village Institute. This thesis-like research was performed on issues related to village and village education. These studies, prepared by the students, were published later and provided for the use of all Institutes (Dündar, 2000, p.61).

F. Closure of Village Institutes:
National identity change in 1945 and later on affected Village Institutes as well. With the development of Institute construction, resistance of traditional community leaders, who thought that the social structure and accordingly the statuses would change and economic interests could be damaged with the introduction of the new school in the village, was encountered. Some beys, landowners and cult leaders felt uncomfortable about the situation because the village teacher returning to the village awakened the villagers and provided enlightenment (Kafkas, 2008, p.69). The new system gave additional duties not only to the employees of National Education Ministry, but also to the relevant people in the other ministries (especially governors of sub-districts, districts and provinces). These new missions required to work both fast and very hard. Those who could not keep pace with working in such a discipline were producing negative criticism. Democratic behavior of those trained in village institutes could also create debates. There were also some negative conditions to obstruct the achievement of the system and to facilitate the work of antagonists apart from the stated reasons. Some of these adverse conditions can be listed as being in the war years, the situation's not being suitable in terms of the village and villagers, the resistance of people to leave their habits.

G. Foreign Assessments of Village Institutes:
The famous American educator, Dewey said "The schools in my dreams have been founded in Turkey" for Village Institutes. The American educator, Dickerman said that Village Institutes were a unique breakthrough

and Turkish education system needed to be developed in this way. One of the foreign educators making research on Village Institutes and Tonguç was the American educator, Kirby. He prepared his work titled "Village Institutes in Turkey" as a doctoral thesis in Columbia University. The American educator stated that Village Institutes were not a copy of Western educators' ideas and systems and these institutions were the solution reached as a result of researches performed since Mahmut II through educational searches of Turkey without looking after political interests. In his article titled "Contribution of Turkey to the Education of our Century", Hausmann from Hamburg University evaluated Village Institutes as "They found the unique way appropriate to their own conditions while maintaining their efforts to determine their direction according to European samples. As a component element of the idea of changing villages through education, the whole of it is of Turkish origin. It is a contribution of Turkey to the education of our century with this feature (Atakul, 2008).

CONCLUSION

"Village Institutes", a Cultural Education Model, were an educational and cultural movement fed on socio-economic conditions unique to Turkey (Şeker,2014). Tonguç, the Minister of National Education of the time, stated the purpose of Village Institutes as "increasing the educational level of large masses of people in accordance with the Populism principle of Atatürk and so creating the necessary conditions for the establishment of Atatürk's Revolutions, providing active participation of public in political, economic and cultural life and raising the awareness of public about their rights. In Village Institutes, in order to influence the healthy development of the individuals and the society, it was aimed to use the proper artistic habits of their own culture depending on the source of folk and the elements of universal art in education, the activities performed in the institutes were presented to the immediate environment as a whole, people's learning while having fun and cultural revival of the village were realized with the contribution of artistic events held. The principal mission of Village Institutes was to raise individuals understanding, questioning and adding meaning to their life by producing as a result of these through acquisition of their own awareness with this education model. They provided heading towards social consciousness from individual consciousness. Village Institutes implemented human, democracy and art education as a whole. Consequently, Village Institutes pioneered the start of secular education and helped the formation of trained, skilled labor for industry. They started the transformation from patriarchal society to nuclear family society. They constituted the institutional infrastructure for a democratic society and culture. They pioneered the start of democratic and productive education raising questioning individuals away from root learning (Gökçora, 2007).

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BİR ÖĞRETİM METODU OLARAK DİYALEKTİK YÖNTEM -ŞARTLI KIYASLAR BAĞLAMINDA-

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BİR ÖĞRETİM METODU OLARAK DİYALEKTİK YÖNTEM

-ŞARTLI KIYASLAR BAĞLAMINDA-

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Çelişkili yollardan muhatapları etkileyip ikna etme veya tartışma sanatı olarak tanımlanan diyalektik yöntemin Antikçağ'daki en yetkin hali "Sokratik Yöntem" olarak kabul edilmektedir. Sokrates'in diyalektik yönteminin hedefi, onu bir araştırma metodu olarak kabul ederek tartışma yoluyla doğru bilgiye varmaktır. Diyalektik yöntemi bir öğretim metodu olarak ilk kez kullanan da yine Sokrates'tir. Ona göre bir öğretmenin görevi öğrencide zaten var olan bilgileri hatırlatmaktan öte değildir. Sokrates, hiçbir matematik eğitimi almamış bir köleye, geometri teoremi çözdürerek ona aslında bildiğini anımsatmış ve hakikat bilgisini tekrar elde etmesine yardım etmiştir. Üç aşamadan oluşan ve fikirleri derinlemesine incelemenin bir yolu olan Sokratik yöntemin ilk aşamasında kişiye sorular sorularak neyi bilip bilmediği tespit edilir. İkinci aşamada ironi yani alay yoluyla kişi varılmak istenen düşünceye yönlendirilir ve üçüncü aşamada söz konusu fikir doğurtulur. Burada önemli olan nokta kişiye hiçbir bilginin dikte edilmemesi ve bilginin çıkarımlar yaptırılarak net bir şekilde muhatap tarafından dile getirilmesinin sağlanmasıdır. Sokratik yöntem günümüz eğitim sisteminde soru-cevap ve buldurma metotları olarak uygulanmaktadır. Aktif öğretim yöntemlerinden biri olarak kullanılan bu metodun amacı, kişiyi bildiği ve sorulan sorulara verdiği cevaplardan yaptığı çıkarımlar aracılığıyla bilgiye ulaştırmaktır. Doğru bilgiye ulaşmayı amaçlayan klasik mantığın en temel konusu olan kıyas türlerinden şartlı kıyasla diyalektik yani Sokratik yöntem arasındaki ortak nokta ise bilinen ya da ön kabul olarak zihinde yer alan bir bilgiden hareketle başka bir bilgiye ulaşma amacı taşımalarıdır. Şartlı kıyas uygulamalarında da, bir öğretim metodu olarak kullanılmasının yanı sıra, kişiden verilen bir bilgiden ya da öncüllerde belirtilmiş bir kayıttan hareketle doğru bilgiyi elde etmesi beklenir. Hazırlanacak olan bu tebliğde şartlı kıyas kullanılarak oluşturulmuş bir Sokratik yöntemin bilgi değeri taşıma açısından bir farklılığa sahip olup olmadığı, bu kayıtla kurulmuş bir yöntemin öğretim metodu olarak kullanılmasının daha etkin ve verimli öğretime ne derecede katkı sağlayabileceği araştırılacak ve belirtilen soruların yanıtları tespit edilmeye çalışılacaktır.

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Keywords: Sokrates, Klasik Mantık, Şartlı Kıyas, Diyalektik.

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BODY IMAGE AND SELF-ESTEEM THROUGH THE SCHOOL CURRICULUM

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ABSTRACT
The paper deals with body image – the area with increasing concern for children – both girls and boys, parents, teachers, psychologists and all educators. The growth and the power of social media bring the pressure on young people with unrealistic image of beauty. We draw attention to the school curriculum and try to find and offer valuable place for all related issues (knowledge, understanding, attitudes and skills). We will discuss the content of body image curriculum and provide statistics in relation to body image. Encouraging the development of positive body image in young people has a significant impact on their emotional wellbeing. The research in this area shows impact also on study results of children, positive participation, aspirations and positive classroom atmosphere.

INTRODUCTION

What is body image? Easy answer is – body image is how you see yourself when you look in the mirror or when you picture yourself in your mind. It encompasses your believes about your own appearance, your feelings about your body – your weight and height. We all have feelings about the way we look. As well as we all have ideas about how others think about our looks. Our body image is strongly influenced by beliefs and attitudes of society, the media and the peer groups around us. Having a positive body image means that we see ourselves accurately and we feel comfortable in our body. A person's body image is thought to be a product of their personal experiences, personality, and various social and cultural forces.

The term body image was first coined in the book *The image and the Appearance of Human Body* written by Paul Schilder, the Austrian neurologist and psychoanalyst in 1935 (Schilder, 2007). He meant an image that we all develop and maintain as an essential part of our identity: the sum total of our perception and feelings about the looks and attractiveness of our own body. The concept of body image is used in different areas – psychology, psychiatry, medicine, philosophy, cultural studies and gender studies. There are various conceptual, methodological, protective, preventive and practical issues, which need immediate research.

The term is often used in the media. Many girls and young women compare themselves to models in films, ads and fashion, and try to be closer and closer to them in physical attractiveness. The pressure in the culture, fashion and other media on thinness can be psychologically detrimental to the well being of young people (Šramová, 2014). The researchers and health professionals are directing their attention to boys as well. The messages are so strong and powerful that they affect young people long before they are exposed to fashion or beauty ads. Many teachers confirm that nine- to twelve-year- old girls said they wanted to be thinner. It's because the vision we have of our own body plays fundamental role in our relation to ourselves, to our fellow human beings and to the entire world around us. The perception of us may result either in satisfaction and dissatisfaction. Researchers seem to agree that dissatisfaction with one's body is multidetermined (Crespo et al., 2010). The level of body satisfaction determines the degree of one's body confidence, body esteem, and body dissatisfaction. Two people could appear identical but due to a combination of biology and experience, one may experience negative body image while the other has positive body image.

According to the Education Act of Slovak republic No. 245 from 2008 (ISCED 1- lower primary education, ISCED 2- upper-primary education, ISCED 3- secondary education), the aim of education is to enable students to: …." Learn how to develop and cultivate their personality and lifelong learning…., and ……"learn to control and regulate their behavior, take care and protect their health and the environment and to respect the universal human ethical values".
The primary education curriculum (grades 1-9) includes 7 learning areas (language and communication, mathematics and information technology, nature and society, man and values, man and the world of work, art and culture, health and movement). There are also cross-curricular themes that serve to extend the subject content matter. The contents can be included in the individual subjects, organized in the form of courses or offered as optional subject. The cross-curricular themes are: personal and social development, environmental education, media education, multicultural education, safety education in traffic, life and health protection, project development and personal skills, regional education and traditional folk culture.

New curricula give the teachers and subject commissions the possibility to adapt the educational programs to the conditions of individual schools and teachers. Teachers are free to use the teaching methods and textbooks of

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their choice (from a list approved by the Ministry of Education). This enables the issues of body image and self-esteem to run through most of the core themes. The teachers can mention the body image not only explicitly but they can offer also implicit learning.

THE STUDY

Body image is usually measured by asking the subject to rate their current and ideal body shape. The difference between these two values is the measure of body (dis)satisfaction. Currently from 40 to nearly 100 instruments for the measurement of body image exist (Thompson, Altabe, Johnson, & Stormer, 1994).

The researches indicate that exercise-based interventions and psychotherapeutic interventions are effective at improving body image of the individuals. The parental and familial factors also exert strong influence on the positive or negative body satisfaction of the children. Increased sense of general social pressure to have an ideal body, frequent teasing by parents and peers, parental values and quality of relationship are some of the factors that contribute to the level of body satisfaction (Tiwari & Kumar, 2015). The individuals may be protected from negative body image by increasing their individual resilience (Peplau et al., 2009). As Vancu (2014) states encouraging the development of positive body image in young girls and boys can have a significant impact on their wellbeing and health. Poor body image can significantly affect health and wellbeing and is an obstacle to effective learning, participation, aspirations and attainment.

METHOD

Participants came from a sample of 1st grade teachers (N=182). Participants included 175 women with average age of 35.7 years. The 12-question self-constructed questionnaire was completed via the online survey realized during March 2015.

The aim of the survey was to explore:

- how important they feel body image is for their pupils?
- how useful they have found resources they have used so far?
- how they could be better supported in promoting positive body image as part of the school curriculum?

FINDINGS

- 85% of teachers agree that attractive children are more popular, both with classmates and teachers,
- 91% of teachers felt that body image has the most impact on pupils in year 3 and 4 (8-10 years old),
- when delivering body image lessons 89% of teachers teach all pupils together, regardless of gender,
- 94% of teachers felt that the lessons on body image delivered in their school have had a positive impact,
- the majority of lessons on body image were provided solely by a teacher (78%) as opposed to an external practitioner or a combination of both,
- 100% of teachers try to provide a safe learning environment for all pupils although 78% of them are not sure whether they reach this aim,
- 89% of teachers consider providing the knowledge education about body image the most important, then attitudes and then skills,
- in 25% of cases, the teacher delivering the lessons on body image lacked confidence in delivering them,
- 85% of respondents felt that body image has an impact on the wellbeing of their male pupils, versus 95% of teachers who felt that body image had an impact on the wellbeing of their female pupils,
- 100% of teachers have familiarized themselves with the school policies and procedures before teaching lessons on body image,
- 91% of teachers use images as a powerful way of conveying messages to pupils,
- 85% of teachers use less formal setting (sitting on the carpet, sofas, beanbags rather than desks and chairs).

Issues teachers asked for more support on are : body image for the disabled, gender identity issues, guidance about working with BME pupils, issues concerning on gender and sexuality. Our teachers consider as effective teaching approaches: group work, draw and write activities, circle time, role play, using photographs, micro-debating, storytelling, activity days / weeks and using “visitors”. According to Hamranová (2013) group work, draw and write activities are the most effective technics used in all trainings or social-psychological activities in 1st grade of primary school. There are always the questions, which pupils may wish to explore, but which they feel uncomfortable asking in front of the rest of the class. In this situation the teachers support the pupils via an anonymous question box. Although there are inherent risks with using external visitors / speakers, teachers often ask for help school psychologists or social workers. Working with parents is always helpful, the school can share information, advice and sources of further support on its school website or while regular meetings with parents.

CONCLUSION

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Schools have great position to support girls and boys in positive wellbeing, higher self-esteem and body confidence. Our school curriculum and school environment offers the possibility to promote the development of positive body image, what leads to effective learning about healthy lifestyles. The space for providing positive body image teaching and learning is within the educational area Health and movement. Pupils develop abilities and acquire knowledge, skills and habits, which are a part of a healthy life style. They should acquire skills and habits for effective spending of their leisure time and at the same time knowledge on health effect of the skills and habits adopted. Some schools offer "advanced" social and psychological trainings for pupils during the whole school term with the accent on developing of positive self-esteem. The body image curriculum should be in the hands of every elementary school teacher. Children should be taught from early school years to recognise and resist unhealthy pressures and messages, and to be motivated to make choices that will increase their health, well being, body image and self-esteem. There is a need to change an approach from "thin ideal" or "body mass" to "health-enhancing behaviours" which teaches children to care instead of compares their bodies.

Teachers are trained to be able to develop learners' key competences. The training activities of pedagogical and non-pedagogical employees are being organized with aim to develop professional skills and to support the development of educational programs in schools. Continuing education is an important part of professional development for teachers.

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BRAND BUILDING OF A UNIVERSITY AS AN INTEGRAL PART OF THE EDUCATIONAL PROCESS

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ABSTRACT
In relation to the quality management of universities it is necessary to follow and strategically manage indicators that formulate (measure) not only international rankings (QS World University Rankings, U – Multirank, etc.) but also national indicators because these are often linked to financing of particular universities. University reputation among its stakeholders is one of the major indicators, too. This paper deals with the results of the primary survey (qualitative and quantitative) analyzing the impact of various factors on perception of the image of universities in the Czech Republic and it has designed a model of brand building in the key "moments of truth" from the period when an applicant develops their interest in study, through the educational process, to the work with the alumni and the co-operating entities in order to create a positive image.

Silinmiş: the

Silinmiş: till

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INTRODUCTION

Modern forms of quality assurance came into the European higher education from the United States where they had been developing since the 1950s and 1960s in reaction to the need of establishing some autonomous quality assurance mechanisms. Western Europe acquires its first experience with the new way of external quality assurance in the 80s, Central and Eastern Europe in the 1990s. In each European country, the system of external quality assurance was brought to life in its own peculiar way and with regards to different historical experiences, culture and traditions of its higher education it has crystalized into various forms. (Kudrová, Smrčka, 2013) According to a differential role of the state, centralized and spontaneous systems of external quality assurance can be distinguished. The centralized systems are formed in the direction from above as a state's regulatory tool. The outcome of evaluations is usually an accreditation granted by a state authority (ie. by the government or a ministry).

The spontaneous systems of external quality assurance are formed in the direction from below usually as a result of the efforts of higher education institutions to prove their quality by means of an external authority, the aim of which is to gain an advantage over institutions without a similar proof of quality. These systems are typical for the plurality of quality-assuring agencies with different levels of provided services, with a relevant specialization, as well as with the regional anchoring.

This development is symptomatic for the entire European scene which is in this case not only the EU but the countries of the European Higher Education Area (EHEA). The Europeran Association for Quality Assurance (ENQA), established in 2000, is the most influential association among accreditation agencies. Five years later, the key document was drafted by the ENQA called the Standards and Guidelines for Quality Assurance in the European Higher Education Area (abbreviated as ESG). The Standards and Guidelines for Quality Assurance in the European Higher Education Area define three levels of standards: 1) for the internal evaluation at a university, 2) for the external evaluation, 3) for the standards that must be met by accreditation agencies.

The centralized quality assurance systems were in the Czech Republic until 1999 provided under the Ministry of Education. Upon the amendment of the Act on universities, this function was passed onto accreditation committees. However, the subject of this article is the analysis of the spontaneous system of a university, ie. factors influencing the quality of a university and its perception among its stakeholders.

The quality of education is closely related to the quality of studies. In the discussion about the quality of studies, Witzany (2002) draws attention to the link between studies and the quality of an educational process, ie. with the mediation of knowledge, its clarification and verification. An educational process provided by a university

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department has basically three types of clients: Students who come to the university with a demand to acquire required higher education, employers whose priority is to take on graduates prepared for the practice, and the state which within the Czech public education system becomes the only paying client. The quality becomes then predicated by so called outputs, and these are not only numbers of graduates, statistical criteria, but also their knowledge, competences which should represent one of the benefits of such studies as well as of the objectives of the same. These outputs are consequently compared within the country as well as internationally.
Among the global rankings of higher education institutions there is among others QS World University Rankings. QS WORLD UNIVERSITY RANKINGS is operated by the QS Intelligence Unit with its seat in London, where the requested data are sent. Roberts (2001) mentions two fundamental Barnett's axioms from which the evaluation of the quality of higher education stems. The epistemiological axiom is the assumption of certain "quantity" of objective knowledge with which students should be familiar and which they should demonstrate with confidence.
The other axiom is based on the assumption that objective knowledge is developed and spread provided the fact that educational instutions are relatively autonomous and the academic community is relatively free. This axiom is affected by relations of the state to its educational institutions. Many questions may be implied from these assumptions that include for instance the issue of setting the objective criteria for evaluation of individual subjects and programs or the internal and external quality assurance. It is obvious that setting the quality criteria for the evaluation of education is more demanding than in the case of the quantitative criteria. The QS Ranking fully respects the mentioned axioms and thus it is partially based on the so called hard data and partially on the data of the two large global reputation surveys, this being between academics and employers – in essence it is a global "peer review" survey. Due to their weight in the final result (50%) of evaluated higher education institutions it is apparent that the reviewers put a great emphasis on the outcomes of both the large surveys.

According to (Barusman, Rama, 2014) Strong corporate reputation affects satisfaction (Lim et al., 2000; Andreassen & Lindestad, 1998). Image is an integral part of the reputation and is often used interchangeably with no clear difference between the two (Chun, 2005). Research conducted by Thomas (2011) reveals that the reputation of the university is able to improve the Student Satisfaction and Student loyalty by using two dimensions, namely; Perception of the general reputation of the university and Perception of study program reputation. Another study concluded that the image is an important role to customer satisfaction and customer loyalty (Wang & Wu, 2011; Ozer & Aydin, 2004)
Reputation of a university in all target groups is formed by a number of factors: the quality of education, employability of graduates, scientific achievements of the school's educators and other These parameters for creating not only the quality but frequently also the added value. The value adding schools their prestige, acknowledgment, which may be one of the decisive factors for the prospective applicants. If a university does not work as a credible, high-quality, well-functioning entity, its position in the Czech market becomes difficult. The reputation of a university, long-term building of a high-quality, scientific and compact unit are the guarantee for a well-established brand. From the perspective of a commercial product functioning, the brand is an important attribute which is relevant for the customer's decision. The individual themselves applying for university studies becomes a client of the university. They become clients for they are the source of finance and no school, nor any commercial entity, will work without finance. In numerous instances when students are accepted for university studies, they pay for the offered products (tuition at private schools). In the case of public universities, the financial subsidies are granted by the Ministry of Education, Youth and Sports (hereinafter referred to as the MŠMT), when in principle it is true that the number of students of a school reflects its financial entitlement. This is an allowance per student which is further multiplied by a coefficient of the demandingness of a study subject. The allowance is also established by the MŠMT and stems from the assumptions for financial demandingness of the place for assurance of a high-quality teaching. A simple example of a comparison of the brand significance in the public and commercial sector offers an important similarity in brand building. In the Czech Republic to this date there operate 44 private, 26 public and 2 state universities. That is 72 organizations in total campaigning for Czech and international university students applicants (MŠMT, ©2008-2010). Each entity in the market searching for their clients should nowadays consider loyalty of their clients to their products, building positive associations of the brand, building the brand value, image and other parameters which are the prerequisites of successful functioning of the brand within the market. There is a number of parameters which become analyzed by enterprises to be able to effectively plan and target their clients. The following article will focus on the analysis of the important factors for creating an image (reputation) of a university based on the analysis of the secondary data sources as well as the realized primary researches.
Within a decision-making as well as an educational process, there are many moments which form the applicant's and later student's experience. This is a valuable, frequently predominant indicator of satisfaction and loyalty, especially in services which are intangible, heterogenous, etc. In 1989 John Carlzon described them using an example of Scandinavian airlines (of which he was the director) as the MOT – Moments of Truth. His study

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became the basis for a two-phase system applying the search for the moments of truth in the sphere of higher education in the Czech Republic which was conducted in the second half of 2014.

METHODOLOGY OF THE STUDY

The aim of the survey was on the basis of a qualitative phenomenological research to define the process and moments of truth of a decision-making process of a university studies applicant (Perception of the general reputation of the university), and later to verify its results on the sample of 220 students of marketing communications at Tomas Bata University in Zlín (Perception of a study program). The third analysis relating to the issue of the image and its influence on brand building of a university was conducted for the representatives of the real world of business/enterprise practice. The results of the research conducted in commercial enterprises may become applicable for the area of educational institutions, and the impact of the brand building criteria may be deduced by means of a comparative method in general terms on brand building of an educational institution. Within the realized focus groups with managers of Czech companies, 23 essential attributes were identified impacting image building. Focus groups were conducted in 2010 by the authors. Based on the results of the qualitative research, further research was carried out when employees of Czech companies (n=367) were addressed with the CAPI method. The aim of the research was to analyze the impact of pre-defined attributes on image building. In 2015 another phase of the research was conducted with the aim to determine the shift in the perception of the attributes impacting on brand image building. With the CAPI method employees of Czech companies were addressed (n=109). The significance of the criteria in image building was demonstrated by means of Likert scaling.

This comprehensive view on the perception of the moments of truth and the factors impacting the applicants, students and the enterprise practice is the primary basis for setting a more effective brand-building of a university with regards to the specifics of study subjects, or other factors of the environment.

FINDINGS

The results analyzing the influence of individual factors on the perception of a university's image in the Czech Republic and the framing brand building model in the important “moments of truth” are structured in two parts. The first part interprets the results of the research with the group of applicants, and the second part with the representatives of the real world of business/enterprise practice.

For the qualitative part of the research, the respondents were chosen with one selection criterion for achieving heterogeneity of participants according to specialization of secondary schools, ie. so that the research was entered into by students of grammar schools, secondary specialized schools (technical schools as well as business schools) as well as secondary vocational schools. In total, 12 interviews were realized with 6 girls and 6 men aged 18 – 19. As was already mentioned above, the aim was to understand the subjective reasons and experience of the individuals, the influence of social, cultural and other factors and interactions between the individuals and the university environment. The scenario comprised of 3 basic phases of an interview:

1. The initiation process of a secondary school graduate (taking a maturita exam) – ie. the decision whether to go to university or into practice, their ideas about studying a university, and so on.
2. The process of choosing a particular university – reasons, motives, selection criteria, influences,
3. The factors impacting the perceived image and its communication tools.

The findings show that higher education for the young people means better employment, employability, higher pay, greater opportunities (experience, study abroad), and last but not least personal development in the field (especially in narrowly profiled schools – eg. graphics, medicine). Applicants expect that they will gain experience from the practice already during their studies at university. Based on the interview responses, we may speak about two groups of potential university students at the beginning of the last secondary school year. Those who have made their decision and have profiled know what study subject and school they will aspire after, and those who have made their decision to go to university, but have not profiled yet. Both the groups undergo the following information process which at first is passive from their side when they attend presentations and the cooperation with the university, they record achievements and successes of university students and graduates in PR reports etc. Then the ‘active’ phase follows when they are already interested in communication activities of the particular university (the Internet, promotional materials and events – fairs, open days). From the results it can be then recommended in what way to “show the direction” to prospective students, to present possible occupations and offer school as a plausible preparation for the exercise of the particular occupation.

An important thing for positive image building is to cooperate with teachers of technical subjects at secondary schools, to offer them eg. cooperation with universities, use of university laboratories so that secondary school students have the opportunity to “experience” the university environment. It is further appropriate to communicate employability of graduates and stories of the successful ones, or to support spreading positive references with current students, or within graduates' clubs, to involve employers of the graduates into communication. The given results are only inspirational. Due to the sample size and the character of the research method the findings cannot be generalized. Thus they were verified in the quantitative manner on the sample of

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219 applicants for university studies of marketing communications at Tomas Bata University in Zlín, when the aim was to verify especially the reputation, image of the particular study programs. The applicants reported employability of graduates, the quality of educators, the scope for personal development and the fruitfulness of students and graduates as the key factors for the choice of a university, which proved that it is not important to work "only" with the hard data, but that the "soft" data are necessary to be communicated, as well as emotive stories based on the real successes of students, graduates and teachers who are not only the source of competitive advantage but also of the particular school's references.

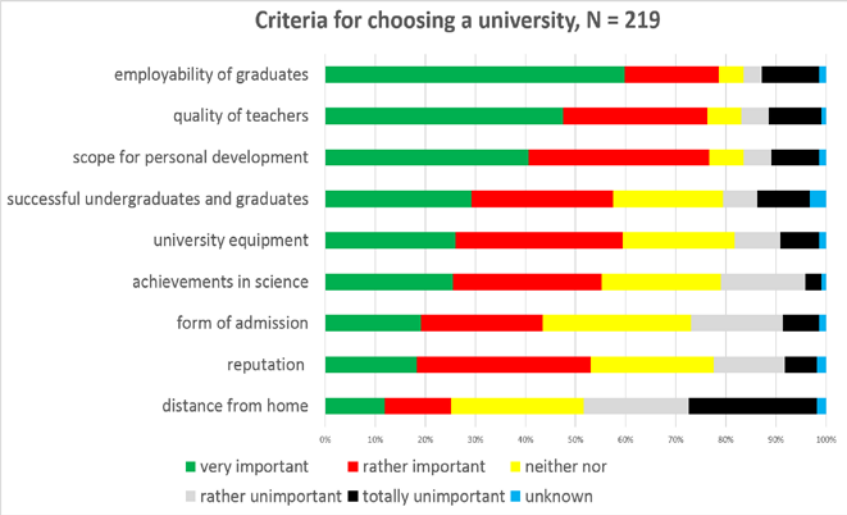


Table 1: Criteria for choosing a university

When asked about the primary source of information on the chosen university, one third of respondents stated that their source were their friends (among university students or graduates), education fairs (in 23%) and websites (in 21%). Social networks appeared as a priority only in 8% of respondents, however, their relevance has been increasing significantly in the phase in which the applicant gets actively involved into the student life at university.

The results for the applicants obviously show that the moments of truth are most significant in personal encounters (fairs, events, etc.) and references from students and graduates. Regarding the recommended communication, it is the information on employability, "quality of teachers", but also the scope for personal development of a student. A high importance is also attributed to emotional communication.

In the second part of the research, the managers of Czech companies responsible for image and communication building were addressed with the aim to verify what brand-building factors they regard as crucial, because it can be assumed that these will also be observed in potentially cooperating universities. By means of focus groups 23 essential attributes were identified which impact image building. Consequently, their perceived significance was verified in a quantitative research. These attributes are not perceived simply as good or bad, however, rather as more or less significant in the frame of benchmarking. A part of the perception of image building attributes are emotions which become utilized in the marketing communication tools. "Stories" related to the brand, the ability to show the brand as a part of a human life, to arouse emotions linked to the brand they all have a significant influence on image building and the client then perceives the brand by means of such emotions. Correctly selected emotions accompanying the brand may markedly enhance perception of the company's image and build a long-term relationship of clients to the brand.

In 2015 a research was conducted with the aim to determine the shift in perception of the general and corporate impact of the attributes on brand image building. Managers of Czech companies (n=109) were addressed with the CAPI method. The importance of the criteria in image building was analyzed in general as well as particular corporate environments. Likert scaling show the results of the survey.

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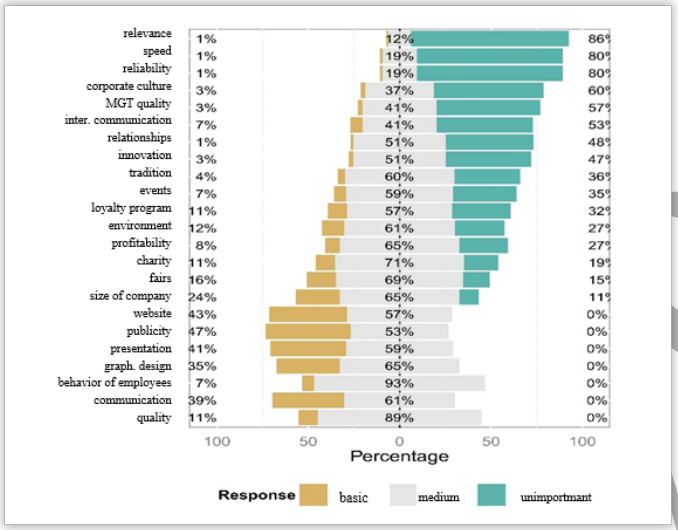


Table 2: Likert scaling of the importance of criteria in image building

The most important criteria for image building in general perception are: publicity, brand presentation, website presentation of the brand. All these criteria are part of public relations, therefore it can be deduced that public relations tools are crucial for brand image building.

From the survey in two stakeholders (potential students and potential employers) the factors were tested impacting the university image building and their relevance in the individual phases of the university brand-building. The results may profile a model for brand building based on the efficient management of relationships with the stakeholders in the moments of truth:

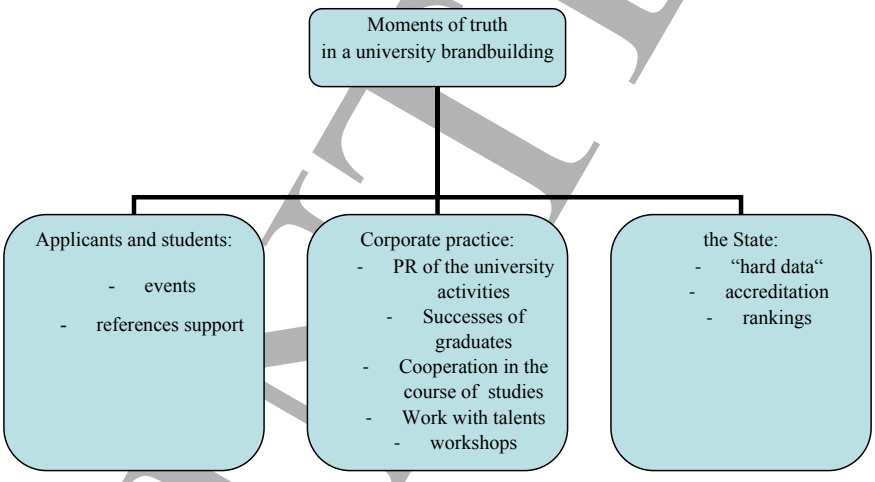


Table 3: Moments of truth in a university brandbuilding

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DISCUSSION

Service providers, with who the clients enter into direct interaction, become the face of the company. What the experience of clients with the services are and how satisfied they are with their quality is thus proportional to the quality of their encounters with the employees. They then become greatly responsible in terms of transmission of values, goals and the validity of promises which the company bound to observe. This is also the case of providing services in the field of higher education when an educational process works with 3 target groups. On the basis of the analysis of the moment of truths according to Carlzon, the options for efficient brand-building were uncovered for the management of tools and communication content – see the figure above. Managerial leadership according to Carlzon is an example of how important it is to delimitate the moment of truths in services. The feelings of clients and their experience with the service become equally significant. Universities invest considerable financial means into information systems and therefore setting an interim analysis of the moments of truth status in their modules becomes a possible solution and thus a considerable improvement of satisfaction and loyalty of the stakeholders may be achieved.

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BRIDGING THE GAP: ADDRESSING THE FIRST YEAR UNIVERSITY MATHEMATICS AND STATISTICS AT VAAL UNIVERSITY OF TECHNOLOGY, SOUTH AFRICA

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ABSTRACT
Vaal University of Technology (VUT) has developed a number of initiatives in order to deal with the delivery of first year mathematics and statistics courses (mathematics 1, mathematics 2 and quantitative techniques/statistics).Students entering Higher Education (HE) are often overconfident in terms of their projected academic performance yet lack the necessary mathematical skills. Hence, their confidence does not translate into automatic academic success. The Centre for Academic Development (CAD), Accounting Department (AD) and the Mathematics Department (MD) at VUT have implemented a variety of strategies to address these issues. This article is a response to the fast growing number of first year University students who are underprepared for mathematics and statistics modules at VUT. Outreach to surrounding high schools so as to promote interest in mathematics is recommended.

Key words: first year, mathematics, statistics, initiatives, centre for academic development.

INTRODUCTION AND BACKGROUND

Vaal University of Technology (VUT) was established in 1966 firstly as a College of Advanced Technical Education (1966-1979) then as Vaal Triangle Technikon (1979-2003). VUT has grown in stature as a higher education institution, drawing students from all over the country and abroad. It is one of the largest residential Universities of Technology, with approximately 17 000 students (www.vut.ac.za).
Students from disadvantaged educational backgrounds as well from privileged backgrounds generally enter Higher Education (HE) with insufficient knowledge and skills required for studying key areas such as mathematics (Paras, 2001; Howie and Pietersen, 2001).Underprepared students do not possess the necessary language or mathematical proficiencies required for HE or may have gaps in the foundational disciplines knowledge. University tasks present major challenges for the underprepared students (Hardman and Ng'ambi, 2003).

According to Greene and Foster (2003) approximately two-thirds of recent high school graduates enter HE each year underprepared academically for University-level material.

This article describes efforts by the Centre for Academic Development (CAD), Accounting Department (AD) and the Mathematics Department (MD) at VUT to enhance learning experience of students in their first year mathematics and statistics courses. Particular emphasis is placed on the role of Mathematics Centre at VUT; work done by MD and motivational seminars done by the First Year Experience (FYE).

CURRENT INITIATIVES BY VUT

1.CENTRE FOR ACADEMIC DEVELOPMENT (CAD)

The CAD Department has various initiatives they are providing to first year mathematics and statistics students through the following units: Mathematics Centre and First Year Experience.

MATHEMATICS CENTRE

Mathematics Centre (MC) is a facility offered at VUT to help registered students in addition to their normal classes of teaching through tutorial classes, consultation (one-on-one and small group) and examination revision sessions.MC offers free support to all registered students through well-designed tutorial classes, one on one consultation and small group consultations, where necessary, examination revision classes, extra classes, and developing and using tools that will improve understanding.
The aims and objectives of the MC is to ease transition of all students to HE courses with a significant numerate component and also to provide non-judgmental support for students outside their teaching time with the aim of improving mathematics and statistics pass rate and success rate.

Other objectives is to support students who are struggling with the mathematical and statistical components of their studies and to aid departments who wish to refer students to the MC when specific needs for tutorial or remedial work arise. The MC assists students in developing fully their mathematical knowledge and skills and to help raise their mathematical confidence and also provide one on one support for any student of the University with mathematics difficulties no matter how small it is.

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At the beginning of the year, all first year students are encouraged to write a diagnostic testing which covers a range of questions from high school to maths 1 work. The purpose of the test is to identify students early who need extra help (Early Warning System).The diagnostic test is used to check for student readiness to begin maths 1 course. The test will inform if students are well prepared for HE maths. All students who fail to meet 50% mark are referred to MC for further help during the course of the semester.

FYE SEMINARS

First Year Experience (FYE) at VUT is held twice a year to motivate students with aim of good retention and success of first year students. The role of FYE is to assist first year students' transition from high school to University life. Motivational speakers are invited to address first year students with the aim of motivating them on their studies. For applied sciences and engineering faculties where all students are doing mathematics, MC is invited to such seminars to motivate students.

2. MATHEMATICS DEPARTMENT

The following are the initiatives adopted by the Mathematics Department (MD):

REMEDIATION

There are consultations – open door policy- where students just walk into the office of the lecturer to consult and also extra lessons which are usually 1 hour allocated per day to attend to students' problems by assigned lecturers. The MD also offers winter and summer schools for those preparing for the second opportunity examinations.

INCORPORATION OF TECHNOLOGY IN THE LEARNING PROCESS

Whilst there is no blanket policy on the use of technology, lecturers are encouraged to apply and to keep abreast with the trends of the use of Information Technology in the learning process.

EXPOSING FIRST YEAR STUDENTS TO UNIVERSITY LIFE

In coming first years are inducted /orientated by an assigned lecturer who is called a mentor. The duties of the mentor are to guide on study habits and expose the students to the expectations of the department.

BRIDGING COURSES

Eight hours are allocated at the beginning of the semester for Mathematics 1 in trying to bridge the gap in high school maths and college maths through doing revision of algebra and functions. The emphasis being to strengthen the foundation and to link the basic concepts to the topics they will cover.

CHALLENGES OF LARGE CLASSES

Many Universities, including VUT, have to accommodate large classes in mathematics and statistics courses. The large classes in many cases contain more than 80 students. This poses extra challenges for the lecturer in dealing with such large numbers. In particular, it is especially demanding for the lecturer to engage with such a large group and create an atmosphere of interaction (Hardman and Ng'ambi, 2003). MD staff at VUT who have experience teaching large groups use a variety of approaches to enhance the learning experience of students in these classes and have developed methods specific for instruction of these courses (Jungic, Kent and Menz, 2006).

3. ACCOUNTING DEPARTMENT

This department offers statistics module called Quantitative Techniques. All first year Management Sciences students are supposed to do this module. As most students were struggling with this module, the department invited Mathematics Centre to offer a supplementary course called 'Numeracy Skills'. The Numeracy Skills course cover topics such as arithmetic operations, percentage calculations, indices, equations and graphs and is offered to students once a week for 1hour/class.

This programme intervention was formed with the following purposes which include developing learners' knowledge, skills and values, motivating and encouraging learners to like statistics and numbers in general and also to build leaner's confidence.

RECOMMENDATIONS

- Outreach to surrounding high schools so as to promote interest in mathematics is necessary (thus bridging the gap).
- The use of clickers and other technologies especially for large classes will help lecturers interact with students.
- A further study into the effectiveness of these interventions is recommended by the author.

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CONCLUSION

In this article, the author has summarised some of the initiatives developed in the Department of Mathematics and Centre for Academic Development at VUT to enhance the learning experience of first year mathematics and statistics. The initiatives must start while students are still at high school by visiting them and motivate them and this should continue into their first year at University by offering a variety of support as mentioned in the study.

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BROADCASTING VIOLENCE SCENES RECORDED BY SURVEILLANCE CAMERAS THROUGH TELEVISION OR INTERNET NEWS AND MEDIA LITERACY EDUCATION

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EXTRACT
Consequences created by the use of violence scenes recorded by surveillance cameras in television and internet news are discussed in this study. Use of some scenes recorded by surveillance cameras prove the reality and correctness of the news, thus functioning affirmatively. However, actual violence scenes are used in many news "in an unnecessary manner" as a way of being watched more and attracting more attention. This may not only isolate the event in the news from its social, political and economic context but also create such consequences as desensitisation towards violence and violation of the honour and dignity of individuals.

INTRODUCTION

At present, reporting is considered to be the most important function of mass communication media. In particular, the news flow which runs in a good manner is deemed to be the most important factor to ensure free formation of the public opinion in Western democracies. In this case, any news reaching the public must be correct and impartial.

Developing technologies have created opportunities which ensure the "reality" concept in news to be proven. One of them is MOBESE (Mobile Electronic System Integration) technology. Surveillance cameras were installed in several locations in 81 provinces in Turkey in 2007 in order to enable security forces to catch criminals easily. Over time, scenes recorded by MOBESE cameras started to be used in their raw state in news videos broadcasted on television and internet. Undoubtedly, such scenes are each a proof of the reality of the event which is the subject of the news and confirm the correctness of the news.

On the other hand, it is possible that such violence-containing scenes as traffic accidents, murders, extortions, physical injuries, suicides, etc. recorded by the MOBESE and surveillance cameras as they are may have adverse effects on the society. Some of them are desensitisation towards violence, consideration of violence to be ordinary and even legitimisation of violence as well as being adversely affected thereby in a psychological way. It is further possible to argue that these kinds of violence scenes may injure the honour and dignity of those individuals who are subjected to violence.

This study is based on the assumption that the broadcasting violence scenes recorded by MOBESE and surveillance cameras in their whole clarity through television and internet news may lead to ethical problems though it considers that the scenes recorded by such cameras are necessary for the reality of the news.

TABLOIDISATION AND CHANGING NEWS LANGUAGE

In line with the developments in Europe, private television broadcasting started in Turkey in the early 1990s and as a consequence TRT's official news discourse underwent some change. Now, news bulletins were intended to bring more rating to the channel where they were broadcasted just as in the other types of programmes.

To describe it briefly, tabloidisation is the sensationalisation and dilution of the contents and styles of and the use of unethical methods in collecting the news (Çaplı, 2002: 92). Garnham (quoted by İnal, 2010: 164) states that the characteristic of the tabloid formats is to change the "events" to a theatrical narration by highlighting the aspects of the events which will attract the attention of and to arouse interest in the audience while making the events into news. Even though such theatrical stories usually focus on the private lives of celebrities, disasters happening to the man in the street are increasingly constituting the subject of the tabloid formats in the present day.

It is known that tabloid news leads to several ethical problems. Offenses, especially offenses containing sexuality, and improper actions containing sexuality and exposure of female body are a consequence of news developing synchronously with tabloidisation. Due to the news values formed in tabloid formats, the news is given by breaking it off from the social, political, economic and cultural context of the event while individual offenses, sexuality, scandals, etc. are made into news. Further, tabloid formats are intended for enjoying oneself, spending a good time

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or looking to those to whom "bad experiences" and "individual disasters" have been happened compassionately and regrettably. Individualisation of the events by isolating them from their social contexts does not make the audience think. Audience watches life in his comfortable and sheltered house and "thanks his lucky stars". Audience alienates with the tabloidisation concept, gets free from the concern of displaying a political standing and is pushed into a dormant state. It is not important at all whether such scenes are fictitious or actual. Because, actual or fictitious, the common feature of both is to bring what is personal and the lives flowing away from us just very close to us and change them into a theatrical narration (İnal, 2010: 170, 172, 175 – 176).

Tabloidisation concept is not only related to television. Spreading of internet in Turkey as from the mid 2000s resulted in both the establishment of new web sites intended for news and extension of media companies broadcasting on local, regional and national basis towards the internet domain. Due to its nature, internet is a mass communication medium in which all mass communication media nestle or, in other words, in which writing, sound and image may take place all together. Early on, the way news was presented in internet news portals displayed similarities with printed newspapers. In that period, both the news photographs used and the news language bear tabloid elements. However, spreading of MOBESE cameras and surveillance cameras as from 2007 especially resulted in frequent use of these scenes in internet news. These scenes which are not fictitious but completely reflect the facts usually focus on disasters happening to individuals and fail to contain any exquisite public interest. At the point we have reached today, news portals of national newspapers are broadcasting several news containing violence which may be considered third page news without comments in such sections as "WebTV", "TV", etc. of their web sites and isolate the events covered by the news from their social, economic and political context. The basic purpose of such a news concept in which the image is the basic element of narration is to ensure more clicks on the advertisements in the web site and generate more advertisement revenue.

USE OF VIOLENCE SCENES RECORDED BY SURVEILLANCE CAMERAS IN NEWS AND RESULTING ETHICAL PROBLEMS

Considering the communication works, it is observed that they focus on a world which television has created via "fictitious scenes". In this context, according to the basic hypothesis of the survey entitled "Cultural Indicators", television has become a strong bonding means just as religion did in the pre-industrial revolution period (Yaylagül, 2008: 67). Therefore, television news is based on such contents given with a rather narrow perspective in a commonplace and twisted manner. In the survey, it is anticipated that the television audience will deviate from their beliefs about the reality at gradually increasing rates.

Gerbner and Gross (2014, 344) dwell upon the "dramatic", i.e. fictitious violence presented by television. Dramatic world of television is a mixture where the facts and lies and correctness and twisting nestle in each other. It is not a real world but, rather, an extension of the standardised images taught to us since our childhood.

Unlike the abovementioned views, it is not possible to consider the use of raw scenes recorded by surveillance cameras in the news broadcasted on television and internet to be "fictitious" or "dramatic" just as it is with news photographs. Because such scenes are based on the fact itself. However, it is also possible for media companies to fiddle on the reality through such elements as the choice of scenes and duration of the chosen scene; but this is a limited intervention.

Considering the matter from this perspective, it is possible to attribute a positive qualification on the use of some scene containing violence recorded by surveillance cameras in news although they contain violence. Because these scenes may be deemed to be the most important evidence of the reality and correctness of the news. For instance, inclusion of the scenes in which the police have used disproportionate force in a social event into the news will both prevent the reality of the news from being questioned and serve an important social interest in that it reflects a social problem. For instance, the disproportionate violence used against demonstrators by the police and some shopkeepers during the Gezi Park events have been reflected to the public thanks to the surveillance cameras. However, excusing such violence scenes in television and internet news is associated with the exquisite public interest borne by such news.

When one looks into the daily news, it is observed that any kinds of events containing "violence" have been recently being reflected on the screens as they are in line with the increase in the number of both MOBESE and surveillance cameras. Even though such scenes are not fictitious or "built" ones, they are intended for ensuring the audience to look to those to whom "bad experiences" and "individual disasters" have been happened compassionately and regrettably and to be viewed more; and this is the basic rationale of the tabloid news.

It is possible to mention three basic ethical problems created by the use of actual violence scenes in news. These are focusing only on the "explicit" content and isolating the event from its political, social and economic reality, both of which are an aspect of tabloidisation. Thus, the audience will focus on what is surficial and will not access to the essence of the event experienced.

In the news entitled "He Stabbed His Ex-Wife before His Children's Eyes" which was broadcasted on "HürriyetTV", which is the web page of Hürriyet Newspaper, on 02.06.2015, murder of a woman recorded by the surveillance camera is shown as it is and the news is built upon the scene. However, no link of this event is established with the reason of the event, medical condition of the woman and the issue of "violence on women" which is a significant social problem. The news only consists of a scene of violence.



The news entitled "Helmeted Robber Bitterly Repented for Robbery" which was also broadcasted in the web page "HürriyetTV" on 02.06.2015 is built upon the scenes of a robber entering a market for robbery in Brazil to be beaten by the clients. The news presented as a scene isolated from the "robbery" concept which is a social problem is supported by such a coarse discourse as "Clients severely beat the robber" which sorts ill with the news language and violence on the robber who must be handed over to the police is merely legitimised.

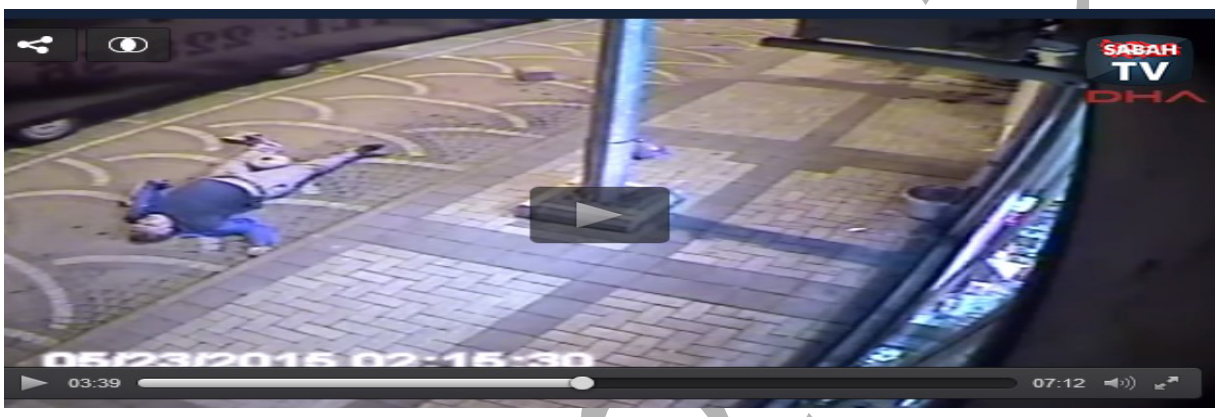


Another problem created in ethical terms by the use of violence scenes recorded by surveillance cameras in television and internet news is that they injure the honour and dignity of the individuals exposed to violence or murdered and that they are of such nature which will upset their kinsmen. Several events such as ordinary

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homicide, fight, traffic accident hundreds of which are experienced every day and the broadcasting of which does not have any exquisite public interest may be brought to screens without even pixelating.

In the news broadcasted on "Sabah TV", which is the web page of Sabah Newspaper, on 23.05.2015, body in a pond of blood of a teacher who lost his life as a result of a fight in Bartın is presented to the audience from a distance which may be considered a "close-up" without pixelating. We are of opinion that this is of nature which may injury the personal rights of the deceased. Likewise, Dönmezer (1976: 98 – 99) states that the honour and dignity of the deceased individual may be injured in case the memory of the deceased is violated. Özek (1978: 145) approaches the matter from a different perspective and states that the protection of the honour and dignity of the deceased intended for the protection of the kinsmen's memories of the deceased individual.



Another ethical problem which may be caused by the violence scenes recorded by surveillance cameras is that the scenes in question are of such nature which may have an adverse effect on the audience. However, the effect in question is not one which will encourage people for violence. Views of Gerbner and Gross'un (2014: 366 – 367) about the effects of violence are important. Accordingly, sensorial perception increasing and intensifying on risk and lack of confidence (which may vary by groups of different strengths) will, in all likelihood, result in submitting to the established authority, accepting what is dictated by it and eventually increasing dependence on it. This view is called "Cultivation Theory" in communication studies. The following photograph is taken from Sözcü Newspaper broadcasting a moment of murder as it is, basing on the surveillance camera scene.



And Dündar (2014: 389) states that news containing violence may have two consequences on the society. First of them is that the audience set off in quest of a superior authority which may put a lid on this state of affairs thinking, "Well, everything goes from bad to worse and there does not seem to be any remedy." The climate which authoritarian regimes like most is this environment of quest. And the second reaction is apathy, i.e. indifference. The audience who are exposed to bloody scene on the screen every day get accustomed to this show of violence and may be so cold-blooded as a student of medicine by a cadaver even when watching the bodies with blown brains. This inurement may be carried one step forward and translated into a call for "more violence" over time. For instance, when a father who walks up to his house's roof and prepare for suicide is caused to give up at the last moment by the police, the crowd that has gathered in front of the building may utter a "boo". Influenced by this atmosphere, television cameras start to compete to be able to offer more to the audience and display the wounds of the bodies in a welter of blood and try to remove the cover over the bodies. As it is seen, Dündar's views on the

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effects of violence on people and those of Gerbner and Gross are close to each other. However, it is possible to describe "limited effects" as they do not directly encourage people for violence.

MAY MEDIA LITERACY BE A SOLUTION?

Media literacy has emerged for the purpose of studying what individuals do to the media and for what purpose s they exploit the media but not what the mass communication media do to individuals within the context of the "Uses and Gratifications Approach" which was effective in the 1960s. Whereas the media was considered to be a weapon which was influential and bad for children and young people, then media literacy must protect them from the adverse effects of the media (İnceoğlu, 2011: 20).

Media literacy acts by the presupposition that individuals may be "active citizens" before media messages. In this case, it is possible to define the media literacy as a qualification which is gained upon the educational process achieved as from the elementary school so that individuals may intellectualise and make sense of the media messages encoded for a particular purpose.

It is necessary to define the term "media literate" after the media literacy. Media literate is a term which describes an individual who is entitled to the epithet "media competent" as a result of an educational process which requires a separate skill, infrastructural knowledge and educational organisation in order to be able to distinguish and perceive the messages reconstructed in media and to comment thereon (Öncel Taşkıran, 2007: 7)

The media literacy course was included into the curriculum in the school year 2007-2008 in the pilot regions identified as İstanbul, Ankara, İzmir, Erzurum and Adana to start from the 7th grade through studies carried out with the Ministry of National Education in Turkey (Öncel Taşkıran, 2007: 129). Four million students were educated by 2014 in the project which started in 2007. In 2014, the curriculum was renewed and the social media domain also included into the curriculum by the cooperation of the Ministry of National Education and Radio and Television Supreme Council (Media Literacy Course to 'Start Over', www.milliyet.com.tr).

There are some problems in terms of teaching the media literacy courses in Turkey. First of them is that the course is not taught by the specialists of the subject. It is known that the media literacy courses have been taught by teachers of social studies in Turkey from the beginning. In our opinion, this is an obstacle before the good teaching of the course – even if the contents of text books are excellent. Because, for instance, it is rather difficult for a teacher of geography or a teacher of religion and ethics to make sense of the history, nature, messages and effects of mass communication as well as a communication specialist.

There are also discussions as to the fact that media literacy courses should be taught by the graduates of Faculties of Communications. However, especially as a result of the reduction in the quality of education in the Faculties of Communications throughout Turkey in recent years, a great number of students graduate inadequately in theoretical terms. Therefore, it is a more rational solution that graduates of Faculties of Communications will teach these courses once they have been provided with a certain training programme. Academicians who volunteer for teaching the media literacy courses may also be benefited in those cities where there are Faculties of Communications.

Another problem which may be experienced in the application of media literacy courses in Turkey is that the level of education throughout the country is still relatively lower. This may result in children's "failure to practise" the media usage practices which they learn at school at home. For instance, it is a subject which is under the control of parents to a great extent to ensure the children to pay attention to those smart symbols taught in the media literacy courses and used on television and cinema.

Then, considering in terms of protecting the children and individuals from the broadcasts containing violence, it is possible to consider the media literacy practices in Turkey to be well-meant but inadequate. Because the only way of protecting from the harmful effects of media is that individuals should become conscious and enlightened in every sense but not only through the media literacy course. Such a change will change the media which is a part of the society as well as the media messages.

CONCLUSION

At present, televisions, internet and all mass communication media act with the purpose of "being watched more" expressed in such terms as profit and rating, circulation, "box-office return", "more clicks", etc. In particular, the object of each programme broadcasted on television channels is to get more commercials advertisers. News bulletins and news programmes are not exceptions.

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Profit-oriented broadcasting naturally results in experiencing some ethical problems as well. One of these ethical problems is the tabloidization of the news. Along with the tabloidization concept, news is tried to be presented in amore sensational, and thereby more attention-drawing manner. There are some inconveniences in using violence scenes recorded by surveillance cameras in ordinary news which does not offer any exquisite public interest. These are the prominence of the violence event in the scene and overlooking of the social, political and economic dynamics of the event. Another important problem is that the honour and dignity of those individuals exposed to violence and the kinsmen of such individuals are attacked. A third problem is that those individuals exposed to violence scenes become increasingly pessimistic and perceive the world in which we are living as worse than it is.

In particular, elimination of the third problem is possible by overcoming it through the self-protection of the society from the media messages. Media literacy has importance at this point. Making sense of media structure's bond with the society and media messages in the media literacy courses will ensure those who take this course to be more protected against media.

When one looks into the functionality of the media literacy education in Turkey, it is possible to say that such practices are well-meant but inadequate due to the fact that these courses are taught by individuals who are not specialised and that the level of education is relatively lower in Turkey.

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BUILDING A LEARNING PROGRESSION FOR SCIENTIFIC IMAGINATION: A MEASUREMENT PERSPECTIVE

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This study aimed to build a learning progression (LP) for the development of scientific imagination using the BEAR Assessment System (BAS) in an attempt to better understand the core ideas and the developmental path of the scientific imagination process as well as align curriculum, instruction, and assessment through LP. A total of 740 5th and 6th grade elementary school students from Southern Taiwan were administered the situation test, Scientific Imagination Test-Verbal (SIT-Verbal). The multiple validities of the SIT-Verbal were assessed using the Rasch partial credit model. The results showed that the brainstorming, association, and transformation/elaboration of scientific imagination were hierarchical. In addition, the SIT-Verbal was suitable for measuring students at the elementary school level. Suggestions for future researchwere proposed.

Keywords: scientific imagination, learning progression, BEAR Assessment System, Rasch model

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BUILDING RESILIENCE DUE TO VIOLENCE: THE STRUGGLES OF MEXICAN COMMUNITIES

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ABSTRACT
In Psychology the term resilience refers to man's ability to respond to stressful events in a positive manner. Cases of feminicide in Mexican society provide significant information regarding the relationship between violence and the development of a capacity for resistance in order to preserve life in the long term. Given that the promotion of empowered actions is closely related with issues of community, power and precariousness, this article will discuss cultural and socio-economic factors in institutional violence against Mexican women and will provide a comprehensive look at a theoretical framework for understanding resilience within this context, starting from the relationship between suffering and vulnerability.

Keywords: Violence, Feminicide, resilience communities, Latin America, vulnerability

INTRODUCTION
In the 20th century, Sorel stressed the fact that the concept of violence was far from being fully comprehended (Sorel, 1906). Although not much has changed in this regard, various theoretical and empirical instruments have emerged, thus helping us to better analyze the discourse around violence and to reveal some of its more obscure aspects. A violent state, of which Latin American countries could prove a prime example, can be described as a place characterized by the extreme use of power, force and coercion. Mexico's history is riddled with corruption and structural violence owing to its colonial exploitation in the far 16th century and the capitalistic system imposed on it by the United States. The first factor to consider is its geographical location: situated between the two Americas, Mexico has become increasingly the scene for illegal drug trafficking as well as an attractive setting for international interests. In one hand, violence constitutes the weapon for the citizen who has to resist against a state of corruption and impunity, and on the other hand it seems to be the same instrument that governmental institutions use to defeat drug traffickers. As a result, violence impacts on the well-being of people who live in a state of terror and public insecurity, undermining the role of justice, and producing vulnerability and a sense of uncertainty. The term "legitimized violence" seems appropriate for the Mexican political system, in as much as the state acts within the logic of a "genocidal continuum" (Scheper-Hughes, Bourgoise, 2003), a political practice that creates both visible and invisible violence, legitimizing it into the social system. This situation is evidenced by the sudden increase of homicides, feminicides and kidnappings from 1990 to today, as confirmed by the recent murders of 43 Ayotzinapa students (BBC, 2015). In addition, we have to take into consideration institutional violence, which is manifested in the denial of access to the health system, government measures against border crossing and the exploitation of victims. The situation became more dangerous as a result of the political efforts of the U.S.A. to control the border zone and to eradicate illegal immigration and drug trafficking. In this regard, prime examples are Tijuana and Ciudad Juárez, two border towns in which violence has reached levels of emergency to the point where they are internationally renowned, and have thus been extensively researched. The aim of this article is to bring to light the non-violent protective measures adopted by communities by means of an interdisciplinary method focused on suffering and resilience. In Ciudad Juárez, as a result of the increase in the rate of feminicide, mothers of the victims began to

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protest in earnest, joining the Nuestras Hijas de Regreso a Casa A.C. (May our Daughters Return Home, Civil Association) protest movement. These events had such an impact that they gave birth to actions against corruption, double victimization and the Mexican government's legitimacy. Furthermore, following the Merida Initiative, stipulated by former Mexican President Felipe Calderon and former U.S.A. President Georg Bush in 2008, the political strategies against the drug war became more violent and aggressive, resulting in an increase of victims and an alarming lack of justice within the administration. Both Mexico and America violate the law, breach security and infringe on human rights. As a consequence, the connection between power and violence creates issues related to the sense of recognition of human being, the legitimacy of safeguarding the right to live without violence and the assertion of a policy based on vulnerability and control. How can we react against violence without responding with violence? Following the example of Gandhi's powerful strategy of non-violent resistance, we believe that Mexican citizens have developed a very successful capacity for resistance through empowerment, which contributes to building a force called resilience.

CONCEPTUALIZING VIOLENCE AND VULNERABILITY

In 'On Violence' Hanna Arendt summarizes her considerations on violence suggesting an examination of its roots and nature (1966, p. 243), at which point explaining such a phenomenon by assigning it into the sphere of power would be reductive. What perhaps eludes Arendt's evaluation on the nature of violence is the cultural context as a root of its development. Gender-based homicide ranks as one of most extreme uses of violence as it is considered the norm and constitutes a social practice carried out through the use of physical, psychological and socially destructive methods. The presence in society of a violent attitude cannot only be explained by its relationship with power, as the power itself acts primarily in the cultural context where the process of encoding and decoding is constructed, deconstructed, fought and burned. Firstly, we will review theories that show the normative use of the term violence, so that violence is not an instinctual act, but rather a product of an ideological construction. Moreover, we will evaluate the bond between violence, vulnerability and resilience within the context of the struggles in Mexican society. Capacity for resilience is analyzed through interdisciplinary theories based on psychology, philosophy and cultural studies which are channeled into a strong political message that promotes empowerment. Resilience is therefore a fundamental factor in helping people to overcome traumatic events during their lives. In addition, the community's capability to manage bereavement and complicated events depends on social, environmental and cultural factors. Also, building resilient communities is a relevant protective factors that needs deep reflection and a critical evaluation. According to Hall (1980), who redefines the concept of "hegemony" developed by Gramsci (1971), the cultural dimension is understood as the battleground where power is disputed. For this reason, he appeals for the need to "deconstruct the culture" (Hall, 1980), the place where the battle for power is fought, won and lost and where awareness is created through policy. The author states that this battleground is the popular culture, which is a "contradictory space", a "negotiation space" where dominant and subordinate groups fight against each other to establish hegemony (Hall, 1980). Similarly, violence is combated in the cultural sphere, and its recognition depends on the success of one of the two groups and on the political and economic role that the state has in the world. Power creates and modifies what can and what cannot be considered violence because it conditions the collective, supported by a 'nested doll principle'. As a result, social phenomena, such as stereotypes and prejudice, allow violent measures and conceptualize it against the understanding of sexuality, race and class. Consequently, sexual, racial and class-based discrimination has become a cultural and biological matter carried out by political and religious powers and whose terminal point flows into the legitimate use of violence, embodied by cases of kidnapping, homicide and feminicide. The latter term refers to a form of physical, moral and psychological crime which includes all instances of violence against the female gender, such as rape, sexual violence, violence caused by laws related to the defense of honor or the right of dowry, and violence committed by intimate partners, by family members or strangers. Many activists, researchers and scholars have contributed with their

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research to give a legitimate definition of this phenomenon. This term was mentioned for the first time by Diana Russell (1976) who presented an international report on crimes against women to the Court of Brussels. However, a first definition was formulated in the work *Rape in Marriage* (1990) in which are collected the testimonies of 930 women living in San Francisco, all victims of rape and abuse within their marriage. In this book feminicide is defined as the hatred towards women only because they belong to the female gender (Russel, 1990).The desire of man to subdue and control the female gender through the use of violence is a practice of terror that begins with an absolute submission and degenerates to complete destruction. As suggested by the anthropologist Marcela Lagarde, this connection between violent control and domination of the woman is based on the political and Judeo-Christian ideologies settled in the cultural space (Lagarde, 2011). Such reality attempts to redefine violence against women within a political and cultural framework as a consequence of human behavior. Cases of feminicide in Juàrez represent the manifestation of the ideological dominance of patriarchal hegemony and the use of terror as a political tool transferred to the culture. This interpretation suggests the inexorable triumph of phallocracy through a policy of "genocidal continuum" (Scheper-Hughes, Bourgoise 2003), and so violence is continuous, cyclical and reproducible. The word genocide refers to those crimes that are committed in social spaces, such as schools, hospitals, nursing homes, prisons and courts, places where the absence of any kind of violence should be ensured. Furthermore, Scheper-Hughes distinguishes visible violence, such as harassment, abuse, kidnapping, torture and infliction of pain, from invisible violence practiced in supposedly safe institutional spaces (e.g., hospitals and nursing homes). According to the author, invisible violence is structural because it is represented by poverty, hunger, social exclusion and humiliation, which inevitably gets translated into intimate and domestic violence (2003). Structural violence is therefore embedded into institutions and it cannot be promptly perceived. Otherwise, the continuum alludes to the human capacity to act with a type of violence that bestows upon victims a status of non-persons. The consequences of physical, psychological and sexual violence are irreversible. It dramatically dehumanizes and depersonalizes the victim, causing social exclusion and psycho-physical disturbances quite similar to the symptoms of Post-Traumatic Stress Disorder (Herman, 1992). Perhaps, it is a form of terror that echoes in everyday life and manifests itself in the public and private spheres. These realities transform legislation related to violence, so that it becomes a structural metaphor for an institutional policy of terror, forcing people to live in precariousness as well as suffering.

With regard to the studies on violence against women, the cultural method emphasizes the bond between aggressive human behavior within the logic of power and social manipulation explained through a feminist perspective. In this scenario vulnerability is the human condition caused by practices of socialization, which are legitimized and regulated by the state. In addition, it should be inferred that the presence of violence in public and private spheres is simply the product of a political governance established by the organs of power. The community perceives violent acts as being necessary, justifying them as lawful actions which are socially required. In this context, emotional manipulation plays a central role in the somatic dimension, in which the physical pain inflicted on the victim causes psychological vulnerability. According to Judith Butler (2004), the human body belongs to the social sphere because of its political constitution. With regard to the recognition of life, we should consider its precariousness caused by the exposition to violence. Psychological and physical vulnerability is part of our sociability, and so we live in a state of subjection (Butler, 1997). The term subjection indicates that our life is dominated by an external political power. Following Althusser's (1970) definition of interpellation and *assujettissement,* Butler argues that we are subordinate to a normative system of control and manipulation, so that power acts on us defining our needs, desires and ideas about the world and about ourselves. The practice of power, understood as the control of men over men, follows the Hegelian theory of recognition in which a human being recognizes itself as a subject through the judgment of others. This process of self-consciousness generates the master-slave dialectic, a kind of relationship that establishes the nature of power. As a consequence, we are the product of this dialectical relationship between power and identification, which clarifies our inevitable embodiment with power. Such a

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concept is discussed in Foucault's work, the *maitre a penser* of contemporaneous human science. In his work *Discipline and Punish* (1975) he proposes an analysis of our society through the study of those systems of punishment that have been sanctioned by a specific "political economy" of the body, in which institutional powers flow into the body, owning it. The author underlines the need to unmask the "micro power" through the knowledge of those historical events which have favored the political hegemony of the social body, both in the collective and in the individual. The result of this process is defined by the term "biopolitics" or "biopower" (Foucault, 1975-76), i.e., the invasion of institutional powers and ideologies over physical human beings with the purpose of bringing hegemony to it. Finally, it forces us to live in a state of vulnerability, so that the political system creates a norm for the recognition of human life, declaring one life as "grievable" and not the other (Butler, 2004). A re-evaluation of the meaning of both vulnerability and pain could be a good way of re-politicizing violence. If victims learn to take advantage of the force of suffering, they can use it as political force for empowerment, forming a multi-level recognition of identity through the unmasking of political constructions of violence and halting the process of re-victimization.

RESILIENCE

Resilience is a term that in physics refers to the capacity of an object to resist against external powerful stimulation without breaking (Oxford Dictionary, 2015). It has since taken on different meanings in various fields, such as in ecology, engineering, computer science and psychology. Consequently, when research in psychology promoted the focus on positive psychology, its meaning was shifted both to the words resilience and recognition with eudemonic response (Keyes, 2007). The concept of eudemonia is an Aristotelian term which means happiness, and it refers to the human practice of flourishing within a socio-emotional context. For positive practice purposes, social science has adopted the term resilience with a eudemonic approach to define the human capacity to react in a positive way against adverse circumstances. According to Bonanno (2004), resilience is "*the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disrupt event, such as death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning*" (2004, p. 20). Moreover, within the concept of resilience the concept of empowerment is stressed: a process which aims for the acquisition of agency (Rappaport, 1977). In psychology, many resilience models have been developed to show how this process works and most of these privilege factors such as personality, educational systems, family and the social environment. One of the most well-known was proposed by Gilligan (1997) who stated that resilient operations rely on the good responsiveness constituted by a secure emotional base, self-confidence and emotional self-efficacy (1997, pp. 22-23). These three factors are focused more or less on the individual capacity.

Alternatively, there are other models, such as the ecological model that considers different protective factors and promotes the cultural and environmental influence for tolerating stressful events. Bronfenbrenner (1996) argues that building resilience is an interactive process constituted of different systems, such as microsystems (the family atmosphere), mesosystems (relationship with peers, teachers), exosystems (Social setting, community), macrosystems (culture) and chronosystems (socio-historical circumstances), (1996, pp. 39-40). Furthermore, the ecological model privileges the relevance of culture, and the number of different ways for a community to overcome vulnerable situations and to understand what a resilient action constitutes as opposed to one that is not. The cultural and social determination of resilience offers a wide and complex key for the interpretation of problems that cannot avoided, considering the individual and collective interaction inside a troubled community. The capacity to react positively, linking positive emotions with the force of adjustment, is character-building for victims who undergo a transformation process until eventually succeeding. However, in psychology some methodological problems exist relating to the concept of positive mental health and resilience. They concern the measurement of resilience factors, because in most cases to be resilient means the absence of depressive disorders or psychopathological disturbances after a traumatic event (Bonanno, 2009). In this article, we do not discuss such scientific gaps. Rather we focus on the link between vulnerability and resilience as

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important an issue connected with empowerment capabilities. We believe that victims, through a re-evaluation of suffering and a politicization of vulnerability, are able to reinterpret the dimension of symbolic violence which are culturally connected, and to re-establish non-violent social practices.

MEXICAN RESILIENT COMMUNITIES

Mexico has a long history of violence and corruption, and its society has long been living in pain, suffering as well as emotional and mental distress. Over the past two decades, the number of victims has grown dramatically and due to the lack of justice, people have begun to adopt a powerful civic response, creating a unified social bond against criminality. This initiative was taken up by the victims themselves, who formed social movements demanding effective response by the government and the implementation of a security system. The most famous action arose in highly dangerous places along the border, in cities such as Ciudad Juarez. Since 1990, this border town has been afflicted by the kidnapping and murder of women, called feminicide. There are a variety of aspects that expose the citizens of Ciudad Juarez to such criminal development. This area has become a crime scene due to its geographical position, the increase of urbanization and migration, the installation of international industries *maquiladoras* and the presence of narco-trafficking, known as el *Cártel de Juarez* (Fragoso, 2000). After the shocking revelation of desert deaths in the Lote Bravo, Lomas de Poleo, Cotton filed and Cristo Negro areas, there have been no positive resolutions to the cases of feminicide and the crimes still remain uninvestigated and unpunished. Such impunity motivated the victims to become aware of this exploitation and to promptly search for the truth themselves. In 2001, the mothers of the murdered women founded the civil association *Nuestras Hijas de Regreso a Casa* with the purpose of fighting through civil engagement against impunity and corruption. These mothers and relatives are unified by the desire for justice and the will to release their murdered daughters from the deprivation of their human rights. This association offers moral and legal support to the victims of kidnappings and feminicide, with the goal of fighting for justice and protecting human rights, as well as avoiding double victimization from the authorities. The organization *México Unido Contra la Delincuencia* (Mexican United Against Crime, MUAC) has a similar background, as it was founded after the kidnapping of Raul Nava on 6th May 1997 and found dead six months later (Amnesty International, 2010). Despite some accusations against this organization and its implication in scandals, its work is significant as an example of civil empowerment. The MUAC has promoted several marches, such as the "Let's rescue Mexico" march that took place in 2004 in Mexico City, which had the aim of encouraging victims to demand justice and of attacking the authorities for lack of security (Villagran, 2014). Other cases of parents who have shown resilient capacity after the loss of their daughters and sons could be illustrated through the actions of Isabel Miranda de Wallace, founder of the *Asociación Alto el Secuestro*, the *Foundacion of Mexico SOS* promoted by Alejandro Martí, the *Movimiento por la Paz con Justicia y Dignidad* formed in 2011 by the poet Javier Sicilia and the *Fuerzas Unidas por Nuestros Desaparecidos y Desaparecidas en Mexico*. These are movements which strive to unite victims and to encourage the creation of a network for fighting against organized crime, asking for justice and punishment, supporting the respect of human rights and civil protection. The work of these numerous civic organizations is relevant because they identify themselves as a heterogeneous community unified in the same suffering. Victim is a word of the collective memory, and through this term people have built psychological and political capacities for resilience. On the other hand, the focus on vulnerability, i.e. the psychological and mental precariousness of a human being, and on resilience, as the ability to afford and change distress, link from the individual to the collective experience, and is eventually translated into community resilience. Adger (2000) previously defines the term of community resilience as "*the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change*" (Ibid. 2000, 350). That means that resilience is the ability to act against vulnerability. With regard to Mexican movements, resilience emerges as the shared abilities to overcome trauma and violent situations, whilst gaining empowerment through communication, self-organization and social union. Even if these organizations began to enforce the impunity system because of personal

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tragedies, entire communities would join to them in fighting for the same cause, i.e. claim the right to be recognized as human beings, reporting the violation of fundamental rights and accusing the Mexican government for being corrupt and unequal. The solidarity around social exploitation is one of the basic attributes to building resilient communities. In addition, social unification can be translated into the building of social capital as an aspect that ensures flexible and resistant relationships based on trust and transformative capacity. Considering Oxley's qualitative approach (as cited in Frankenberg, Mueller, Spangler, Alexander, 2013) by the measurement of community resilience, we show that Mexican communities act in a resilient manner, re-politicizing their recognition through suffering. As Oxley states, they show 'preparedness' in perceiving the risk and for coping with trauma; 'responsiveness' in protecting the victim and working on their behalf with legal, social and health initiatives; 'learning and innovation' referring to the ability to be flexible and innovative, and transforming mistakes or difficult conditions into instrumental growth; 'memory' with regard to the sharing of the same history of Hispanic colonization and capitalistic exploitation, a past that reconstructs Mexican identity on the basis of victimization and deprivation of their religion, language and tradition. The common status provides force and the ability to fight for the same rights; 'self-organization', i.e. the ability to rely on own capacities without any institutional, economical, financial and legal support; 'diversity' alludes to the existence of different resilient responses from individual to collective, including the different ways of control distress on a physical, emotional and psychological level; 'inclusion' means the creation of a cohesive and cooperative community formed by different members; 'aspirations' includes the same goal and a common vision of the future that people unanimously have.

CONCLUSION

The question surrounding violence needs an analysis through an interdisciplinary perspective under the lens of cultural studies. This is a field that is connected to human rights discourse and praxis including feminist and psychological theories. The central aim of this contribution is to examine the relationship between vulnerability and pain as a process that generates resilient force. In this regard, Stuart Hall's invitation to investigate ideas of justice and agency into a cultural dimension suggests we focus on the struggles evident in cases of feminicide. This is suggested due to the effectiveness of women-led movements. In these cases, Mexican communities began to react against violence following the example of Ciudad Juarez's initiative after its cases of feminicide. After a long history of exploitation and colonization, Mexican people have reached the capacity for using their suffering as a weapon to reconstruct their identity. Our aim is not only to question violence, but rather to start from this point with the intention of showing the efficacy of resilience. Principally, in psychology the capacity to cope with adverse events is related to individual factors, whereas the ecological view promotes the cultural and environmental dimension, underlying the bond between outside/inside factors. On the one hand, theories from psychology are useful for scientifically explaining how people adopt resilience and how it can be observed through measured parameters. On the other hand, we argue that an interdisciplinary work is fundamental in understanding complex relations between violence and resilience, keeping in mind the strong relationship between policy, body discipline, culture and ideology, and violence, vulnerability, empowerment and resilience. Considering the bond between these factors, we argue that violence and resilience coexist in a dialectical relationship, in which they interact simultaneously (Cirami, 2014b). Focusing on the dialectic meaning, the search for truth about violence ensures that the political use of such opposing forces determines the affirmation of one above the other. The instrumental use of these coexisting forces is embedded in structural, social, cultural and political dimensions, so that in the context of high levels of crime and persisting violence, people learn to manage them. The high levels of illegality can reproduce negative social reactions, such as narco-trafficking, kidnapping, criminal social practices, as a means of instinctive defense and survival. Otherwise, violence becomes an instrument of cohesion, building social trust and civil engagement which gives rise to resilient capability. This is to say that stressful situations produce a kind of agency, i.e. the capacity to engage into the social structure, through resilient force generating a resilient agency (Cirami,

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2014b). According to Sampson (Sampson et al. 1997), collective efficacy is more stable and increased in such emergency contexts where the community resilience flourishes on a structural and social level. When structural corruption concerning employment, education, inequality, urbanization and health treatments persists, it directly produces violence, represented in physical, emotional and psychological contexts. Nowadays, violence still keeps threading through society and justice or human rights seem to be reverberating sounds in everyday life. The mass kidnapping of 43 male students that occurred last September in Mexico's Guerrero State remind use how brave, unified and determined the Mexican community is. All walks of life protested against this state of terror, sharing the pain, the suffering and the indignation of the victims' parents. The slogan "*Todos somos ayotzinapa*" ("We are all ayotzinapa"), was embraced worldwide, and was adopted by supporters of justice, human rights and of freedom from violence. Protests and resistance actions have been an essential instrument in contributing to the unmasking of state guilt. Even if a way of finding an efficient cure for the metastasis of violence is very difficult and requires co-operation, obstinacy and love for the search of truth, resilient capacity still remains the best antidote for fighting against the uncontrollable raging hunger for the domination of men over other men.

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BURDUR'DA ARKEOLOJİK TURİZM BAKIMINDAN İKİ ÖNEMLİ MERKEZ: SAGALASSOS VE KİBYRA

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ÖZET
Antik kentler sadece, arkeoloji bilim disiplini için değil tarih, coğrafya, jeoloji, jeomorfoloji, antropoloji, sosyoloji, zooloji, botanik gibi bilim dallarının da ilgi alanı ve araştırma konuları içerinde yer alır. Burdur ili sınırları içerinde yer alan Sagalassos ve Kibyra antik kentlerinde yürütülen arkeolojik kazılarda ele geçen maddi kültür belgeleri her iki kentin de zengin bir arkeolojik mirasa sahip olduğunu göstermektedir. Ancak bu mirasın ne kadarı arkeolojik turizm bağlamında değerlendirilmektedir? Zira arkeolojik turizmden gelir temin eden ülkeler bu turizm türü ile olan ekonomik ilişkisinin güçlendirilmesine yönelik önlemler almakta ve bu yönde yapılacak yatırımları teşvik etmektedir. Bu çalışmada Sagalassos ve Kibyra antik kentlerinin arkeoloji ve coğrafya arasındaki ilişkisi turizm bağlamında irdelenmiş ve her iki antik kentin arkeoloji turizmi bakımından önemi tartışılmıştır.
Anahtar kelimeler: Arkeoloji, Turizm, Antik kent, Sagalassos, Kibyra

ABSTRACT
Ancient cities are included not only in archaeological science discipline but also in the interest area and research topics of the science branches, such as history, geography, geology, geomorphology, anthropology, sociology, zoology, and botany. Material culture documents uncovered in archaeological excavations conducted in the ancient cities of Sagalassos and Kibyra located in the province of Burdur show that both cities have a rich archaeological heritage. But how much of this heritage is evaluated in the context of archaeological tourism? Countries supplying income from archaeological tourism take measures to strengthen economic relations in this type of tourism, and they encourage the investments to be done in this direction. In this study, relationship of the ancient cities of Sagalassos and Kibyra between archeology and geography has been examined in the context of tourism, and importance of these both ancient cities has been discussed in terms of archaeological tourism.
Keywords: Archeology, Tourism, Ancient city, Sagalassos, Kibyra

1.GIRIŞ

Arkeolojik mekânlara gerçekleştirilen seyahatleri kapsayan, arkeolojik kalıntıları koruma bilincini geliştiren ve ekonomik kazanç sağlayan bir turizm tipi şeklinde izah edilen arkeolojik turizm, yazının başlangıcından itibaren olan dönemi kapsamaktadır. Türkiye şartlarında ise bu tarih, M.Ö. 19. yüzyıldan M.S. 12. yüzyıla kadar olan çok geniş bir zaman sürecini içerisine alır. Arkeolojik turizm, arkeolojik sit ve müzelere yapılan turlarla, kültürlerin gelişim sürecini öğreterek halkın kültür seviyesini arttıran, arkeolojik kalıntıları koruma bilincini geliştiren, ülkesel ve yerel ekonomik kazanç sağlayan bir turizm tipidir (Doğaner,2013:69).

Türkiye'de arkeolojik turizm, kültür turizmi adı altında yapılmaktadır. Alternatif turizm türlerinden olan kültür turizmi, değişen seyahat eğilimleri ve turistlerin beklentileriyle birlikte, giderek büyümektedir. Kişilerin artık daha farklı ve daha otantik yerleri ziyaret etme istekleri, kültürel alanlara yapılan gezilerde artışa neden olmaktadır. Turistler gezileri süresince kültürel anlamda keşif yapma isteği içinde olduklarından, kültür turizmi giderek gelişme göstermektedir (Wang ve diğerleri, 2006:49-50). Dünya Turizm Örgütü, yapılan turizm seyahatlerinin % 37'sini kültür turizmin oluşturduğunu ve bu talebin her yıl % 15 oranında artacağını tahmin etmektedir (McKercher ve Cros, 2002:135).Ülkeler için önemli bir alternatif turizm türü olan kültür turizmi, gelir sağlayıcı etkisinin yanında kültürel değerlerin korunması açısından da üzerinde durulan bir turizm seklidir (Öztürk ve Yazıcıoğlu, 2002:189).

Turizmin kültürel varlıklar üzerindeki olumlu etkilerinden en önemlisi, yerel halkın yasam seviyesini yükseltmesi ve yeni iş olanakları yaratması gibi ekonomik etkileridir. Ekonomik gelişme, sosyo-kültürel gelişmeyi de beraberinde getirmektedir. Yerel halkın toplum bilincinin yükselmesi, korumaya yönelik yatırımların da artmasını sağlamaktadır. Kültür turizmiyle elde edilen ekonomik kazanç, kültürel mirasın korunması için gerekli finansal desteği de sağlayacaktır. Çevreyi ve kültürel mirası koruma adına yapılan harcamalar, uzun dönemde ekonomik açıdan olumlu bir gelişmeye neden olmaktadır. Bu nedenle kültür turizmi ve kültürel miras, sürdürülebilirlik ve ekonomik gelişme açısından birbirlerine gereksinim duyan iki olgudur (Akgül, 2003:63).

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Turizm, geleneksel kültürü tekrar canlandırabilir ve gelirlerin artmasında doğrudan fayda sağlayabilir. Kültürel anlamda turistlerle bilgi alışverişi sağlanmasında etkili olabilir (Mckercher ve Cros, 2002:62). Turizm, eski yapıları, yeni kimlikleriyle yasamalarını sağlayacak düzenlemeleri özendirmektedir. Bir anlamda eski binaları, değerleri kaybedilmeden, modern bir görünüme kavuşması konusunda etkili rol oynamaktadır. Bu sayede çekicilikleri de artırılmış olmaktadır (Kousis, 2000:471). Kültürel varlıkların turistler tarafından ziyaret edilmesi, yerel halka ve hükümetlere çok çeşitli yararlar sağlayabilmektedir. Öncelikle, tarihi, kültürel ve doğal alanlar bu sayede koruma altına alınmış olmaktadır. Ayrıca, kültürel veya miras turizmi, hem yerel halkın hem de turistlerin, bölgenin tarihi ve kültürü hakkında bilgi sahibi olmaları konusunda oldukça önemli bir rol oynamaktadır (Huh, 2002:8).

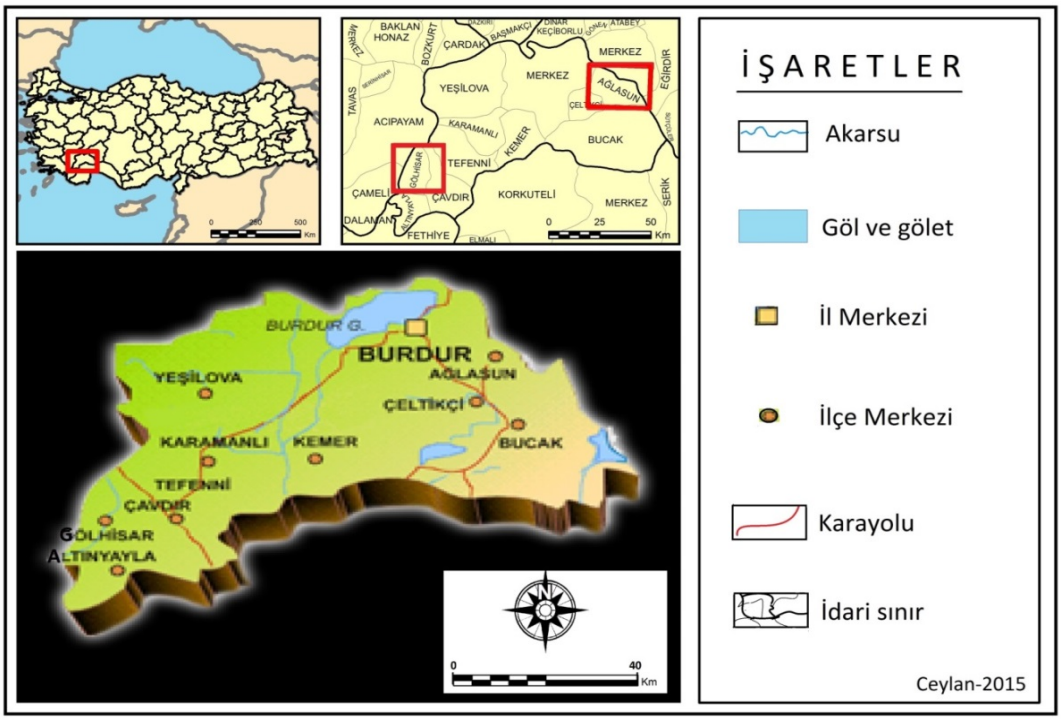
Türkiye topraklarının konumu ve coğrafyası yerleşmeye çok uygun olduğundan arkeolojik turizm için eşsiz zenginliği sahiptir (Doğaner, 2013:80). Ancak Türkiye'de arkeoloji turizminin gelişim alanı Doğanerin'in ifade ettiği üzere Ege ve Akdeniz çevresidir. Bu klasik arkeolojinin ilgi alanı olan sahadır. Bunun nedeni Yunan-Roma uygarlıklarının burada taş ve mermerden yapılmış anıtlarla süslü kentler kurmuş olmalarıdır (2013:76). Turizm şirketlerinin kültür turu olarak reklamını yaptığı turlar antik kentlerin en çok olduğu "Ege ve Akdeniz Kültür Turu" şeklinde düzenlenmektedir (Doğaner, 2013:76).

Batı Akdeniz'in önemli kentlerinden biri olan Burdur'da da Anadolu kültür tarihi ve arkeolojisi açısından önemli bir yere sahiptir. Hacılar, Kuruçay ve Höyücek Höyüklerinde yapılan kazılarda ele geçen maddi kültür belgeleri, Burdur'da yerleşme tarihinin günümüzden 9000 yıl öncesine kadar gittiğini ve yörenin Prehistorik devirlerden bu yana iskan edildiğini göstermektedir. Nitekim Burdur'da 50'ye yakın höyük ve Tümülüs ile 25'ten fazla ören yeri ve antik kent yerleşim yeri bulunmaktadır. Burdur turizmi açısından önem taşıyan Sagalassos ve Kibyra antik kenti, bu çalışmanın konusunu oluşturmaktadır.

2.ARAŞTIRMA SAHASININ KONUMU VE GENEL ÖZELLIKLERI

Burdur, Akdeniz Bölgesinin Antalya bölümünde ve Göller Yöresi'de yer almaktadır. Burdur İli güneyde Antalya, batıda Denizli, güneybatıda Muğla, doğu ve kuzeyde Isparta ve Afyon illeri ile çevrilidir. Bir il merkezi (merkez ilçe) ve 10 ilçe yönetiminden oluşan ilin toplam yüzölçümü 6883 km dir. Çalışma konumuzu oluşturan Sagalassos antik kenti Burdur'un ilçelerinden olan Ağlasun ilçesi sınırları içerisinde ve ilçe merkezinin 7 km kuzeyinde yer alır. Kibyra antik kenti de, ilin güneybatı ilçelerinden Gölhisar ilçesi sınırları içerisinde ve ilçe merkezinin 2 km batısında yer alır (Şekil 1).

Burdur, Batı Torosların uzantıları üzerindeki Boncuk Dağları, Elmalı Dağı ve Katrancık Dağı, doğudan yine Batı Torosların uzantısı olan Kuyucak ve Dedegöl Dağı, kuzeyden Burdur Gölü ve Karakuş Dağı, batıdan ise Acıgöl ve Eşeler Dağları ile çevrilmiştir. Dolayısıyla il topraklarının % 78'i(% 78,2) engebelidir. Geri kalan yaklaşık % 20'lik kısmı ise tepelik alanlar ve ovalardan oluşur. İlin güney ve güneydoğusundaki tepelik alanlar ile güneybatıdaki engebeli düzlükler arasında tektonik ve karstik çöküntü alanları yer alır



Şekil 1. Araştırma sahasının lokasyon haritası

Bölgeye engebeli bir yapı kazandıran dağların büyük bölümü Batı Torosların uzantısıdır. Ormanlar daha çok dağlık alanlar üzerinde dağılış gösterir. En yaygın türü ardıç ve karaçam ormanlarıdır. İl topraklarının güneyinde sedir, batı ve kuzey kesimlerde karaçam, güney kesimde ise meşe ve kızılçam ağaçlarına rastlanır. Seyrek olarak kızılçam, meşe türleri dağılış göstermektedir. Güney kesimlerde kızılçam ormanlarının tahrip edildiği yerlerde maki türleri dağılış gösterir. Yörede ova ve havzalar daha çok step karakterli bitki türleri ile kaplıdır. Bu kesimlerde yoğun tarım ve hayvancılık faaliyetleri nedeniyle doğal bitki örtüsü yerini kültür bitkilerine bırakmıştır.
Burdur coğrafi olarak Akdeniz Bölgesinde yer almasına rağmen bu jeomorfolojik özelliği ile Akdeniz iklimi ile Karasal iklim özellikleri arasında bir geçiş özelliği göstermekte, ancak daha çok ise Karasal iklim özelliklerinin karakterini yansıtmaktadır. Nitekim Burdur yazları sıcak ve kurak, kışları ise soğuk ve yağışlı bir iklime sahiptir. İl toprakları genel olarak ana kayanın özelliğine bağlı olarak killi ve kireçli bir yapıya sahiptir.
Klasik Grek Çağı'nda Pisidia olarak isimlendirilen bu bölgeye Türklerin gelişi 1071 Malazgirt Zaferine dayanır. Bugünkü Burdur toprakları 1391 yılında Yıldırım Beyazıt tarafından Osmanlı topraklarına katılmış, 1852'de Burdur Sancağı kurulmuş, Cumhuriyetle birlikte il merkezi olmuştur. Su anda Burdur ili, merkez ilçeyle birlikte 11 ilçeden oluşmaktadır.

3.BURDUR'UN KÜLTÜREL VE ARKEOLOJI TURIZMI POTANSIYELI

Kültür turizmi; sahip olunan kültürel varlıkları, kültürel mirası, kültürel etkinlikleri ve sanat eserlerini "bir turistik ürün" olarak turistlerin hizmetine sunmak olarak tanımlanabilir. Burdur ilini Kültür turizminde ulusal ve uluslararası pazarlar açısından özgün kılan en önemli tarafı Batı Akdeniz Bölgesinin tarihsel adı olan "Teke Yöresi"nin manevi başkenti olmasındadır. Teke yöresi kültürü; mimari özellikleri, konakları, camileri, hamamları, çeşmeleri, kervansarayları, el sanatları, giysi ve kıyafetleri, sosyal yaşamdaki gelenek ve görenekleri, türküleri, oyunları, çalgıları, kıvrak ezgileri ve yöre mutfağı ile oldukça zengin bir potansiyele sahiptir.
Burdur, sınırları içinde Sagalassos (Ağlasun), "Kibyra ve Bubon (Gölhisar), Kremna, Milias, Sia ve Kodrula (Bucak), Balboura (Altınyayla) gibi antik kentleri bulundurması nedeniyle Arkeoloji turizmi potansiyeli bakımından da oldukça zengin bir potansiyele sahiptir. Özellikle Ağlasun ilçesindeki Sagalassos antik kenti ve Gölhisar ilçesindeki Kibrya antik kentinde sürdürülen kazılarda ortaya çıkarılan yapılar ve elde edilen maddi kültür belgeleri, Burdur ilini arkeoloji turizmi bağlamında önemli bir konuma taşımaktadır.
Bu çalışmada her iki kentin arkeolojik mirasına değinilmiş ve bu mirasın arkeolojik turizm bağlamında nasıl değerlendirilebileceği üzerinde analizler yapılmıştır.

4. SAGALASSOS VE ARKEOLOJIK TURIZM

Sagalassos antik kenti, Burdur'un yaklaşık 37 km. doğusunda ve Ağlasun ilçe merkezinin 7 km kuzeyinde yer alır. Kent, Batı Toros dağların iç sıralarından olan ve doğu batı yönünde uzanan Akdağ'ın güney yamacında 1450-1700 m. yükseltiler arasında meyilli bir arazide kurulmuştur (Ceylan, 2015)(Fotoğraf 1).
Pisidia bölgesinin Roma İmparatorluk döneminde en önemli şehri olan Sagalassos hakkında ilk bulgular, Fransız gezgin Paul Lucas'ın 1706 yılında burada antik bir şehir kalıntıları bulmasıyla başlar. Kent hakkındaki ilk araştırmalar ise 1884 ve 1885 yıllarında K.Lackoronski başkanlığında Avusturyalı bir ekip tarafından yapılmıştır. 1982 yılında S.Mitchell'in Pisidia Bölgesi hakkında bu bölgedeki antik kentleri inceleyen bir proje başlatması ve 1985 yılından sonra da Sagalassos'u bu projeye dahil etmesi bir bakıma Sagalassos'un da kaderini değiştirmiştir. Sagalassos'ta ilk modern ve bilimsel kazı çalışmaları Prof.Dr.Marc Waelkens başkanlığında 1989 yılında başlamıştır (www.sagalassos.be ; Sagalassos Ziyaretçi Kılavuzu; Torun, 2013; Waelkens *et al.*2011).



Fotoğraf 1. Sagalasos Antik Kentinin kuşbakışı görünümü.

Sagalassos'un yerleşme tarihi, Neolitik ve Kalkolitik çağlara kadar uzanmaktadır. Ancak yazılı kaynaklardan bilinen tarihi, Büyük İskender'in kenti M.Ö. 333 yılındaki fethi ile başlar. Kent İskender'in ölümünün ardından, kısa bir süre seleflerinin idaresinde kalır. M.Ö. 281'de, Seleukoslar'ın kontrolü altına giren kent, M.Ö. 188-133 yılları arasında Attaloslar'ın Bergama Krallığı'nın bir parçası olur. M.Ö. 129'dan itibaren çeşitli Roma eyaletleri içine dâhil edilen Sagalassos, M.Ö 39'da Roma'nın Galatya eyaletinin en önemli kenti olur (www.sagalassos.be ; Sagalassos Ziyaretçi Kılavuzu; Torun, 2013; Waelkens *et al.*2011).

Julio ve Claudian dönemleri arasında (M.Ö.25-M.S.1.yüzyılın ortası) Pisidia bölgesinin en büyük ve önemli şehri haline gelen Sagalassos bu dönemde birçok önemli yapılarıyla mimari açıdan da oldukça zenginleşir. Adrian döneminde (M.S.117-138) tekrar büyük canlılık kazanan kent, M.S.3. yüzyılın başına kadar da mimari yönden en parlak devrini yaşamıştır. Ancak 6. ve 7. Yüzyıllar kentin sonunu getiren sürecin başlangıcıdır. Her iki yüzyılın başında birer deprem yaşanır. Depremler kente önemli zararlar vermiş ve altı yüzyıl boyunca kentin ekonomisinin en önemli kaynaklarından biri olan seramik üretimi durmuştur. Bu dönemde özellikle Arap saldırıları ile bölgenin nüfus kaybetmesi Sagalassos'un terk edilme sürecini hızlandırmıştır. Bundan sonra kentte yaşam 13. Yüzyıla kadar tarıma dayalı olarak, küçük köy yerleşimi şeklinde devam eder. Sagalassos'ta İskender Tepesi'ndeki son kalenin de 13. Yüzyılda yıkılmış olduğu tespit edilmiştir (www.sagalassos.be ; Sagalassos Ziyaretçi Kılavuzu; Torun, 2013; Waelkens *et al.*2011).

Klasik antik dönemin en iyi korunmuş kentlerinden biri olan Sagalassos'ta Dor Tapınağı ve Antik Tiyatro gibi anıtlar ayakta kalmış durumdadır. 1989'dan itibaren yapılan kazılarda; Geç Hellenistik Çeşme, Dor Tapınağı, Meclis Binası, KB Heroon (Kahramanlık) Anıtı, Yukarı ve Aşağı Agoralar, Yukarı Agora'nın giriş kapıları olan GB Claudius Kemeri ve KD Kapısı (Fotoğraf 32), Neon Kütüphanesi, Macellum(Gıda Pazarı), Antoninler Çeşmesi (Fotoğraf 33), Hadrian Çeşmesi, Roma Hamamı ve Kent Konağı yamaç evi gibi pek çok yapı ve eser ortaya çıkarılmıştır. Geç Helenistik Çeşme, Antoninler Çeşmesi, KB Heroon, GB Claudius Kemeri, KD Kapısı ve Yukarı Agora'nın onursal sütunları özgün taşları kullanılarak ayağa kaldırılmıştır (Torun ve Ercan 2013). Neon Kütüphanesi üzerine, mozaik tabanı ve duvar yazıtlarını korumak amacıyla bir koruma binası inşa edilmiştir (www.sagalassos.be ; Sagalassos Ziyaretçi Kılavuzu; Torun, 2013; Waelkens *et al.*2011).

Kentin önemli yapıları

Hadrian ve Antoninus Pius Tapınağı

İmparator Hadrian (MS 117-138), Sagalassos'u tüm bölgenin (Pisidya, bugünkü Göller Bölgesi) resmi din merkezi ilan eder. Bu sayede kent yeni bir gelişim dönemine girer ve çok sayıda yeni anıt inşa edilmeye başlanır, imparator aynı zamanda, Sagalassos'a "Pisidya'nın birinci kenti, Romalıların dostu ve müttefiki" ünvanını verir. Bunun üzerine, kentte imparator Hadrian için bir tapınak yapılmaya başlanır, imparatorluğun ve Sagalassos'un itibarını yansıtan bu önemli anıt, kentin güneyindeki yüksek bir tepeye inşa edilir. Böylece her yerden görülebilir. Ancak tapınak Hadrian öldükten sonra, imparator Antoninus Pius döneminde (MS 138-161) tamamlanabilir (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Aşağı Agora

İmparator Augustus döneminde düzenlenmiştir (MÖ 27-MS 14). Aşağı Agora, Yukarı Agora'ya kıyasla daha ticari bir özelliğe sahiptir. Yine de, burada da pek çok onursal anıt ve heykel yer alır. Agora'nın doğusu boyunca bir sütun sırası ve bunun ardında bir seri dükkân yer almıştır. Meydanın iki yanındaki üstü çatı ile kapalı bu sütun sıraları (portikolar) yayaları güneşten ve yağıştan korur (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Roma Hamamı

Sagalassos'ta imparator Augustus döneminde bir hamam yapılır (MS 10-MS 30). Bu hamam Anadolu'da bilinen Roma tarzı hamamların en eskisidir. Daha sonra, MS 2. yüzyılda bu ilk hamamın üzerine bugün görülen devasa hamam kompleksi inşa edilir. Roma Hamamı kazılarında, bu ilk hamama ait bazı duvarlar da açığa çıkmıştır. İlk hamam birbirine paralel, sıcaklık, ılıklık ve soğukluk salonlarına sahiptir. Uçları apsisli (yarım daire biçimli) yan yana dikdörtgen salonlardan oluşan bu tür hamamların örnekleri İtalya'nın Campania bölgesindeki Pompei kentinde vardır (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Odeon

Odeon'un yapımına, MÖ 27-MS 14 arasında, imparator Augustus zamanında başlanır. Odeon kapalı bir tiyatro ve konser salonudur. Yarım daire biçimli bir oditoryumu ve yaklaşık 50 metre uzunluğunda bir sahne binası vardır. Salon 1500-2000 kişiliktir. Odeon'da müzik, tiyatro, şiir ve güzel konuşma gösterileri düzenlenir. Kentleri dolaşan ünlü konuşmacılar (hatipler) burada sahneye çıkar (Waelkens, 2005; Torun, 2013; Waelkens ve Sagalassos Ekibi, 2012).

Kent Konağı

İmparator Augustus döneminden itibaren, kentin yeni oluşan çok zengin toprak sahipleri sınıfı Sagalassos'un imarı ve altyapısına yatırım yapıp, bunun karşılığında Roma vatandaşlığı ve sosyal saygınlık kazanır. MS 4.

yüzyıldan itibaren bu durum değişir. Varlıklı seçkinler, kentte kendilerine ait özel yatırımlara öncelik vermeye başlar.

MS 4. yüzyılın sonu ve 5. yüzyılın başlarında, evin özel kısmında bir özel hamam, üç iç avlu ve çok sayıda oda ve servis mekânı yer alır. Anadolu'da bilinenlerin en büyüklerindendir. Sagalassos'un doğu konut mahallesinde yer alan bu sarayvari konut, sadece bir ev değildir. Yukarı kısmı resmi kabul mekânlarından oluşur. Burada büyük olasılıkla kentin yönetiminde söz sahibi, seçkin bir kimse, ailesi ile oturmuştur.

MS 450'den sonra, olasılıkla MS 541- 542'de yaşanan veba salgının ve daha sonra MS 602-615 depreminin ardından bu büyük konak giderek küçük kısımlara bölünür ve farklı amaçlar İçin kullanılmaya başlanır. Bu evrede, konut kompleksinin bir kısmı bir han gibi İşletilir, mekanları depo, ahır ve hatta çöplük olarak kullanılır (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Macellum

Yukarı Agora'nın hemen güneyinde yer alan bu teras üzerine, MS 2. yüzyılın son on yılında, pahalı gıdaların satıldığı bir pazar binası (macellum) inşa edilir. Daha sonraki yüzyıllarda burada başka pahalı ürünler de satılır. Mücevherler, müzik aletleri; cam, metal, işlenmiş kemik ve geyik boynuzundan dekoratif eşya ve aletler dükkan kazılarında ele geçmiştir. Sagalassos'un varlıklı ailelerinin hizmetkarları bu pazardan alışveriş yapmış olmalıdır (Waelkens, 2005; Torun, 2013; Waelkens ve Sagalassos Ekibi, 2012).

Yukarı Agora

Hellenistik Dönem'de bu meydan kentin politik merkezidir. Kentin erkekleri politika konuşmak üzere burada toplanır. Kent meclis binası da bu nedenle Yukarı Agora'ya hakim bir konuma inşa edilir. İmparator Augustus zamanında meydan yeniden düzenlenir ve taş döşenir. O dönemden itibaren agoranın üç tarafı sütunlu galerilerle (portiko) çevrilidir. MS 1. yüzyıldan itibaren bu meydan giderek onursal anıtlarla dolmaya başlar, imparatorlar, valiler ve yerel seçkinler için yapılmış heykel kaideleri, yazıtlar ve küçük anıtlarla agora adeta bir galeriye dönüşür. MS 500 civarında meydana gelen depremde bunların çoğu devrilir (Waelkens, 2005; Torun, 2013; Waelkens ve Sagalassos Ekibi, 2012)

Antoninler Çeşmesi

MS 160-180 yıllarında Yukarı Agora'nın kuzeyine görkemli bir çeşme inşa edilir. Anıtsal çeşme, Yukarı Agora'nın kuzeyi boyunca uzanan teras duvarın önüne, Augustus döneminde yer almış bir başka basit çeşmenin yerine inşa edilir.

Tek katlı çeşme 28 metre uzunluğunda ve yaklaşık 9 metre yüksekliğindedir. Her iki ucunda dışarıya doğru çıkıntı yapan sütunlu birer podyum (edikula) yer alır. İki dış edikula arasında, cephe boyunca dört adet daha edikula vardır. Su, merkez nişte bulunan 4,5 metre yüksekteki şelaleden akar ve önündeki 81 metreküp kapasiteye sahip havuzu doldurur (Fotoğraf 2). 1998-2010 yılları arasında onarılarak ayağa kaldırılmış ve kaynak suyu yeniden bağlanarak, özgün işlevine de kavuşmuştur. Kazılar sırasında çeşmenin haznesi içinde bulunmuş heykellerin döküm kopyaları restore edilen anıta 2011 yılında konulmuştur. Heykellerin asılları Burdur Müzesi'nde sergilenmektedir.



Fotoğraf 2. Antoninler Çeşmesinden (MS 160-180) bir görünüm.

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Antoninler Çeşmesi, MS 610 civarında meydana gelen büyük depremle yıkılır ve üzeri kısa sürede toprakla kapanır. 1993- 95 yıllarında yapılan kazılarla yapının podyumu halen ayakta, özgün taşlarının büyük çoğunluğu ise kırılmış ama genelde iyi korunmuş durumda açığa çıkmıştır. Bu sayede anıtsal çeşmenin yeniden ayağa kaldırılması mümkün olmuştur. 1998 yılında başlayan restorasyon projesi, mimari restorasyon uzmanı Semih Ercan yönetiminde, her yaz yaklaşık üç ay olmak üzere aralıksız 13 yıl sürdürülerek 2010 yılında tamamlanmıştır (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Bouleuterion

Kent meclisi binası MÖ 100'den hemen sonra inşa edilir. Yukarı Agora'nın batısında yer alan doğal bir teras üzerine kurulur ve önünde (kuzeyinde) bir avlu yer alır. Bu bina, o dönemde Sagalassos'ta seçimle gelen bir kent meclisi *(boulé)* olduğunun kanıtıdır. Sagalassos olasılıkla çok daha erken, MÖ 4. yüzyıldan itibaren bir kent *(polis)* niteliğine sahiptir. Antik Grek modeli kentlerde olduğu gibi seçilmiş vekiller ve değişen hakimler tarafından yönetilir; hatta yazıtlardan bildiğimiz yazılı kanunları vardır. Roma Dönemi'ne gelindiğinde, kentin yönetimine Sagalassos'un ileri gelen, seçkin kimseleri hakim olur. Demokrasi yerini oligarşiye bırakır (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Kuzeybatı Heroon

Kuzeybatı Heroon MS 1. yüzyıldan biraz önce veya az sonra, imparator Augustus zamanında İnşa edilir. 15 metre yükseklikteki yapı, bir kule gibi uzaklardan da görülmek üzere 7,80 x 8,50 metrelik bir podyum üzerine yapılır. Heroon, 2000-2010 yılları arasında özgün taşları kullanılarak yeniden ayağa kaldırılmıştır. Mimarlar, bağlantı deliklerinden ve yapıdaki İzlerden özgün taşların tam yerlerini belirleyebilmişlerdir.

Heroon adı verilen yapılar, kent halkından hayırsever bir kişiyi onurlandırmak üzere yapılmış küçük anıtlardır. Bazen bu kişinin mezarı da anıtın İçinde olur. Bu heroon, Sagalassos'un seçkinlerinin uzun yıllar hatırlanmak İçin yaptırdıkları onursal yapılardan biridir. Erken imparatorluk dönemine kadar kentte buna benzer pek çok anıt inşa edilmiştir (Torun, 2013; Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Dor Tapınağı

MÖ 50-25 yıllarında, Sagalassos'un bu en yüksek noktasına yeni bir tapınak inşa edilmeye başlanır. Tapınak çok büyük olasılıkla Tanrı Zeus'a adanmıştır. Zeus o dönemde uzun zamandır Sagalassos'un, hatta hemen hemen tüm Pisidya'nın Baş tanrısıdır. Yapı Antik Grek mimarisinin Dor düzenindedir. Ama aynı zamanda Roma mimarisinde olduğu gibi bir podyum üzerine kuruludur. Bu bakımdan Antik Grek ve Roma mimarisinin bir karışımını sergiler. Kısa süre sonra, imparator Augustus döneminde, tapınağa bir anıtsal giriş inşa (propylon) edilir ve bulunduğu alanın çevresi duvarlarla çevrilir. Anıtsal girişte Korint mimari düzeni kullanılmıştır (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

Geç Helenistik Çeşme

Bu küçük çeşme, imparator Augustus döneminden önce, MÖ 50-25 yıllarında inşa edilir. Bir ufak avlu etrafında düzenlenmiştir. Su haznesinin ön duvarı ve bunun üzerinde yükselen Dor düzenindeki sütunlar, avlunun üç kenarını çevreler. Üstü örtülü su haznesi, güneşten ve kirden bu şekilde korunmuştur. Kazılarda kısmen yıkılmış durumda ortaya çıktıktan sonra yeniden ayağa kaldırılmış, 1997 yılında restorasyonu tamamlanmıştır. Kazılar sırasında kendi su kaynağının da bulunmasıyla, bu çeşmeye yeniden su bağlanabilmiştir.

Bu çeşmenin inşası, Sagalassos'un sur duvarlarının dışına taşıp, geliştiği döneme denk gelir. O dönemde nüfus artar ve Hellenistik kent merkezi insanlara yetmez olur. Çeşme, kentin doğuya doğru genişleyen yeni mahallesi için yapılır. İmparatorluk döneminde bu çeşmenin olduğu Doğu mahalle, Sagalassos'un varlıklı kesiminin yerleştiği bölgedir. Mahalle suyunu bu çeşmeden almıştır. Pek çok evin ise doğrudan su bağlantısı vardır.

Yaklaşık bir yüzyıl içinde (MÖ 50-MS 50) Sagalassos kent yerleşimi üç kat büyür. Aynı dönemde kentin yeraltı su şebekesi de döşenir. Bu tarih, antik dönemde altyapı su sistemi için oldukça erkendir. Sagalassos'un bakım ve onarım görerek yüzyıllarca kullanılan su şebekesi, MS 500 civarında meydana gelen depremden itibaren ihmal edilir (Waelkens, 2005; Torun, 2013; Waelkens ve Sagalassos Ekibi, 2012)**.**

Neon Kütüphanesi

Sagalassos'ta kentin ileri gelenlerinin yaptırdığı pek çok anıt vardır. MS 120 civarında inşa edilmiş kütüphane de bu yapılardan biridir. Kentin seçkinleri, bu tür anıtlarla hem kendi zenginliklerini göstermek, hem de geriye eserler bırakmak istemişlerdir.

Kütüphaneyi Titus Flavius Severianus Neon, ölen babası için yaptırır. Neon, Sagalassos'un en önemli ailelerinden birinden gelir ve Sagalassos'un başlıca hayırseveri, aynı zamanda kentin oyunlarının (spor ve eğlence) da hamisi ve sponsorudur. Kütüphane pek çok bakımdan Efes'te yer alan Celsus Kütüphanesi'ne benzer. MS 114-117 yıllarına yapılmış olan Efes'teki kütüphane de bir oğul tarafından ölen babasına ithafen inşa edilmiştir. İki kütüphanenin mimarileri de benzerlik gösterir.

Neon Kütüphanesi'nin bugünkü halinde, yalnızca arka duvarın alt kısmı, özgün yapım evresine aittir. Bu taş podyumda küçük heykeller için nişler ve üzerinde bir sıra yazıt yer alır. Yazıtlarda, kent konseyi ve halk konseyi Neon'u ve onun ailesinden önemli kişileri onurlandırır. Kütüphane yüzyıllar içinde çeşitli değişiklikler geçirir. Yerde görülen siyah beyaz mozaik döşeme ise ikinci bir onarım evresine aittir; imparator Julianus zamanına tarihlenir (MS 361-363). Mozaik tabanın ortasında, bugün bozulmuş durumdaki panelde Truva Savaşı destanından bir sahne yer alır. Panelde, Achilles Truva Savaşına gitmek üzere Yunanistan'dan ayrılırken annesi

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Thetis'e veda eder. MS 4. yüzyılın sonuna doğru Hıristiyanlar tarafından çok tanrılı kültürün sembolü kütüphane ve yine o kültüre ait bir destanı anlatan mozaik panel tahrip edilir. Tabanda görülen yarıklar ise antik kentten geçen fay hattının MS 610 civarında yarattığı depremin izleridir (Waelkens, 2005; Torun, 2013; Waelkens ve Sagalassos Ekibi, 2012).

Tiyatro

Yükselen tepenin yamacında, bugüne dek gördüğüm veya duyduğum tiyatroların en zarifi ve en güzeli yer alır...". Sagalassos'un erken ziyaretçilerinden Charles Fellows yazdığı "1839 Küçük Asya'da Bir Seyahatin Güncesi"nde Sagalassos tiyatrosunu bu şekilde tasvir eder.

Tiyatro'nun yapımına olasılıkla MS 120 civarında başlanır. Bu dönemde imparator Hadrian, Sagalassos kentini Pisidya bölgesinin imparatorluk kült merkezi ilan eder. Bu da Sagalassos'ta her sene tüm Pisidya halkı için kutlamalar düzenlenmesini gerektirir; hemen ardından kentte buna uygun yapılar inşa edilmeye başlanır. Bölgenin kült kutlamalarına evsahipliği yapabilmek için, Sagalassos'un kendi nüfusu en fazla 5000 iken, tiyatrosu yaklaşık 9000 izleyici kapasitesinde inşa edilir. Ancak Tiyatro'nun yapımı, olasılıkla para sıkıntısı nedeniyle MS 180-190 civarında durur. Sagalassos kenti o yıllarda bu tür anıtlara fazlasıyla para harcamış olmalıdır. Bu nedenle sahne binası iki değil, tek katlıdır. Güneybatı girişin üzerinde devam etmesi gereken oturma sıraları ise yapılmamıştır. 2011'de burada yer alan daha eski bir tiyatroya ait oturma sıraları tespit edilmiştir (Waelkens, 2005; Waelkens ve Sagalassos Ekibi, 2012).

5. KIBYRA VE ARKEOLOJIK TURIZM

Gölhisar İlçesi:

Gölhisar ilçesi, Bucak'tan sonra Burdur ilinin önde gelen ilçelerinden birisidir. Kuzeydoğuda Tefenni, doğuda Çavdır, güneyde Altınyayla, güneybatıda Fethiye, batıda Çameli ve kuzeybatıda Acıpayam ilçeleri ile çevrilidir. Gölhisar' ın içinde bulunduğu bölge "Arzava" adıyla Hitit tabletlerinde yer alır. Arzava sözcüğü ormanlık ülke anlamındadır. İlçe merkezine yakın noktadaki Kibyra antik kenti ile İbecik kasabasındaki Bubon antik kenti ilçenin sahip olduğu önemli kültür varlıklarıdır.

Kentin Konumu ve Tarihi

Kibyra antik kenti, Burdur'un, Gölhisar İlçesi'nin batısındaki alçak tepeler üzerinde konumlanmıştır. Antik yazarların verdikleri bilgilere göre kent buraya, M.Ö. 3. yüzyılda kurulmuştur. Kentin kurulduğu bu bölge, Eski Anadolu coğrafyasında "Kabalya" olarak bilinmektedir. Roma İmparatorluk Dönemi'nde ise, bölgenin en büyük kenti olan Kibyra'dan dolayı "Kibyratis" olarak anılmıştır (Özüdoğru, 2014:173).

Kibyra isminin anlamı, henüz bilinmemektedir. "Kibyra" adının eski Yunancada bir karşılığı yoktur. Bu durum Kibyra adının, Anadolu'daki diğer birçok antik kent adında olduğu gibi (Örneğin Altınyayla yakınlarındaki Balbura ve Bubon antik kent isimleri gibi), yerel bir Anadolu dilinden türediğini göstermektedir.

Kibyra ile ilgili tarihsel bilgilerimizin büyük çoğunluğunu Amasyalı (o zamanki adı ile Ameseia) antik coğrafyacı Strabon'un (Doğum:M.Ö.64; Ölüm:M.S.24, dünyanın ilk coğrafyacılarındandır.) anlatımlarından öğrenmekteyiz. Strabon'un anlattıklarına göre: Kibyralılar ilk önce Lidya bölgesinde (Uşak ve Manisa yöresinin o zaman ki adı Lidya idi.) yaşıyordu. Daha sonra bu halk, buradan göç ederek Kabalya bölgesine (Gölhisar ve yakın çevresinin eski adı Kabalya olarak bilinmektedir.) geldiler. Geldikleri zaman burada Pisidia'lı (Göller Yöresinde oturan halkın eski adı) bir halk yaşamaktaydı. Bir süre sonra Kibyralılar bu halkı hâkimiyetleri altına aldılar. Bundan sonra da buraya yerleşerek bölgedeki diğer halklarla birlikte Kibyra kentini kurup burada yaşadılar. Kibyra'da Lidce, Solymce, Pisidce ve Hellence olmak üzere dört farklı dil konuşulmaktaydı. Kibyra özellikle demir işçiliği, dericilik ve at yetiştiriciliğinde oldukça ünlüydü. Kibyra'yı M.Ö. 2. yüzyılda "Moagetes" isimli bir tiran (hükümdar) yönetmekteydi (Özüdoğru, 2013: 30).

Kibyra, kurulduğu tarihten itibaren hızla gelişmiş ve M.Ö. 2. yüzyılda Bubon (İbecik), Balbura (Altınyayla) ve Oinoanda (Elmalı yakınlarındaki İncealiler köyü) kentleri ile birlikte, dört kentten oluşan bir birlik kurarak bölgenin tek hâkimi olmuştur. Bu birlik Kibyra'nın iki, diğer kentlerin ise birer oy hakkına sahip olduğu bir meclis tarafından yönetiliyordu. Antik coğrafyacı Strabon'a göre Kibyra'nın iki oy hakkına sahip olmasının nedeni, Kibyra'nın sadece kendi kaynaklarıyla bu birliğin ordusuna otuz bin piyade ve iki bin atlı asker sağlamasıdır. Bu birlik yaklaşık olarak yüzyıl boyunca, bölgede etkin bir şekilde varlığını sürdürmüştür. M.Ö. 82 yılına gelindiğinde ise Roma İmparatorluğunun generallerinden Murena, bölgeyi ele geçirerek bu birliği dağıtmıştır. Bu olayın ardından Kibyra, Roma İmparatorluğunun Asya Eyaletine bağlı bir şehir olarak varlığını sürdürmüştür (Asya Eyaleti: Batı Anadolu şehirlerini kapsayan yönetim birimi). Roma İmparatorluğu, Anadolu'yu bölgelere göre eyaletlere bölerek idare etmekteydi. Her Eyalet, Roma İmparatorunun atadığı bir Vali tarafından yönetilmekteydi.

Kibyra ile ilgili kayıtlara geçen bir diğer önemli durumda M.S. 23 yılında meydana gelen depremdir. Bu deprem sonucunda kentteki yapıların neredeyse tamamı yıkılmıştır. Depremin neden olduğu hasar, o zamanki Roma İmparatoru Tiberius'un para yardımlarıyla onarılmıştır. Kibyra özellikle M.S. 1. - 3. yüzyıllar arasında en parlak dönemini yaşamıştır. Kentte şu an görülen kamu yapıları bu dönemde inşa edilmiştir.

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Kentin Büyük Kamu Yapıları

Turistik merkezlerin oluşmasında rol oynayan en önemli beşeri faktörlerden biri de tarihi ve kültürel değeri olan antik şehir kalıntılarıdır. Bunlar; tarihi arkeolojik ve etnografik eserler, tarihi yerleşme yerleri, dini eserler, sosyal ve kültürel faaliyetler olarak sıralanabilir. Bu turizm değerleri bakımından ilçede antik kent, mezar ve kilise kalıntılarına rastlanmaktadır. Bunlar içerisinde en fazla değere sahip olanlar arasında Gölhisar şehrinin kuzeybatısındaki tepeler üzerindeki Kibyra antik kenti yer almaktadır. Kibyra kent merkezi, birbirinden küçük vadilerle ayrılan üç egemen tepelik üzerindedir. Kamu, sivil ve dini yapıların bu alan üzerinde belli bir bütünlük oluşturacak biçimde düzenlendiği görülür. Kamu yapıları, doğuda stadiondan başlayarak batı uçtaki tiyatro ve meclis binasının oturduğu sırt arasında yoğunlaşmıştır. Sosyal ve ticari agoraların yanı sıra, kentin ekonomik yaşamın canlılığını simgeleyen küçük iş yerleri de bu eksen üzerinde konumlanır. Antik şehirden günümüze kadar gelen ve ayakta duran anıtsal yapılardan birisi, **Stadion**'dur. Yaklaşık 12000 kişilik kapasitesi yanı sıra 200 m.ye varan pist uzunluğuyla Anadolu'nun en görkemli stadyumları arasında yer alır. Stadion, U şeklinde, açık dar cephede zafer takı şeklinde anıtsal beş gözlü girişi olan, halkın sportif faaliyetlerine hizmet eden üç tarafı basamaklı bir yapıdır (Fotoğraf 3).



Fotoğraf 3. Kibyra antik kenti anıtsal yapılardan olan Stadion'dan bir görünüm.

Meclis binasının hemen kuzey kenarında, büyük oranda sağlam durumdaki **Tiyatro,** ana tepenin doğu yamacına yerleştirilmiştir. Yarı dairesel planlı, üç katlı oturma sırası, beş kapılı sahne binası ve yaklaşık 9000 kişilik izleyici kapasitesiyle halkın tiyatro oyunlarını seyrettiği bir yapıdır.

Diğer bir sanatsal yapıda **Odeon** 'dur. Odeon, tiyatronun güneyinde içinde konserler verilen bir yapıdır. Kesme taş bloklardan yamaca yarım daire planlı olarak yapılmıştır. Tiyatro ve Stadion'u birbirine bağlayan doğu-batı doğrultulu ana cadde, kuzey-güney yönünde uzanan Agora'yı tam ortadan böler. Yolun güneyi Aşağı Agora olarak adlandırılmış olup, yan yana konumlandırılmış dükkanlarıyla daha çok ticari işlevlidir. Yukarı Agora ise, doğusunda üç terasa oturtulmuş üstü kapalı sütunlu galerileriyle sosyal işlevlidir. Birinci teras agora cadde uzunluğu 115 m. olup 89 metrelik kısmı, kazısı yapılarak açılmıştır(Fotoğraf). Agoranın kuzeybatı köşesine yakın konumda, büyük oranda sağlam durumdaki Roma Dönemi Hamam yapısı(Fotoğraf) ve onun önündeki düzlükte **Gymnasion** yer almaktadır. M.S: 250 yıllarında inşaatı bitirilmiş hamam kompleksi 2600 m olup, Palestra ve Gymnasion alanlarıyla birlikte yaklaşık 6000 m² alanı oluşturmaktadır. 2015 yılında yapılan kazı çalışmalarında hamamın dış cephesi açılmış, hamamın iç kısmının kazısı gelecek yıllarda yapılması planlanmaktadır.

Bu anıtsal yapıların dışında mezar yapıtları, bazilika ve köprü gibi eserlerde hala ayaktadır. Kibyra antik kentinde 2006 yılında Stadion'da başlanan kazı çalışmaları, 2009 yılında Odeon'da devam edilmiş ve burada yapılan kazılar sonucunda orkestranın tam merkezinde kırmızı, beyaz ve yeşil mermerden yapılmış bir **Medusa başı** (Fotoğraf 4), tamamıyla sağlam olarak ortaya çıkarılmıştır(Yılmaz,2009: 163).

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Fotoğraf 4: Kibyra antik kenti anıtsal yapılarından olan Odeon'da ortaya çıkarılan Medusa başı, yılanlardan olan saçları ve insanları taşa çeviren bakışlarıyla, antik dönemde özellikle mezar yapılarında koruyucu bir nitelik taşır.

Medusa, yılanlardan olan saçları ve insanları taşa çeviren bakışlarıyla, antik dönemde özellikle mezar yapılarında koruyucu bir nitelik taşır. Bir orkestranın zemin döşemesinde böylesine bir Medusa resmi, Anadolu arkeolojisi için tekil bir örnektir. Odeon'da ortaya çıkarılan Medusa başı haberleri ulusal basında yer almasıyla birlikte, Kibyra antik kente olan ilginin artmasına neden olmuştur. Kibyra'daki kazı ve restorasyon çalışmalarının gelecek yıllarda da devam etmesi, ilçenin turizm faaliyetlerinin daha da canlanmasını sağlayacaktır.

6.TARTIŞMA VE SONUÇ

Burdur, Göller yöresinin gerek doğal ve tarihi ve gerekse arkeolojik ve kültürel bir çok zenginlikleri bünyesinde barındıran önemli yerleşmelerinden biridir. Antalya gibi dünyanın turizm başkentine olan yakın konumu (yaklaşık 125 km.) gelecekte turizm potansiyelini değerlendirmesi yönünde önemli bir avantaj sağlamaktadır. Her ne kadar turizm etkinliğine katılan turistlerin deniz-kum-güneş tercihleri halen başat olsa da kültür ve arkeoloji turizmine yönelen turist sayıları da her geçen yıl artmaktadır.

Yılda 15 milyon turiste yaklaşan Antalya turizmine alternatif oluşturmada kültür ve arkeolojik turizmin önemli iki merkezi olma yolunda ilerleyen Sagalassos ve Kibyra antik kentleri için önemli bir potansiyaldir. Burdur'un, bu iki merkez dışındaki diğer turizm çekiciliklerini değerlendirmesi bu iki merkeze yönelik turizm aktivitesinin gelişimine bağlıdır.

Turistin beklentileri olan konaklama, yiyecek-içecek, erişe bilme kolaylığı gibi temel gereksinmelerin karşılanması bu merkezlere olan taleplerin artması bakımından önemlidir. Sagalassos'da konaklamaya yönelik otel konsepti 2014 yılında faaliyete geçmiş olup henüz yolun çok başındadır. Kibyra'da ise henüz buna yönelik bir adım atılamamıştır. Dolayısıyla turistlerin günübirlik turlarla ziyaretleri gerek sayı ve gerekse gelir getirici olmaktan uzaktır. Bu yönde özellikle yöreninin mimari özellikleri dikkate alınarak inşa edilecek konaklama üniteleri arkeoloji turizminin gelişmesi açısından önemlidir.

Sagalassos antik kenti yaklaşık otuz yıldan beri interdisipliner uzmanlarca çalışılan bir proje olarak hem yurt içinden özellikle yurt dışından güçlü sponsarlarla desteklenmektedir. Bu antik kentin çok kısa sürede ve çok önemli kamu yapılarının ayağa kaldırılmasına ve turizme hazır hale getirilmesine neden olmuştur. Oysa Kibyra kazılarının çok daha yakın bir zamanda (2006 yılında) başlaması ve Mehmet Akif Ersoy Üniversitesinin desteği ile ve sınırlı kamu kaynakları ile yürütülmesi nedeniyle henüz yolun başındadır. Bu bağlamda özellikle güçlü sponsorlara ve devlet bütçesinden ayrılacak kaynaklara büyük ihtiyaç vardır. Bunun yanında yurt içi ve yurt dışında etkili tanıtım faaliyetlerine ağırlık verilmesi de son derece önemlidir.

Sagalassos, Kültür ve Turizm Bakanlığının sağladığı kaynaklarla ören yeri giriş düzenlemesi, çok amaçlı bir salon, kafe ve tuvaletleri içeren ören yeri karşılama binası 2014 yılı sonunda faaliyete geçmesine ragmen Kibyra için henüz bir giriş düzenlemesi yapılamamış, Kültür ve Turizm Bakanlığınca 2015 yılında karşılama merkezi ve bilet gişe üniteleri, gezi yolları, seyir ve dinlenme alanları projesine başlanmış olup, 2016 yılında faaliyete

geçirilmesi planlanmaktadır. Dolayısıyla Kibyra antik kenti giriş düzenlemesinin bir an önce hayata geçrilmesi turist taleplerinin artması açısından gereklidir.

1946 yılından beri Birleşmiş Milletlere bağlı özel bir kurum olarak faaliyet gösteren Birleşmiş Milletler Eğitim, Bilim ve Kültür Örgütü (UNESCO) bir amacı da, insanlığın ortak mirası olan doğal ve kültürel varlıkların tahrip yada yok edilmesini engellemektir. Bu bağlamda 1972 yılında imzalanan "Dünya Kültürel ve Doğal Mirasının Korunmasına Dair Sözleşme" ile koruma yönünde atılan adımlar (Türkiye söz konusu sözleşmeyi 1982 yılında imzaladı) ve 1976 yılında oluşturulan Dünya Mirası Komitesinin 2015 yılında düzenlediği (Almanya-Bonn) 39. Toplantısıyla Ülkemizin Dünya Mirası Kalıcı listesinde yer alan doğal ve kültürel değerlerimizin sayısı 15'e yükselmesi sevindiricidir. Dünya Mirası Kalıcı listesi dışında Geçici listesinde bulunan 60 farklı doğal ve kültürel değerimizle birlikte Türkiye'nin 75 doğal ve kültürel değeri insanlığın ortak mirası olarak tescil edilmiştir. Bu ortak kültürel miras değerleri arasında yer alan ve Dünya Mirası Geçici listesine 2009 yılında giren Sagalassos antik kentinin kalıcı listeye girmesi yönündeki çabaların devam etmesi, diğer taraftan Kibyra gibi çok yeni kazılan bir antik kentin kısa sürede ortaya çıkarılan maddi kültür belgeleri ve kent yapılarının da dünya insanlarına duyurulması ve Dünya Mirası Geçici listesine dahil edilmesi yönünde atılacak adımların desteklenmesi gerekir. Her iki antik kentin yakın bir gelecekte Dünya Mirası Kalıcı listesinde yer alması Burdur Arkeolojisi ve Arkeolojik turizmi için son derece önemlidir.

Sonuç olarak, Sagalassos ve Kibyra kazılarıyla gün yüzüne çıkarılan arkeolojik değerlerin çok paydaşlı, katılımcı, çok disiplinli, yerel hatta bölgesel kalkınmayı gözeten "Arkeolojik miras yönetimi" projelerine dönüşmesi, bu kentlere yönelik turizm faaliyetinin gelişmesi yanında sürdürülebilir bir turizm faaliyeti için zorunluluktur.

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ABSTRACT
Background: Physiotherapists are exposed to emotional and physical burdens that often lead to a state of Burnout. Objectives: To determine the prevalence of burnout rates in physiotherapists. Methods: Cross-sectional descriptive and correlational study with 85 physiotherapists , whom we applied a socio-demographic questionnaire, the scale of positive and negative affections on personality of Eysenk, the scale of Job Satisfaction and the Inventory of Mas- lach Burnout (MBI). Results: 84% are women with a mean age of 39. 45% exhibit moderate exhaustion. Conclusion: The prevalence of burnout among physiotherapists is high. Affective balance, neuroticism and job satisfaction are predictive factors.

INTRODUCTION
Health is a key factor for life and promoting well-being, working capacity and personal happiness. Professional, social, environmental and psychological variables have recently been valued in health measurement (Bennet & Murphy, 1999) cited by Gonçalves (2008).
Work has acquired social relevance at times neglecting proper conditions, resources and appropriate job posts tailored to the characteristics of the people, their needs, skills, interests, emotional, social and family components with repercussions to the individual, organizations and society in general on the physical, psychological and behavioural levels, (European Agency for Safety and Health at Work in https://osha.europa.eu/pt/front-page consulted on 15 September 2013). Thus, there was an intention to study burnout syndrome in physical therapists working in Regional Health Administration hospitals in the central region of Portugal.
For Seabra (2008), the burnout syndrome is "an experience of physical, emotional and mental exhaustion caused the long-term involvement in situations that are emotionally demanding." The physiotherapist deals with the pain and suffering of patients and families daily and is often susceptible to stress (Vital, Baltazar, Gavinho, & Mendes, 2006.
"Health is not an absolute quality. It has the value given to it by the culture of society" and for Reis (2000), cited by Mendes (2008), it is the highest level of well-being, functional capacity, and intervention capacity achieved by each of us and by the community, valuing our own potentialities the most and lucidly facing our own limitations and constraints (psychological and biological), as well as environmental limitations and constraints (community and ecological) of the ecosystem which surrounds us.
Burnout: It is during the 70s in the United States of America (USA) that there is a wake-up call to the fact that the burnout phenomenon does not involve the "aberrant" behaviours of some individuals considered "deviant" but rather is a more common phenomenon, characterized by emotional exhaustion and loss of motivation and commitment.
The term stems from popular culture and not from academic origin. It is the result of a work of fiction, "The Burnout Case," where a spiritually tormented and disillusioned architect quits his job and goes to an African jungle. Health professionals are prone to burnout (Mateen, 2009).
In any profession, stress can have positive aspects that challenge us, and allow us to evolve personally and professionally as well as negative aspects which place obstacles in our way and deteriorate our attitude with regards to work over time with impacts on our mental and physical health. (Seabra, 2008) considers it "an experience of physical, emotional and mental exhaustion caused by long-term involvement in situations that are emotionally demanding." It is a psychological syndrome involving prolonged responses to stressors in the workplace. It involves chronic stress resulting from a mismatch between the individual and the work (Maslach, 2003) cited by Seabra (2008). Burnout is a social problem identified by commentators and social workers long before becoming a focus for researchers, (Maslach et al., 2001; Maslach, 2003) cited by Seabra (2008).

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According to Mateen (2009), the concept of burnout is a psychological syndrome in response to chronic interpersonal and emotional stressors at work. The three dimensions of these responses are a choking exhaustion, a feeling of cynicism and detachment from work and a feeling of inefficiency and lack of personal accomplishment.
Today there is a consensus that burnout is a chronic and multidimensional experience of stress at work, although some authors address it as one-dimensional. The burnout syndrome for David and Quintão (2012) is a psychosocial syndrome assumed as a response to chronic emotional and interpersonal stressors.
Job satisfaction: This concept is not consensual. The first studies on this topic were carried out within the field of psychology. It is based on the satisfaction obtained from any experience and depends on expectations, needs and values. For the author, expectations affect attitudes because there is a greater or lesser discrepancy between what one wants and what one has. Thus, values, unlike needs, are something that are acquired by the individual and that may be desired by him consciously or unconsciously. It is what is sought and which conditions choices and emotional reactions. Job satisfaction results from the perception that the individual has about their work and its value to the extent that they are consistent with their needs, (Dias, 2009). According to Rodrigues (1995) cited by Borges and Daniel (2009), the importance of job satisfaction is notorious as it represents an "indicator of the perception that individuals have between what are the expectations with regards to work and what are the intrinsic or extrinsic rewards effectively taken from these situations, capable of revealing the feelings of personal achievement and participation in the system through work."
For Dias (2009) whether the work is a utility, a need, an obligation or a source of satisfaction, it represents, regardless of individual perception, a fundamental dimension of life in modern societies. Its centrality derives not only from the impact it has on workers' behaviour, but also in job satisfaction and is one of the three most important predictors of well-being, along with marriage and satisfaction with the family. The relationship between performance and job satisfaction is clear, but there are two opposing explanations for this. The first refers to will the satisfaction resulting from performance; that is, when people like their work, they will strive more and as a consequence will perform better. In the second, performance results in satisfaction; that is, when people perform well, they tend to benefit and the benefits may increase satisfaction, and satisfaction favours the state of mind and positive attitudes at work and in private life. Dissatisfaction correlates directly with various psychosomatic problems, such as stress, problems of conduct at work, absenteeism and lack of punctuality, (Costa et al., 2008).

THE STUDY

Our research questions are: (i) "what is the prevalence of burnout in physiotherapists working in the Centre-RHA hospitals; (ii) what socio-demographic and professional factors influence burnout syndrome in physiotherapists in their workplace; (iii) what is the influence of psychological variables on the onset of burnout syndrome in physiotherapists working in Centre-RHA hospitals.
The aims are: to determine the prevalence of burnout in physiotherapists working in Centre-RHA hospitals; to identify socio-demographic and professional variables that influence physiotherapist burnout syndrome and to evaluate the influence of psychological variables on the onset of burnout in physiotherapists.
This is a cross-sectional descriptive correlational and analytical study. A questionnaire to obtain socio-demographic and professional data was applied, as well as the Satisfaction at Work Scale and the Maslach Burnout Inventory (MBI) to a convenience sample consisting of 85 physiotherapists working in the Centre RHA hospitals.
The statistical descriptive and analytical or inferential statistics were used for data analysis.

FINDINGS

Physiotherapists have an average age of 39 years, 16.47% of the entire sample is male and 83.53% are female. Of the 85 physiotherapists who participated in the study, 31.8% are aged 33 or less, 32.9% are between 34 and 43 years old and 35.3% 44 or older. Between gender and age groups the adjusted residuals do not show statistical significance. Most physiotherapists are married (56.5%), followed by 43.5%, single/divorced/separated. There are no significant differences in relation to marital status. 68.2% have a bachelor's/honours degree and 31.8% hold a of post-graduate degree, a master's degree or a doctorate, with no significant difference in relation to gender. The mean length of professional experience is 15.92 years, with 34.1% exercising the profession for 12 years or less; 31.8% of the sample between 13 and 19 years and finally 34.1% for 20 or more years. Length of service in the institution is on average 12.54 years. Most respondents, 56.5%, are civil servants and the remaining 43.5% have a contract relationship with the institution. 65.9% perform 35 hours of weekly work and 34.1% perform 40 hours a week. 89.4% of the physiotherapists perform duties related to patient care and 10.6% work in management/coordination.
Job satisfaction: The values range between 12 and 35 with a mean of 24.98 and standard deviation of 5.04 with differences which are not statistically significant. The results show that 62.4% are satisfied with their work and of these 84.9% are women. Of the 37.6% who are dissatisfied about 8 out of 10 are women, with no statistically

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significant differences. The highest degree of satisfaction (39.6%) is found in older physiotherapists. Those aged 33 or less and 34 to 43 have equal percentages (30.2%). The adjusted residuals and the chi-square test did not show statistical significance (x2= 1.181; p= 0.554). The marital status variable was also not found to have a moderating effect in relation to burnout.

Among the dissatisfied the largest percentage (59.4%) is among those who cohabit with a partner. Those cohabiting with a partner were also found among the group of the satisfied. There was a slightly lower percentage (54.7%) in this case, without statistical significance (x2=0.176; p=0.675).

The most satisfied have been working for more years (37.7%) and as civil servants (60.4%). Among the dissatisfied, half are civil servants and the other half have a contract with the institution, without statistical significance for length of service and institutional bond, respectively.

Burnout syndrome: The statistics indicate a minimum rate of exhaustion of 0 and a maximum of 25 with a mean of 11.82 (± 6.38). As for cynicism, the minimum and maximum values found respectively were 14 and 36 with a mean of 29.42 (± 4.94) and moderate variation coefficient of 16.7%. With regards to effectiveness the minimum and maximum values range from 0 to 29 and the mean is 10.22 (± 6.62) with a high variation coefficient (64.7%). Most of sample exhibits moderate exhaustion and approximately four in ten, high exhaustion.

Older and married women suffer from greater exhaustion than men, without statistical differences. Those with up to 12 years of service, have a higher percentage of moderate (42.1%) and high (35.5%) exhaustion. The chi-square test revealed statistical significance among participants with moderate exhaustion and between 13 and 19 years of service, as well as those with high exhaustion and over 20 years of service. Low and high exhaustion appears in civil servants, while moderate exhaustion is found among participants under contract, with statistical significance.

Note that none of the study participants was rated with a low level of burnout, 8 out of 10 respondents were classified with moderate burnout and of these 84.8% are women, mostly married (57.6%), aged 33 or less (34.8%), with 12 years or less of service (36.4%) and are civil servants (53.0%). Of the 22.4% classified with a high level of burnout, the results point to similar results with regards to gender, marital status and employment status, differing for age where there is a higher percentage in those over 43 (42.1%) and with longer service (47.4%). However, between the groups and the different variables under study statistical significances were not found.

CONCLUSIONS

We found that in terms of the moderating effects of socio-demographic variables in regard to burnout, age and length of service are variables which allow us to say that over an entire career, professionals should be alert, assessing, forming, preventing and intervening in terms of professional stress factors, vulnerability to stress (coping strategies, personality, social and family support) in order to promote emotional balance and thereby prevent burnout syndrome.

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BUSINESS PROCESS REENGINEERING IN EDUCATIONAL INSTITUTIONS (REALITY AND HOPEFULLY)

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In the light of global developments that we are witnessing in the world today that has become necessary to increase the competition in all fields which would achieve the highest level of quality and productivity. This has increased the importance of revise the reality of an institution from all aspects (procedures, plans, policies and development of human and physical resources). This prompting many of organizations to take the Business Process reengineering (BPR) in consideration, which are mainly dependent on reconsideration of the fundamental and the radical redesign of organizational processes, in order to achieve drastic improvement of current performance in cost, services and speed. Therefore, the adoption of this concept has become vital and important for all institutions that are looking forward towards the idealism. As it has become necessary to focus on a number of questions including the following:

- What are the procedures that must we do?
- Why are we doing this business?
- What are the benefits of this business?
- What is the best method to achieve this business?
- Does this work give any extra value to contribute in achieving the vision, mission and goals of the organization?

Despite of the simplicity of these questions, but the institutions vary in answering them to continue to compete with each other to achieve the best desired results which achieves the principle of applying a real business reengineering.

The concept of BPR which defined by Hammer and Champy in 1992 provoked a real revolution in the institutions because it eliminates the routine and monotony spurring many organizations to reconstruct its system through reconstruction of the processes, activities and procedures.

Therefore, the educational institutions should keep pace with these rapid changes because of the previous administrative systems are not necessarily be appropriate for current institutions. In addition, the current requirement of individuals and communities are differed from their requirements and needs in the past.

The current challenges that face educational institutions are one of the main motives for changing and development in all aspects and activities to force all organizations to make a quantum leap to achieve great results make them capable of the right to compete. In addition, increasing the size of the institution thus increasing of its members lead to increasing of their needs and aspirations, this motivates us to apply the concept of BPR to keep pace with the development.

The essence of this paper is that the Business Process Reengineering is the redesign of business processes and the associated systems and organizational structures to achieve a dramatic improvement in business performance and to Increase the motivation, satisfaction and loyalty of individuals to ensure satisfactory results for all.

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Keywords: Business Process Reengineering, Educational Institution, Organization performance, Policies.

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CAN AN EXERGAMES TRAINING PROGRAM IMPROVE THE JUMP FOR HEIGHT SKILL IN CHILDHOOD?

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ABSTRACT
Exergames technologies have been proposed to support the mission of the physical education teachers. In this respect, we evaluated the efficacy of an exergaming intervention for improving the motor pattern and the strategy related to vertical jump skill in middle childhood (experimental group). A control group was used for the comparison. Assessment procedures were realized with qualitative instruments and with an objective approach implemented by means of the Microsoft Kinect. The performance of experimental group improved after the training, and some objectively indexes were statistically different in pre-post evaluation. The exergames have been confirmed good resources for physical education teachers.

INTRODUCTION

Today, the children live in a society where the technologies have became ubiquitous. The children study using e-book, communicate with cell and social network, share photos, songs, and files with their peers using cloud services, and spent more time playing with videogames or surfing on internet. Considering the use of new technologies at schools, in several school subjects technological aids have been integrated to support the teacher's work and to increase the involvement of the children (Webb & Cox, 2004). In this respect, a promising technology for physical education curriculum (PEC) is represented by the exergames (Enis, 2012; Giblin, Collins, & Button, 2014). The exergames are videogames where the player has to play moving their bodies. The children who play with the exergames have shown an increasing of their physical activity levels. As well, the use of exergames seems to be worthwhile also to promote healthy and active lifestyle. Furthermore, several researchers showed the use of exergames is correlated with health-related parameters, as the reductions of waist circumference, of the body mass index, and of the percent body fat (Mhurchu, *et al.*, 2008). The increasing experience in exergaming is also associated with high level of physical activity (ie., moderate to vigorous level) (Sell, Lillie, & Taylor, 2008). Considering the aims of physical education curriculum in primary schools, the acquisition and the improvement of the Fundamental Movement Skills (FMS) are the main goals. The FMS represent the baseline of the movement, and their role in the lifetime physical and sport activities has been defined critical (Payne & Isaacs, 2012). Likewise, the proficiency of the FMS has shown positive relationship with the children's participation in daily physical activity (Fahimi, Aslankhani, Shojaee, Beni, & Gholaki, 2013), with the children's involvement in sport and non-sport activities (Gabbard, 2011), and with the children's weight status (Castebon & Andreyeva, 2012). The development of the FMS is not naturally correlated with the growth (Gallahue, Ozmun, & Goodway, 2012), but it has to be supported from the early childhood with an adequate training protocol reinforced by specific skill-related feedback (Payne & Isacs, 2011; Gabbard, 2011).

The exergames are considered potential training strategy for the aims of PEC in primary schools. The use of the exergames is appealing to children and seem to be useful for the development of the FMS (Papastergiou, 2009). Likewise, the children who play with the exergames learn so much and experience reinforcement of positive feedback from emotional pleasure and positive results (Barnet, Hinkley, Okely, Hesketh, & Salmon, 2012). The exergames represent an opportunity for educational pedagogy students and researchers for studying the relation between these tools and the situated learning theory (Enis, 2013). Moreover, the exergames and the exergaming technologies have been suggested for the assessment of the FMS because they can provide valid and comparable data (Giblin, *et al.*, 2014). However, in order to support the use of these tools in the physical education curriculum, several recommendations related to the design of the exergames interface have to been followed (Sgrò, Schembri, Nicolosi, Barresi, & Lipoma, 2013).

In several previous studies the exergaming training strategies have been compared with others physical activity interventions for supporting the acquisition and the improvement of the FMS in childhood. The exergames technologies mainly used in these studies are: the Nintendo Wii® and the Microsoft Xbox®. The Nintendo Wii use two types of controllers for the interaction with the exergames: the Wii Remote® and the Wii Balance Board®. The first is a wireless controller equipped with a triaxial-accelerometers sensor: the players hold the controller in their hand and its movements are used as input for the game. The Wii Balance Board® is a low-cost force plate,

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equipped with four strain-gauge sensors, usually used for the interaction with the Wii's games based on balance exercises. The Microsoft Kinect® is the controller used by the Xbox for the interaction between the players and the games. The Microsoft Kinect is a low-cost motion capture device that used depth sensors to detect and acquire the movement of the players located in front of it. Later, the acquired movements 'data are encoded in input for the game by means of marker-less techniques. Sheehan and Katz (2013) investigated the effects of an exergaming training strategy for the improvement of balance skill within the children of an elementary school. The exergaming intervention (6 weeks, 5-6 times per week, 34 min. for session) has been compared with a training protocol specifically developed for agility, balance, and coordination skills, and with a third group of children involved in typical physical education activities. The authors suggested the exergaming training strategy increased the balance levels of the children more than the others interventions, especially respect to the children involved in PE activities. Likewise, Vernadakis and colleagues (2013) addressed the levels of stability in childhood students with experimental pre- and post-test design approach. Two groups of children were involved in exergaming interventions based on Xbox Kinect games (EG) and in traditional physiotherapy training (PT), respectively. The third group of children did not receive any balance training. The results of EG and PT groups were statically better than the ones of the control group. Of note, the authors suggested the use of Xbox intervention for the development of balance skills. The use of the exergames has been also suggested for the training of object control (OC) skills in early elementary school children (Vernadakis, Papastergiou, Zetou, & Antoniou, 2015). The authors studied the effect of an exergaming intervention based on Xbox games (8 weeks, 2 times per week, 30 min. for session) against a traditional training of OC skills, and a control group who was not involved in any structured OC training. The assessment of the developmental levels of OC skills was based on the results of the test of gross motor development 2 (Ulrich, 2000). The measurements were repeated three times: pre-training, post-training, and one month after the end of the training (retention test). The results of the measurements related to the exergaming group were in agreement with the ones of the traditional training intervention. The exergaming group showed remarkably and statistically difference in pre-post test and in post-retention test, while the control group did not showed the same results. Indeed, the authors suggested the use of exergames also for the training of OC skills.

At this time, there is a lack of studies on the effect of exergaming training for the development of locomotor skills, as walking, running, or jumping. Jump for height is one of the FMS that as a critical role in many daily and sport activities of children (Gallahue, *et al.*, 2012). Several researches have studied the developmental levels of this skill among children (Williams, Saunders, Maschette, & Wilson, 2013; Floría and Harrison 2013), even using exergaming technology (ie., Microsoft Kinect) (Sgrò, Nicolosi, Schembri, Pavone, & Lipoma, 2015). In this respect, this study was designed for addressing the effect of an exergaming training strategy for the improvement of several components related to the jump for height skill, as compared with a traditional physical education intervention (control group). We involved a group of children from an elementary school, and we have hypothesized the follows: H1) there were no difference between exergaming and control group at the start of this study; H2) there were differences in the performances of the exergaming group between pre- and post-test.

METHODS

Participants

This study involved twenty-four children randomly selected from the three and the fourth classes of an elementary school located in a municipality in the south of Italy. The characteristics of the children were: male n=13, female n=11; age: M= 7.17, SD=0.81; body mass: M=31.3, SD=9.07; height: M=1.26, SD=0.11; leg length: M=0.67, SD=0.05; body mass index (BMI): M=19.17, SD=3.36. Participants were randomly divided in control group (n=12, male=5, female=7) and exergaming group (n=12, male=6, female=6). Prior to group assignment, children provided an informed consent where the voluntary participation of each child to the study was subscribed with the signature of their parents. Furthermore, each child was checked for the following inclusion criteria: previous experience in exergaming activities, involvement in regular physical education courses at school, and no injuries that making it impossible to perform exergaming or physical activities training. The children of each group performed a specific training protocol over the 10-week study period. Ethical Board of the University of Enna approved the sample, methods, and instruments proposed in this study.

Control group intervention

The children in the control group were involved in the typical physical education lessons of the primary school for two times at week. The lessons' program was not structured for improving specifically any components (eg., preparation phase, propulsion phase, take-off posture) related to vertical jump skill. The activities provided in these lessons were: low intensity warm-up program, dynamic stretching, running, and organized games as volleyball and basket. The rest period between the activities was 30 seconds. Each training session was more or less 45 minutes, and it was supported by a physical education teacher.

Exergaming group intervention

Children involved in this group performed a training protocol by means of two games of the Nintendo Wii platform: My Body Coach (MBC) and Wii Sports Resort (WSR). The training protocol was structured with the aim to improve the components related to vertical jump skill. Each training session was divided in two periods. In the first period (15 min.), the children performed a warm-up program using MBC in order to increase the heart rate, and the blood flow to the muscle of the legs. In the second period (30 min.), the children performed structured activities related to basketball using WSR game. The aim of these activities was to develop lower legs movement patterns associated with the jump for height skill. Each child performed its exergaming training protocol setting low-level of intensity for the first three weeks, the intermediate level for the next three weeks, and the high level for the last weeks in both games 'activities. The rest period between the activities was 30 seconds. Children of this group performed only the exergame training protocol for three times at week: two times during the physical education lessons and one more time in the afternoon of an other day. During the training session, a physical education teacher with expertise in exergaming interventions followed the children and provided to us support with demonstrations, explanations, and cue words if necessary.

Assessment procedures

The assessment procedures of the children performance were done in the first and in the last week of the study period. The pre- and the post-test of vertical jump developmental levels were performed in two days for group using the same procedures and approaches proposed in a previous study (Sgrò, et al., 2015) and described in the next sections. Each group come in the gym of the school were two assessors with previous experience in the FMS assessment procedure were located. Initially, the assessors acquired the aforementioned anthropometric data from each participant. Next, the participants started a low-level warm-up program for 10 minutes. Before the assessment began, one assessor showed the right execution of the countermovement vertical jump task. Each child was invited to jump as high as possible for three times, with 30-sec. of rest between each jump. For each group, the assessment order of pre- and post-test was randomized by means of a random number assigned to each child.

Qualitative assessment approach

The qualitative assessment of vertical jump skill was performed using the process-oriented procedure proposed in the Western Australian Teachers Resource (EDWA, 2013b). Each assessor observed the jumps from sagittal point of view and produced their evaluation using a Skill Observation Records grid (EDWA, 2013b) composed of the six criteria proposed in the table 1.

Table 1. Component-based criteria for vertical jump skill assessment (EDWA, 2013b).

Phase	Segment	Component-based Criteria
Preparation	Legs	1. Ankles, knees, and hip bend*
	Head and trunk	2. Head up, trunk upright
	Arms	3. Arms swing behind body*
Propulsion	Legs	4. Legs forcefully extend
	Arms	5. Arms swing forward and up in time with leg action
Landing	Legs	6. Ankles, knees, and hip bend on landing*

Note - * Initial focus skill criteria.

Each criteria is related to a vertical jump component; the criteria numbers 1, 3 and 6 are defined the initial focus skill criteria because they are considered the easiest to teach and to observe (EDWA, 2013a). For each jump, the assessors had to score whether each criteria is present or not. The jumps were also video-recorded, as well the assessors were able to observe more times a performance for providing a secure score. The relation between the scores and the developmental levels were defined using a "rule of thumb" approach (EDWA, 2013a). The levels where the children could be classified are: beginning, developing, consolidating, and generalizing. The assessment procedures used in this study concerns only the first three levels.

Quantitative assessment approach

The assessment of the jump performance was also realized using a low-cost motion capture device: the Microsoft Kinect. The movements of the children were tracked using the data acquired from infrared emitter and sensitive camera of the Kinect, and they were reconstructed by means of a C# application developed using Microsoft Kinect SDK. For each child, a skeleton model was built using the 3D coordinates of twenty joints, identified in: feet,

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ankles, knees, hips, hip centre, spine, shoulder center, shoulders, elbows, wrists, hands, and head (Webb & Ashley, 2012). The coordinates of each joint were sampled at 30 Hz and were used to estimate the 3D coordinates of the whole body center of mass (CoM) by means of the segmentation method (Winter, Patla, Prince, Ishac, & Gielo-Perczak, 1998). Furthermore, the CoM coordinates were filtered to reduce the noise of motion data using a fourth-order zero-lag Butterworth filter with cut-off frequency of 20 Hz (Azimi, 2012). The vertical velocity and the vertical position of the CoM were used to obtain quantitative parameters according to the assessment methodology proposed by Sgrò and colleagues (2015). The parameters estimated were: a) height of jump (HJ): estimated as the vertical displacement of the CoM from the start of the jump and the peak of the jump; b) takeoff velocity (TV): estimated as the value of the vertical velocity in the takeoff frame; c) preparation time (PreT): calculated as the time between the jump start frame and the frame where the CoM position was the lowest; d) propulsion time (ProT): calculated as the time between the end of the preparation time and the frame before the takeoff; e) flight time (FT): set as the time between the takeoff and the landing frame. Considering the well-known relation between the level of the skill components and the anthropometric characteristics of the children (Okely, Booth, & Chey, 2004), the parameters were also estimated in non-dimensional (or normalized) form according to Hof 's formulas (1996).

Statistical analysis

The reliability of qualitative analysis was addressed with inter-class correlation coefficient. Data from quantitative assessment procedure were preliminary screened for normality, univariate and multivariate outliers. Descriptive analysis was computed between all measures for pre- and post-test. An independent t-Test was done to evaluate the uniformity between groups for pre-testing scores. Considering the data of post-test, a pairwise comparison was computed to address the change within groups. Furthermore, a mixed between-within analysis of variance was calculated to compare the values of statistical difference measure between and within groupings over the training time period. The analysis was computed using SPSS for Mac version 20.0 (SPSS Inc., Chicago, IL, USA), and the significance level was set to 0.05.

RESULTS

The 96% of inter-observer reliability was estimated using agreement percentage. The children involved in this study mastered at lest the three initial focus skill criteria, as well they were grouped into developing and consolidating developmental levels. Table 2 reported the number of children for each level in pre- and post-test.

Table 2. Distribution of children in developmental levels in pre- and post-test analysis.

Group	Pre-test		Post-test	
	Developing	Consolidating	Developing	Consolidating
Control	7	5	8	4
Exergaming	5	7	1	11

The data analysis revealed that the parameters values were normally distributed and none outliers were found. Descriptive analysis of quantitative measure in pre- and post-test was reported in table 3.

Table 3. Descriptive analysis of jump's measures for pre- and post-test (mean ± standard deviation).

Measures	Pre-test		Post-test	
	Control (n=12)	Exergaming (n=12)	Control (n=12)	Exergaming (n=12)
HF (m.)	0.21±0.08	0.16±0.11	0.23±0.08	0.19±0.08
HF_N	0.30±0.12	0.25±0.18	0.33±0.12	0.28±0.11
TV (m/s)	1.97±0.4	1.69±0.6	2.05±0.35	1.85±0.42
TV_N	0.76±0.16	0.66±0.25	0.79±0.14	0.71±0.14
PRE T (s.)	0.26±0.02	0.24±0.04	0.26±0.05	0.23±0.02
PRE T_N	1.0±0.12	0.96±0.18	0.98±0.21	0.91±0.11
PRO T (s.)	0.11±0.01	0.11±0.01	0.12±0.01	0.12±0.01
PRO T_N	0.45±0.05	0.43±0.04	0.45±0.05	0.46±0.03
FT (s.)	0.13±0.01	0.12±0.01	0.13±0.02	0.13±0.01
FT_N	0.51±0.04	0.49±0.07	0.52±0.08	0.52±0.07

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Considering the pre-test data, the results of independent t-Test reported no significance differences between groupings for any measures and confirmed the uniformity between control and exergaming groups. The results of pairwise comparison between pre- and post-test reported no significant difference for any measures in control group, while in the exergaming group a significant increase was found for the propulsion time normalized (t=-2.93, df=11, p=.01) parameters. The mixed-analysis of variance for normalized propulsion time parameter revealed different results for within and between procedures. There was significant main effect for time within groups: Wilks'Lambda=.77, F(1,22)=6.50, p=.01, partial eta squared=.69, with the exergaming group showing a higher score across the time than the control group. The groups resulted no statistical difference: F(1,22)=0.66 p=.79, suggesting that the propulsion time normalized was not remarkably affectd by the two training strategies. The interaction between time and groups was also not significant: Wilks'Lambda=.95. F(1,22)=1.21, p>.05, partial eta squared=.17. Figure 1 showed the difference for the propulsion time normalized measure within groups between the start and the end of the training.

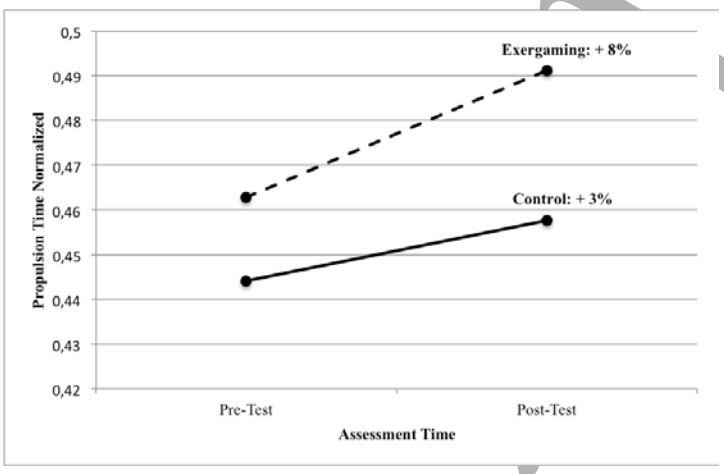


Figure 1. Percentage of improvement for the propulsion time normalized within groupings over the training period.

DISCUSSION AND CONCLUSION

In this study we have proposed the use of the exergames to support the development of a vertical jump skill in middle childhood. In this respect, we have addressed whether a physical education protocol based on exergames activities produce different effect on several components of the vertical jump skill, as compared with a standard physical education lessons. Although exergames activities provide several elements of motor learning (Yen, *et al.*, 2011), few studies addressed specifically the use of exergames for supporting the development of fundamental movement skills (Vernadakis, *et al.*, 2012; Sheehan and Katz, 2013; Vernadakis, *et al.*, 2015). The aforementioned studies addressed the balance and the object control skills, while in this study the exergames training protocol was proposed to improve the skill 'components related to one (vertical jump) of the locomotor skills. To the best of the authors 'knowledge, an intervention based on exergames activities has never proposed for supporting the development of any locomotor skills.

The assessment of vertical jump developmental levels in pre- and post-training phase was based on the same procedures proposed by Sgrò and colleagues (2015). Likewise, we used the qualitative object-oriented approach proposed by the Western Australian Education Department (EDWA, 2013b), while the quantitative approaches was based on the output measures obtained from an exergaming device (ie., Microsoft Kinect). The typology of qualitative assessment procedure is widely used for the study of vertical jump performance in childhood (Floría & Harrison, 2013; Williams, *et al.*, 2013). Furthermore, the object-oriented approach was previously used for evaluating the effect of the exergames-based intervention for the trin of the object control skills in childhood (Vernadakis, *et al.*, 2015).

The participants of this study were grouped in developing and consolidating developmental levels, in agreement with previous findings about the development of normal children after the age of 6 years (Gallahue, *et al.,* 2012). Considering the classification in pre- and post-test, the children in control group showed lowest performance after the training period, while the children in the exergaming group showed an improvement of their performance. The methodologies used for the objective assessment of vertical jump performance have just been proposed for the study of developmental levels in childhood (Sgrò, *et al.*, 2015). According to Floría and Harrison (2013), the

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parameters in non-dimensional form were estimated for addressing the role of the differences in body size related to the different rate in growth during middle childhood.

The first hypothesis was corroborated with the results of the independent t-Test on the measures obtained with the quantitative approach. This finding had a critical role for addressing the effect of the two physical education interventions separately. The similarities in the groups 'characteristics could be explained considering that the children had the same age, the same physical education curriculum, and met the same inclusion criteria. Considering the performances of each group in the post-test, the exergaming group showed better scores in each parameter than the control group. The pairwise difference analysis revealed that the objective parameters of the children in control group were not statistically different after the physical education lessons, while the propulsion time normalized was statistically different after the exergaming interventions. The mixed between-within analysis of variance for repeated measure confirmed the propulsion time normalized has changed with the training, but only the exergaming groups showed significantly and substantiality improved of this parameter (see figure 1). Of note, these results were useful to partially support our H2, and they were in agreement with previous researches related to the study of jump performance in children. The "timing" was defined as a critical element in order to ensure that the jump is efficient and performed explosively (Williams, *et al.*, 2013). Furthermore, Floría and Harrison (2013) showed that there is a relation between the concentric performance of the propulsion phase, a specific training for the legs (as the proposed exergames interventions), and the improvement of the jump performance in childhood. The same relation has been verified for the athletes (Cormie, McBride, & McCaulley, 2009).

The results of our study are quite different from the ones obtained in other studies where the exergames was proposed for improving the FMS in childhood (Vernadakis, *et al.*, 2012; Sheehan and Katz, 2013; Vernadakis, *et al.*, 2015). These differences may be explained considering the different frequency of the interventions (ie., three versus six times per week) (Sheehan and Katz, 2013), the higher complexity of the jump skill compared with the balance skill (Vernadakis, *et al.*, 2012), and the different approach used for the assessment of the exergames intervention effect (Vernadakis, *et al.*, 2015). Several limitations affect the generalizability of our results. First, the school environment cannot be considered as clinical because the conditions (ie., noise, lightness, temperature) changed regularly. Considering that the games used for the exergames interventions are only two, the second limit could be identified as a case-specificity problem. The characteristics of the sample could be the third limit. In this respect, the following changes will be planned in future works. A bigger sample size with large differences in age and gender are needed with the aim to address also the beginning developmental levels, and the effect of the gender, as proposed in the previous study (Sheehan and Katz, 2013). Furthermore, new kinematics parameters have to be studied in order to better address the change of jump patterns related to the training. Different exergames shall be suggested in the interventions considering the latest developed games.

In conclusion, the result of this study confirmed that the exergames could be considered as promising tools for supporting the activities of physical education teacher (Enis, 2013) and, overall, for increasing the physical activity level of the children. The teachers shall use the exergames for improving the engagement of the children in physical education lesson with funny and motivating activities. The games chose for the proposed training strategy may be considered adequate, inexpensive, and joinable tools for the development of the jump for height skill. The exergames devices (e.g., the Microsoft Kinect or the Wii Balance Board) may be also used for assessing the FMS development. The authors believe this study expand the dissemination of the exergames as potential tools for the physical education curriculum. Furthermore, this study has to be considered as the first step in order to fill the lack about the use of the exergames for locomotor skills training within the physical education curriculum for middle childhood.

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YAŞAM GÜNLÜĞÜ SİSTEMİ KULLANARAK ÇEVRİMİÇİ DERS YAKALAMA

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ÖZET
Bireylerin öğrenme yönetim sistemleri ve sanal öğrenme ortamlarında katıldıkları dersleri daha sonra tekrar incelemek amacıyla kişisel öğrenme ortamlarına aktarabilmeleri için ekran videosu kaydetme vb. ders yakalama araçlarına gereksinimleri vardır. Yaşam boyu öğrenme bağlamında ele alındığında, yıllar boyunca yakalanan derslerin video dosyalarının tekrar erişilebilir biçimde düzenlenmesi zahmetlidir. Bu amaçla bir yaşam günlüğü sistemi kullanmak ders yakalama ve dosyaları düzenleme sürecini kolaylaştıracaktır. Bir yaşam günlüğü sisteminin bileşeni olan ekran videosu yakalama aracı ile yakalanan dersler bireyin zaman çizgisinde dersin işlendiği zaman dilimine yerleştirilirler ve böylece birey dersin dosyalarına dersin işlendiği tarih ve saat bilgisiyle tekrar erişebilir. Bu çalışmada ekran ve kamera görüntüsü, ses, konum, video ve ekran videosu yakalama araçlarını barındıran çok algılayıcılı bir yaşam günlüğü sisteminin çevrimiçi dersleri yakalamak amacıyla kullanımı araştırılmıştır. Bu amaçla bir uzaktan öğretim yüksek lisans programında kayıtlı olan birinci araştırmacı bir öğretim dönemi boyunca katıldığı sanal sınıf ortamındaki dersleri bir yaşam günlüğü ile kaydetmiştir. Yakalanan ekran videoları ve diğer günlük verileri bulut üzerinden aktarılarak zaman çizgisine yerleştirilmiş ve bir yaşam günlüğü görüntüleyicisi ile tarama, erişme ve görüntüleme sağlanmıştır. Çalışmanın sonuç bölümünde yaşam günlüğü sisteminin işleyişi değerlendirilerek uzaktan öğrenme öğrencilerine sağladığı olanaklar tartışılmıştır.

Anahtar Sözcükler: Ders yakalama, ders kaydetme, yaşam günlüğü

CAPTURING ONLINE LECTURES USING LIFE LOGGING SYSTEM

ABSTRACT
Individuals need course-lecture capture tools like screen video recording application in order to re-examine the courses they attend at virtual learning environments and/or their learning management systems to transfer them to the their personal learning environment. When it is considered as a part of lifelong learning, arranging video files of the courses which have been captured for years is exhausting. Using a life logging system with this aim will ease the process of recording courses and arranging files. With screen video recording tool, which is a component of the life logging system, the recorded courses are placed in the timeline of the course so individual can access the course files via date and time of the course. In this study, usage of a life logging system, which contains multiple sensors and tools to record screen and camera images, audio, location, and video and screen video, to record online courses is researched. With this aim, the first researcher, who is enrolled to a master's programme in distance education, recorded all the courses she attended on virtual classroom environment during a semester via a life logging system. She transferred all the videos and other daily data on cloud and placed them on her timeline and then she managed to browse, retrieve and display them via a life logging viewer. At the conclusion part of the study, operation of the life logging system is evaluated and the facilities provided to the distance education students are discussed.

Key Words: life logging, learning experiences, lecture capture

GİRİŞ

Bireylerin günlük yaşamlarında gerçekleştirdikleri etkinlikleri ve maruz kaldıkları olayları, daha sonra anımsamalarını kolaylaştıracak biçimde, taşınabilir/giyilebilir cihazlardaki algılayıcılar yardımıyla yakalamalarına ve kaydetmelerine olanak sağlayan araçlara yaşam günlüğü sistemi adı verilmektedir. Yaşam günlüğü sistemleri yaşanan deneyime ait belirli aralıklarla (genellikle 30 saniyede bir) kamera görüntüsü kaydedebileceği gibi deneyimi olduğu gibi videoya da kaydedebilirler. Yaşam günlüklerinin kökeni Vannevar Bush'un 1945 yılında ortaya attığı, bireyin duyduğu ve gördüğü herşeyi kaydeden bir makine olan Memex vizyonuna dayanmaktadır (Bush, 1945). Bu vizyon 1990'larda Steve Mann'in giyilebilir bilgisayar alanında yaptığı öncü çalışmalarla uygulanabilir hale gelmiş (Mann, 2004), 2000'lerin başında Gordon Bell'in MyLifeBits Projesi (Gemmell vd.,

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2002), Aizawa ve arkadaşlarının çalışmaları (Aizawa vd., 2004) ve Microsoft'un SenseCam giyilebilir kamerasıyla gerçekleştirilen araştırmalarla (Hodges vd.; 2006, 2011) gelişme kaydetmiştir. 2014 yılında giyilebilir cihazlarda yaşanan yaygınlaşmayla yaşam günlüğü uygulamaları toplumun genelinin ilgi alanına girmiştir (Gurrin vd., 2014).

Bu çalışmada ekran ve kamera görüntüsü, ses, konum, video ve ekran videosu yakalama araçlarını barındıran çok algılayıcılı bir yaşam günlüğü sisteminin çevrimiçi dersleri yakalamak amacıyla kullanımı araştırılmıştır.

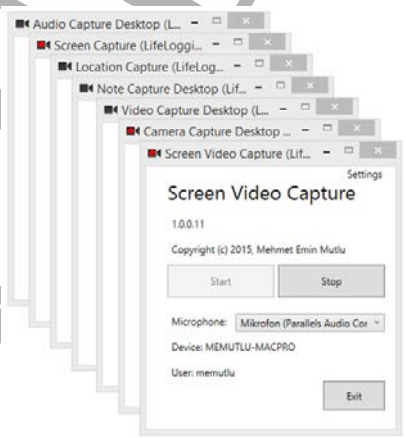
ÇOKLU CİHAZLI VE ÇOKLU ALGILAYICILI YAŞAM GÜNLÜĞÜ

Yaşam günlüğü sistemleriyle öğrenme deneyimlerinin yakalanması konusu çok az araştırmacı tarafından araştırılmıştır. Bunların arasında; sınıf içindeki etkinliklerin yaşam günlüğü ile canlı kaydı (Ogata vd., 2011), yaşam günlüğü verilerinin yansıtıcı öğrenme için kullanımı (Rivera-Pelayo vd., 2012), müze vb. ortamlardaki QR kodlarını kullanarak biçimsel olmayan öğrenme deneyimlerinin yakalanması gibi araştırmalar bulunmaktadır (Perez-Sanagustin vd., 2013).

Öğrenenlerin masaüstü, dizüstü ve tablet bilgisayarlarının birer günlük verisi yakalama aracı olarak kullanılması ve yakalanan günlük verilerinin "öğrenme" süreçlerinde kullanılması konusu Mutlu ve arkadaşları tarafından incelenmektedir. Mutlu ve arkadaşları 2013-2014 yılları arasında pasif bir biçimde ekran ve kamera görüntü yakalama özelliğine sahip bir yaşam günlüğü sistemiyle biçimsel olmayan öğrenme deneyimlerinin yakalanmasına odaklanan bir proje gerçekleştirmişlerdir (Mutlu, 2015a; Mutlu vd., 2015). Aynı ekip, 2015 yılında, pasif biçimde ekran ve kamera görüntüsünün yanı sıra pasif biçimde konum yakalama ile aktif biçimde ses, video, ekran videosu ve not yakalama özelliklerini de sahip olan "çoklu cihazlı ve çoklu algılayıcılı bir yaşam günlüğü sistemi"ni yaşam genişliğinde öğrenme deneyimlerini yakalamak amacıyla kullanmaya çalışmaktadırlar (Mutlu, 2014a; 2015b).

Günlük Verisi ve İçerik Yakalama Uygulamaları

Çoklu cihazlı ve çoklu algılayıcılı yaşam günlüğü sisteminde günlük verisi yakalamak amacıyla ekran görüntüsü, kamera görüntüsü, konum, ses, video, ekran videosu ve not yakalama uygulamaları kullanılmaktadır. Birer Windows 8.1 masaüstü uygulaması olan yazılımlar, kurulu oldukları bilgisayarda bilgisayar açıldığında çalışmaya başlayacak biçimde başlangıç klasörüne yerleştirilmişlerdir. Her uygulama "Start" ve "Stop" düğmesine sahiptir. Ses, video ve ekran videosu yakalama uygulamaları mikrofon seçimi; kamera görüntüsü ve video uygulamaları ayrıca kamera seçimi için ek düğme barındırırlar. Her uygulama çalıştırıldığında hangi kullanıcıya ait olduğunu ve hangi cihaz üzerinde çalıştığını görüntüler. Bu enformasyon yakalanan verilerin kaydedileceği klasörlerin oluşturulmasında kullanılır (Şekil 1).



Şekil 1: Günlük Verisi Uygulamaları

Kullanıcı, bir bilgisayarda bu uygulamaları çalıştırdıktan sonra, uygulamaların "Start" düğmesine tıklayarak yakalama işlemini başlatır ve yakalama işlemi kullanıcı "Stop" düğmesine tıklayana kadar, bilgisayar açık olduğu sürece devam eder. Kullanılan bilgisayarlarda yakalama işleminin aksamaması için "Uyku Modu" devre dışı bırakılmıştır. Windows 8.1 kurulu tablet bilgisayar, kapatılmadığı, sadece uyku durumuna geçirildiği için bu cihazda kullanım sona erdiğinde yakalama işlemleri kullanıcı tarafından durdurulmalıdır.

Yakalama uygulamalarının pencereleri ekranda daima en üstte görünür. Kullanıcı pencereyi ekrandan kaldırmak için "Simge Durumuna Küçült" yapmalıdır. Böylece yakalama uygulamaları ekranda yer kaplamazlar ve kayıt esnasında kullanıcı bütün ekranı kayıt amacıyla kullanabilir. Kullanılan yaşam günlüğü sistemine ait yakalayıcılar çalıştırıldıktan "Simge Durumuna Küçült" ile "Araç Çubuğu"na küçültüldüklerinde uygulama simgesinde kırmızı daire şeklindeki kayıt yapılıyor göstergesi aktif hale gelir. Böylece kullanıcı o anda hangi yakalama uygulamasının çalıştığını fark edebilmektedir (Şekil 2).



Şekil 2: Yakalama Uygulamalarının Çalışması

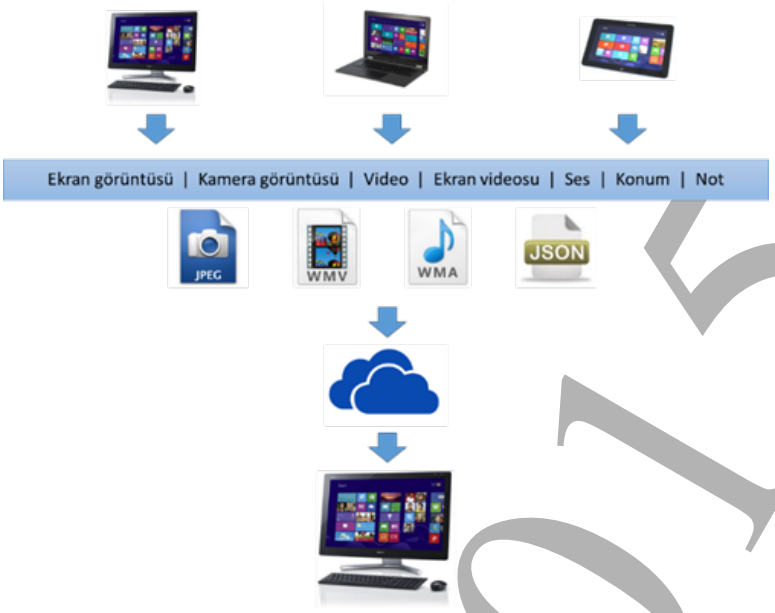
Günlük verisi yakalama uygulamalarının genel özellikleri Tablo 1'de özetlenmiştir:

Tablo 1: Günlük Verisi Yakalama Uygulamaları. Mutlu (2015b)'den uyarlanmıştır.

Uygulama	**İşlevi**	**Varsayılan Yakalama Aralığı**	**Varsayılan Medya Özellikleri**	**Ortalama Dosya Büyüklüğü**	**Kaydedilen Dosya Türü**	**Kullanılan Yazılım Kitaplığı**
LifeLoggingCCDesktop	Kamera görüntüsü yakalama	30 saniyede bir görüntü	Kameranın varsayılan görüntü çözünürlüğü	50 KB	".jpeg"	Emgu.CV API ve DirectShowLib API
LifeLoggingSC	Ekran görüntüsü yakalama	30 saniyede bir görüntü	Görüntü çözünürlüğü ekran çözünürlüğü ile aynı, 96 dpi, 24 bit renk derinliği	300 KB	".jpeg"	System.Drawing ve System.Drawing Imaging
LifeLoggingLCDesktop	Konum yakalama	30 saniyede bir konum	Konuma ait enlem ve boylam değeri yakalanmakta	Her yakalama <1 KB	".json"	System.Device.Location
LifeLoggingSVC	Ekran videosu yakalama	360 saniyede bir 360 saniye uzunluğunda video	Video çözünürlüğü ekranın çözünürlüğü; video kalitesi 384 kb/sn veri hızı, saniyede 30 kare; ses kalitesi 192 kb/sn veri hızı, stereo, 48 kHz	14 MB	".wmv"	Microsoft Expression Encoder 4 API
LifeLoggingACDesktop	Ses yakalama	360 saniyede bir 360 saniye uzunluğunda ses	Ses kalitesi 192 kb/sn veri hızı, stereo, 48 kHz	12 MB	".wma"	Microsoft Expression Encoder 4 API
LifeLoggingVCDesktop	Video yakalama	360 saniyede bir 360 saniye uzunluğunda video	640x480 çözünürlük; video kalitesi 384 kb/sn veri hızı, saniyede 30 kare; ses kalitesi 192 kb/sn veri hızı, stereo, 48 kHz	24 MB	".wmv"	Microsoft Expression Encoder 4 API
LifeLoggingNCDesktop	Not yakalama	-	Zengin metin biçimi	En fazla 64KB	".json"	-

Deneyim yakalama uygulamalarıyla yakalanan günlük verileri OneDrive bulut hizmeti üzerinden bir çalışma bilgisayarına transfer edilmektedir. Çalışma bilgisayarında biriken yaşam günlüğü verileri bir yaşam günlüğü görüntüleyicisi (LifeLoggingViewer) yardımıyla taranabilmektedir (Şekil 3).

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Şekil 3: Sistemin İşleyişi (Mutlu, 2015b)

Ekran Videosu Yakalama Uygulamasının Özellikleri
Bir yaşam günlüğü sistemi genellikle pasif bir biçimde (kullanıcı müdahalesi gerekmeden sürekli ve kendiliğinden çalışma) kullanılır. Fakat bireyler yaşam günlüğü sistemindeki günlük yakalama araçlarını aktif biçimde kullanarak; anlarını ve görüşmelerini kaydedebilirler ve o ana ait not alabilirler. Bu açıdan ele alındığında, bir yaşam günlüğü sistemine ait ekran videosu yakalama uygulamasının aşağıdaki amaçlarla kullanılabildiği görülür:

Anları Kaydetme: Birey pasif durumda ve kaydetme serbest ise, birey o anda kullandığı bilgisayardaki ses ve görüntüyü ekran videosu yakalama yazılımıyla yakalar. Bireyin bilgisayar ekranında yakalayabileceği anlar, kişisel anlar, kamusal anlar ve ticari anlar olarak üç grupta ele alınabilir:

- *Kişisel anlar:* Birey, o anda kullandığı bilgisayarın ekranında gördüğü ve duyduğu her şeyi pasif bir biçimde yakalar. Yakalanan veriler arasında (a) dinlenen müzikler, (b) izlenen film/videolar, (c) okunan gazete ve dergiler, (d) günlük bilgisayar kullanımına ait diğer anlar yer alabilir. Bilgisayardan film izlemek gibi durumlarda, birey ekranı yakalarken, aynı zamanda bilgisayar ekranını televizyona yansıtarak seyrediyor olabilir.
- *Kamusal anlar*: Birey herkesin kayıt yapma serbestliğine sahip olduğu ortamlara ait ekran videosu yakalar. Kişisel bilgisayar "kişisel" bir ortam olduğundan dolayı bilinen anlamda kamusal an yaşanmaz. Fakat kişisel bilgisayarla bağlanılan sosyal medya, sanal dünyalar ve çok kullanıcılı çevrimiçi oyunlar gibi ortamlar birer "sanal" kamusal alanlardır.
- *Ticari anlar:* Ücret ödenerek ya da özel kullanım koşullarıyla dâhil olunan webcast, podcast, web televizyonu ve internet radyosu gibi ortamlarda ekran videosu kaydetmek serbest olsa bile bu videoyu dağıtmak serbest olmayabilir. Bu ortamlara ait içeriklerin yayın hakları sıkı biçimde korunuyor olabilir.

Görüşmeleri Kaydetme: Birey başka katılımcıların da bulunduğu sanal bir görüşme ortamında bir katılımcı durumdayken, görüşmeyi ekran videosu yakalama uygulamasıyla kaydedebilir. Bu durumda, etik açıdan, mutlaka diğerlerinden izin alarak, görüşmeyi yakalaması gerekmektedir.

- *Ders yakalama uygulamaları:* Kullanıcıların ekran videosu olarak yakalayabilecekleri görüşmeler arasında etkileşimli dersler, çevrimiçi dersler, sanal sınıflar ve diğer e-öğrenme etkinlikleri gibi internet ortamında gerçekleştirilen dersler de bulunmaktadır.
- *Canlı görüşmeleri yakalama:* Skype, Hangout vb. canlı iletişim araçlarıyla sanal ortamda gerçekleştirilen görüşmeler ekran yakalama aracıyla kaydetmek.
- *Ekip etkinliklerini yakalama:* Bilgisayar ortamında işbirliği yazılımları vb. araçlarla gerçekleştirilen ekip etkinliklerine ait ekran videolarını yakalamak. Örneğin, bir belge üzerinde aynı anda çevrimiçi bir sözcük işlemci kullanarak gerçekleştirilen yazma işlemini kayda almak.

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Ekran Videolu Not Alma: Birey tek başına bilgisayar ortamında bir etkinlik gerçekleştiriyorken bu etkinliğe ait ekran videosunu aktif olarak yakalayarak arşivleyebilir ve bu esnada kayda sesli not ekleyebilir.

- *Öğrenme etkinliklerini yakalama:* Öğrenci ödev-proje yaparken gerçekleştirdiği etkinlikleri kaydedebilir. Bazı durumlarda biçimsel öğrenme süreçlerinde öğretim elemanı öğrenenin ödev-proje ya da laboratuvar raporlarını ekran videosu biçiminde teslim etmesini isteyebilir.
- *Çalışma etkinliklerini yakalama:* Birey iş hayatına ait etkinlikleri ekran videosu yakalayarak belgelemek isteyebilir. Bu seçeneğin etkin olarak kullanıldığı ortamlardan biri laboratuvar ortamındaki deneylerin ekran görüntülerinin deney günlüğü biçiminde yakalanmasıdır. Ayrıca yazılım projeleri vb. çalışmalarda ekran videosunun proje günlüğü olarak kullanımı mümkündür.
- *İlgi alanlarına ait etkinlikleri yakalama:* Birey hobileri, sanatsal ilgileri vb. nedenlerle bilgisayar ekranındaki etkinliklerini kayda almak isteyebilir.

Bu çalışmada, ekran videosu yakalama süreci, bir kişisel yaşam günlüğü ile bütünleşik olarak, bütünüyle kişisel kullanım açısından ele alınmaktadır. Aynı aracın gözetim amacıyla, öğretimde içerik hazırlama amacıyla ya da kullanıcı deneyimlerinin yakalanması amacıyla kullanımı gibi kişisel olmayan kullanım biçimleri kapsam dışı tutulmuştur.

ÇEVRİMİÇİ DERSLERİ YAKALAMA UYGULAMALARI

Bireylerin öğrenme yönetim sistemleri ve sanal öğrenme ortamlarında katıldıkları dersleri daha sonra tekrar incelemek amacıyla kişisel öğrenme ortamlarına aktarabilmeleri için ekran videosu kaydetme vb. ders yakalama araçlarına gereksinimleri vardır. Ekran videosu uygulamalarıyla etkileşimli dersler, çevrimiçi dersler, sanal sınıflar ve diğer e-Öğrenme etkinlikleri eş zamanlı olarak yakalanarak kaydedilebilir. Bu esnada öğrenen katılımcı olarak ekran videosundaki var olan seslerin üzerine kendisine ait ses kaydını da ekleyebilir. Bu amaçla kullanılabilir bir dizi açık kaynak ya da ticari ekran videosu yakalama yazılımı bulunmaktadır (Tablo 2). Ekran videosu yakalama yazılımlarının daha geniş bir listesine (Wikipedia, 2015)'dan erişilebilir:

Tablo 2: Ekran Videosu Yakalama Yazılımları

Yazılım	Türü	Kaynak
Camtasia Studio (http://www.techsmith.com/camtasia.asp) Adobe Captivate (http://www.adobe.com/products/captivate/).	Ücretli	Griffis (2013)
Jing (http://www.jingproject.com) Trailfire (http://www.trailfire.com) Wink (http://debugmode.com/wink) SlideShare (http://www.slideshare.net) (yüklenen dosyaları Flash filmlerine çevirme özelliği)	Ücretsiz	
CamStudio (http://camstudio.org/) Screencast-O-Matic (http://www.screencast-o-matic.com/) Screenr (https://www.screenr.com/)		http://www.digitaltrends.com/computing/best-screencasting-tools-apps-programs-for-windows-pc-mac-os-x/
Webinaria (http://www.webinaria.com/record.php) ScreenCastle (http://screencastle.com/) Capture Fox (http://www.capturefox.com/)		http://www.educatorstechnology.com/2012/06/8-free-and-simple-tools-to-create-video.html

Literatürde ekran videosu yakalama yazılımlarının daha çok e-Öğrenme içeriği hazırlamak amacıyla kullanımı incelenmiştir (Yuen, 2004; Carlson, 2009). Bu videolar genellikle öğreticiler tarafından hazırlanmaktadır.

Öğrenenlerin ekran videolarını kendilerinin yakalamaları, öğrencilerden geri-dönüt almak (Jones vd., 2012; Mathieson, 2012; Fernández-Toro ve Furnborough, 2014), öğrencilerin ekran videoları ile laboratuvar raporu hazırlamaları (Hazzard, 2014), kendileri tarafından hazırlanan ekran videolarının akranlarla paylaşımı (Zhang vd., 2015) gibi alanlarda araştırmaya konu olmuştur.

Ekran videolarının yaygın bir kullanımı da çevrimiçi derslerin kaydedilmesidir. Adobe Connect gibi sanal öğrenme ortamları kendi üzerlerinde düzenlenen çevrimiçi canlı derslerin (toplantıların) bir kopyasının kaydedilmesine ve kendi sunucusu üzerinden öğrencilerin bu ekran videolarına tekrar erişmelerine olanak sağlamaktadırlar (Erturan vd., 2012). Bu tür kullanımın iki temel sorunu bulunmaktadır. Birincisi, dersin öğretim elemanı çoğu kez canlı dersi kaydetmeyi ya da kaydedilmiş dersi öğrencilerin erişimine açmayı unutmaktadır. İkincisi ise dersin ekran

videosuna sadece kurumun Adobe Connect sunusundan erişilmekte ve öğretim dönemi sona erdiğinde genellikle bu ders videoları yayından kaldırılmaktadır. Bu nedenle çevrimiçi derslerin öğrencilerin kendileri tarafından ve kendi kişisel öğrenme ortamlarında tutulacak biçimde kaydedilmesi, öğrencinin yaşam boyu öğrenme sürecinin sağlıklı olması için daha uygundur. Kurum tarafından aksi belirtilmediği durumda ve öğrenenin söz konusu ekran videolarını dağıtmaması koşuluyla öğrenenlerin katıldıkları canlı derslerin ekran videolarını kendi öğrenme amaçları için yakalamaları ve kaydetmelerinde yasal bir sorun bulunmamaktadır.

Yaşam boyu öğrenme bağlamında ele alındığında, yıllar boyunca yakalanan derslerin video dosyalarının tekrar erişilebilir biçimde düzenlenmesi zahmetlidir. Bu amaçla bir yaşam günlüğü sistemi kullanmak ders yakalama ve dosyaları düzenleme sürecini kolaylaştıracaktır. Bir yaşam günlüğü sisteminin bileşeni olan ekran videosu yakalama aracı ile yakalanan dersler bireyin zaman çizgisinde dersin işlendiği zaman dilimine yerleştirilirler ve böylece birey dersin dosyalarına dersin işlendiği tarih ve saat bilgisiyle tekrar erişebilir. Yaşam günlüğü sistemleri, bu tür yakalama, düzenleme ve erişim kolaylığını ses yakalama (Kip Kayabaş ve Mutlu, 2015) ve video yakalama (Kayabaş ve Mutlu, 2015) için de sunmaktadırlar.

UYGULAMA

Bu bölümde ekran videosu yakalama aracını barındıran bir yaşam günlüğü sisteminin, çevrimiçi yürütülen bir yüksek lisans programındaki çevrimiçi dersleri yakalamak amacıyla bir dönem boyunca gerçekleştirilen kullanımı incelenmiştir. Kullanılan çok algılayıcılı yaşam günlüğü sistemi ekran videosu yakalama özelliğinin yanı sıra ekran görüntüsü, kamera görüntüsü, ses, konum ve video yakalama araçlarını da içermektedir. Daha önceki araştırmalarda aynı çevrimiçi programın 2013-2014 öğretim yılı bahar dönemine ait çevrimiçi dersleri, sadece kamera ve ekran görüntüsü yakalama özelliğine sahip bir yaşam günlüğü sistemiyle (Peri Mutlu ve Mutlu, 2014) ve bunlara giyilebilir yaşam günlüğü kamerasının dâhil olduğu bir yaşam günlüğü sistemiyle de (Mutlu ve Peri Mutlu, 2015) bir dönem boyunca yakalanarak incelenmiştir.

Çevrimiçi Ders Yakalama Aracı Olarak Yaşam Günlüğü

Bu çalışmada bir uzaktan öğretim yüksek lisans programında kayıtlı olan birinci araştırmacı 2014-2015 öğretim yılı güz dönemi boyunca katıldığı sanal sınıf ortamındaki dersleri bir yaşam günlüğü ile kaydetmiştir. Yaşam günlüğü ile hem pasif günlük verileri yakalanmış hem de aktif içerik kaydı gerçekleştirilmiştir. Bu çalışmada pasif yakalama, kullanıcının bilgisayar açıldığında başlattığı ve bir daha ilgilenmediği ekran görüntüsü, kamera görüntüsü ve konum verisi yakalama uygulamalarıyla gerçekleştirilmektedir. Aktif yakalama ise kullanıcının sadece gereksinimi duyduğunda başlattığı ve gereksinim ortadan kalktığında durdurduğu ses, video ve ekran videosu yakalama uygulamalarıyla gerçekleştirilmektedir.

Birinci araştırmacı bu dönem boyunca deneyim yakalama araçları olarak işyerindeki bir masaüstü bilgisayarı, sürekli yanında taşıdığı bir dizüstü ve bir tablet bilgisayarı ve evindeki bir masaüstü bilgisayarı kullanmıştır. Bu bilgisayarların tümünde Windows 8.1 işletim sistemi çalışmaktadır ve gömülü birer kamera bulunmaktadır. Her bilgisayarda yedi adet günlük verisi yakalama uygulaması kurulu durumdadır ve bilgisayarlar çalıştırıldığında bu uygulamalar kendiliğinden çalışacak biçimde ayarlanmışlardır.

Çalışma kapsamında yakalanacak günlük verilerinin başlangıçta öngörülen büyüklüğü her veri türü için aşağıdaki gibi hesaplanmıştır:

Haftada 4 ders, her ders için ortalama 2 saat ekran videosu kaydı ile (bu sürenin yarısının canlı ders, kalan yarısının ise ödev-proje yapımı ile diğer öğrenenlerle gerçekleştirilen görüşmeler olması beklenmektedir) bir dönemde 14 hafta, toplam 112 saat canlı ders kaydı oluşmaktadır. Gerçekte ders yapılmayan saatlerin varlığı nedeniyle toplam sayı daha az gerçekleşecektir. Her saatte 360 saniyelik 10 adet ekran videosu dosyası yakalandığına göre toplam 1.120 video dosyası ve dosya başına 14-16 MB dosya büyüklüğü oluştuğuna göre toplam 15,68 GB ile 17,92 GB disk alanı gerekecektir. 2015 yılı itibariyle 1TB büyüklüğündeki taşınabilir disklerin ortalama 200 TL olduğu düşünülürse söz konusu videoları yedeklemenin maliyetinin son derece düşük olduğu görülür.

Ekran görüntüsü, kamera görüntüsü ve konum verisi yakalama uygulamaları uygulayıcının uyanık olduğu saatler boyunca o anda kullandığı masaüstü, dizüstü ya da tablet bilgisayarda çalışmakta ve sürekli olarak 30 saniyede bir yakalama yapmaktadırlar. Uygulayıcının, hafta sonu dahil olmak üzere, gün içerisinde iş, ders çalışma ve sosyal medya amacıyla herhangi bir bilgisayarı kullandığı sürelerin toplamının 8 saat olduğu varsayılırsa günde 960 ekran görüntüsü, 960 kamera görüntüsü ve 960 konum verisi yakalanacağı görülür. Kamera görüntülerinin ortalama 50

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KB, ekran görüntülerinin ortalama 300 KB (çözünürlüğü 2560x1440 olan ekranlar için), konum verisinin ise 1 KB olduğu düşünülürse bir günde yakalanan günlük verilerinin 351 KB x 960 KB= 336,96 MB yer kapladığı görülür. 14 Hafta (98 gün) için gereken disk alanı 33 GB olacaktır.

Yaşam günlüğü ile yakalanacak diğer aktif veriler ise ses ve video kayıtları ile gerçekleştirilecektir. 14 Hafta boyunca toplantılar, seminerler, görüşmeler, not alma vb. amaçlarla günde 1 saat (dakikası 2 MB kalitesinde) ses ve 1 saat (farklı kameralarda farklı sonuçlar alınmakla birlikte ortalama olarak dakikası 4 MB kalitesinde) video kaydı öngörülmüştür. 14 hafta boyunca yakalanacak ses ve video günlüklerinin kaplayacağı alan sırasıyla 11,76 GB ile 23,52 GB büyüklüğündedir.

Böylece uygulamada gerçekleştirilen yakalamaların kaplayacağı toplam alan teorik olarak en fazla 17,92 GB + 33 GB + 11,76 GB + 23,52 GB = 86,2 GB olacaktır.

Yaşam günlüğü yakalama uygulamalarının hepsini aynı anda aynı cihazda çalıştırmak mümkün olmamaktadır. Sıradan kameralarla bir kameradan bir anda sadece bir kayıt yapılabildiği için bir cihazda aynı anda kamera görüntüsü ile video yakalama gerçekleştirilememektedir. Bu kısıtlılık aynı anda iki kamera görüntüsü ya da aynı anda iki video kaydı yapılmasını da engellemektedir. Bu sorun teknik bir sorundur ve daha gelişmiş kameralarda ortadan kalkacaktır. Bunun dışında diğer uygulamalar birbirinden etkilenmeden, bilgisayarın gücünün izin verdiği ölçüde, aynı bilgisayarda istenildiği sayıda çalıştırılabilir (Tablo 3).

Tablo 3: Günlük Verisi Yakalama Uygulamalarının Birlikte Çalışabilirliği

	LifeloggingCCDesktop	LifeloggingSC	LifeloggingLCDesktop	LifeloggingSVC	LifeloggingACDesktop	LifeloggingVCDesktop
LifeloggingCCDesktop	✖	✓	✓	✓	✓	✖
LifeloggingSC	✓	✓	✓	✓	✓	✓
LifeloggingLCDesktop	✓	✓	✓	✓	✓	✓
LifeloggingSVC	✓	✓	✓	✓	✓	✓
LifeloggingACDesktop	✓	✓	✓	✓	✓	✓
LifeloggingVCDesktop	✖	✓	✓	✓	✓	✖

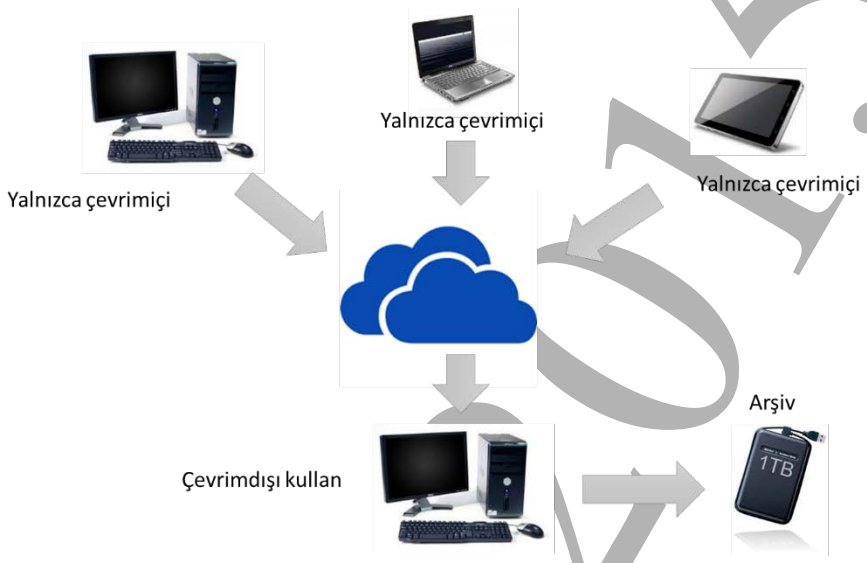
Verilerin Aktarılması

Günlük verisi yakalama uygulamaları yakaladıkları verileri üzerinde çalıştıkları bilgisayarın "OneDrive" klasöründeki "Resimler/LifeLogging" alt klasörüne kaydederler. Örneğin, ekran videosu yakalama uygulaması yakaladığı videolara ait dosyaları bu klasörün "Yıl/Yıl.Ay/Yıl.Ay.Gün" isimli alt klasöründe "KullanıcıAdı-CihazAdı-YakalamaAdı" ile oluşturulmuş bir cihaz klasörüne "Yıl.Ay.Gün Saat.Dakika.Saniye.wmv" biçiminde isimlendirerek kaydedecektir. Bu işlem, bilgisayarda eğer birden fazla kullanıcı tanımlıysa, her kullanıcı için diğer kullanıcılarla temas etmeden bağımsızca yürütülür ve bu amaçla her kullanıcının kendi OneDrive hesabı kullanılır. OneDrive hizmeti yakalanan günlük verilerini kullanıcının kurulu olduğu bütün bilgisayarlarına eşleştirerek dağıtacaktır. Kullanıcı bir çalışma bilgisayarında eğer "OneDrive" altındaki "Resimler/LifeLogging" alt klasörünün kullanılabilirlik özelliğini "Çevrimdışı kullan" olarak değiştirmişse, bu veriler çalışma bilgisayarına aynı anda indirilecektir (Şekil 4).

Çalışma boyunca yakalanan ekran videoları ve diğer günlük verileri kaydedildikleri "OneDrive" klasöründen OneDrive tarafından kullanıcının herhangi bir müdahalesine gerek kalmadan bulut üzerinden aktarılarak, aynı

zamanda çalışma bilgisayarı olarak kullanılan evdeki masaüstü bilgisayara indirilmiş ve zaman çizgisine yerleştirilmiştir.

Kullanıcı çalışma bilgisayarında "OneDrive" klasöründeki verileri çalışma bilgisayarının yerel diskine taşıyarak, "OneDrive" klasöründen kaldırmıştır. Böylece OneDrive bulut depolama hizmetini kısıtlı kapasitesi dolmadan kullanmaya devam etmiştir. Bu işlemi elle yaptığı gibi, bu amaçla geliştirilmiş olan LifeLoggingTransporter uygulamasını da zaman zaman kullanmıştır.

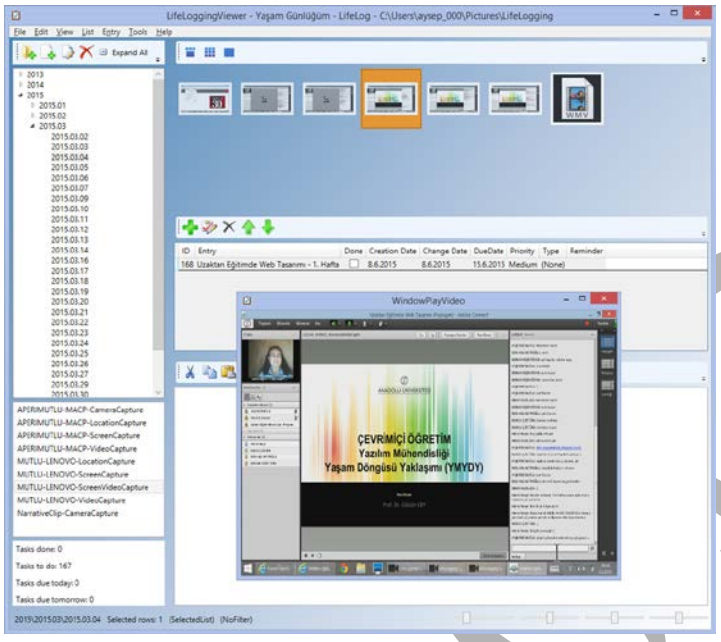


Şekil 4: Verilerin Aktarılması

Kayıtlara Erişmek ve Yorumlamak

Kullanıcı çalışma bilgisayarında kurulu olan LifeLoggingViewer isimli bir yaşam günlüğü görüntüleyicisi ile çalışma bilgisayarının yerel diskindeki günlük verileri üzerinde bir zaman çizgisi yardımıyla tarama, erişme ve görüntüleme yapabilmektedir (Şekil 5). Yaşam günlüğü görüntüleyicisinde başlangıçta "MyLog" biçiminde bir yaşam günlüğü dosyası oluşturulur ve günlük verilerinin bulunduğu yerel klasörle ilişkilendirilir. Bundan sonra kullanıcı yaşam günlüğü görüntüleyicisine her giriş yaptığında yerel klasördeki güncel bütün günlük verileri kendisine bir zaman ağacı yardımıyla listelenecektir. Kullanıcı yaşam günlüğü görüntüleyicisinde bir tarih ve bir yakalama cihazı seçtikten sonra o cihazla yakalanmış bütün veriler kendisine görüntülenir. Kullanıcı verileri listeleme, döşeme ya da tüm gün görünümü şeklinde ekranda listeleyebilir, seçtiği bir görüntüyü büyük pencerede açabilir ya da seçtiği bir ses-video dosyasını oynatabilir. Konum yakalayan bir cihaz seçildiğinde o güne ait ziyaret edilen bütün konumlar bir harita üzerinde işaretlenerek görüntülenir. Kullanıcı seçtiği veri gruplarına, seçtiği bir gün, ay ya da yıl düğümüne istediği kadar yorum ekleyebilir. Daha sonra bu yorumlar üzerinde arama yaparak erişebilir. Bu özellik kullanılarak olay/etkinlik yorumları oluşturulmuş, bağlamlar elde edilmiş ve içerik yorumları eklenmiştir.

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Şekil 5: LifeLoggingViewer Yaşam Günlüğü Görüntüleyicisi

Olaylar ve Etkinliklerin Yorumlanması

Yaşam günlüğü uygulamalarında günlük verilerinin yakalanmasından sonraki aşama deneyimlerin yorumlanmasıdır (Mutlu, 2014b). Ekran ve kamera görüntüsü yakalama ile elde edilen günlük verileri bir-iki günde bir incelenerek öğrenme etkinlikleri ve öğrenme olayları fark edilmeye, anımsanmaya ve diğer deneyimlerden ayırt edilmeye çalışılmıştır. Bunun sonucunda Şubat 2015 – Haziran 2015 tarihleri arasındaki bütün biçimsel öğrenme etkinlikleri (çevrimiçi canlı dersler, ödev-proje yapma, toplantılar) ve öğrenme olayları (öğretim elemanlarıyla ve diğer öğrenenlerle önceden planlanmamış görüşmeler ve faaliyetler) belirlenerek etiketlenmiştir. Bu dönem boyunca gerçekleşen yarı biçimsel ya da biçimsel olmayan öğrenme etkinlikleri ve olayları ayrıca etiketlenerek, biçimsel öğrenme deneyimlerinden ayrı tutulmuşlardır. Günlük deneyimlerin yorumlanması dışında ayrıca her ay zaman ağacının o aya ait düğümünde o ayın epizodları güncellenmeye çalışılmıştır. Epizodlar, o ay içerisinde yaşanan birbiriyle ilişkili deneyim kümeleri olarak ele alınmıştır. Örneğin, Şubat 2015 ayının başlıca epizodları öğretim döneminin başlaması, derslere kayıt yaptırma ve ekle-sil haftası olmuştur. Ardından birbiriyle ilişkili epizod kümeleri oluşturularak o yıla ait öyküler halinde düzenlenmişlerdir. Birinci araştırmacı için 2014-2015 yılları arasında yaşam günlüğü ile izlenen başlıca öykü çevrimiçi uzaktan öğretim yüksek lisans programı öğrenciliği olmuştur.

Bağlamların elde Edilmesi

Deneyimlerin yorumlanmasından sonraki aşama deneyimlere eşlik eden bağlamların elde edilmesidir (Mutlu, 2015c). Bu amaçla her etkinlik ve olay haftada bir gözden geçirilerek bu deneyime eşlik eden kişiler, yerler, olaylar, davranışlar, duygular, özellikler ve varlıklar belirlenmeye çalışılmıştır. Yaşam günlüğü verilerinin bağlamları içeriklerin etiketlenmesi amacıyla kullanılmıştır.

İçeriklerin Yorumlanması

Görüntü, ses, video ve ekran videosu kayıtları haftada bir incelenerek, bu kayıtlar tarafından içerilen "içerik" tanımlanmaya çalışılmıştır. Belirlenen içeriklere "Çalışma", "Öğrenme" ve "İlgi alanları" şeklindeki "alan etiketleri", her alana ait uygun "konu etiketleri" ve varsa içeriğe ait "kapsam/gündem/kavram" etiketleri atanmaya çalışılmıştır. Böylece çalışma dönemi boyunca yaşanan deneyimlere eşlik eden bütün içerikler alan ve konular halinde kataloglanmıştır.

BULGULAR

2014-2015 öğretim yılı güz döneminde gerçekleştirilen yaşam günlüğü uygulaması sonucunda, yakalanan ekran, kamera, konum, ses, video ve ekran videosu verilerinin toplam büyüklüğünün başlangıçta öngörülen 86,2 GB

değerinin altında kaldığı ve 25,7 GB civarında gerçekleştiği görülmüştür. Bunun başlıca nedeni aktif olarak yakalanan ses ve video kayıtlarının ve pasif olarak yakalanan ekran ve kamera görüntüsü yakalamanın beklenen ölçüde gerçekleşmemiş olmasıdır. Yakalanan ekran videolarının kapladığı alanın ise başlangıçtaki öngörüye yakın gerçekleştiği görülmüştür.

Eylül 2014 – Şubat 2015 tarihleri arasındaki ekran videoları incelendiğinde dört grupta toplandığı görülmüştür;

- Önceden planlanmış gün ve saatte gerçekleşen çevrimiçi dersler
- Diğer öğrenenlerle ve öğretim elemanıyla olan önceden planlanmamış görüşmeler
- Ders saatleri dışında gerçekleştirilen ödev, proje ve diğer etkinlikler
- Diğer kayıtlar (ders öncesi ve sonrası çalışma ve ilgi alanlarına yönelik kayıtlar)

Elde edilen kayıtların, deneyime geri dönüldüğünde, derslere ilişkin etkinliklerin ve olayların neredeyse eksiksiz olarak yeniden yaşanmasına olanak sağladığı görülmüştür. Böylece dersleri tekrar etmek, anlaşılmayan ya da ihtilaflı bölümlerini ayrıntılı biçimde inceleyerek anlaşılır kılmak ya da sorunları çözmek mümkün hale gelmiştir.

Yakalanan ekran videoları zaman zaman (özellikle öğretim elemanının dersleri kaydetmeyi unuttuğu durumlarda) diğer öğrenenlerle paylaşılmıştır.

Çevrimiçi derslerin yakalanmasında ekran videosu yakalama uygulaması başlıca yakalama aracı durumunda olmasına rağmen, diğer yakalama uygulamalarının da aynı anda kullanılması yakalanan derslerin daha sonra yorumlanması ve bağlamlarının elde edilmesinde destekleyici olduğu görülmüştür.

Dönem sona erdiğinde, devam edilen dört dersin bütün bir döneme ait çok detaylı bir arşivi elde edilmiş ve deneyim, bağlam ve içerik yorumlarıyla daha sonra kolayca erişilebilecek biçimde kataloglanmıştır.

Birinci araştırmacı, aynı çevrimiçi programın 2013-2014 öğretim yılı bahar dönemine ait çevrimiçi derslerdeki deneyimlerini pasif yakalama araçlarıyla kaydettiği önceki araştırmalarda (Peri Mutlu ve Mutlu, 2014; Mutlu ve Peri Mutlu, 2015) ders içeriklerinin yakalanamamasından dolayı ders esnasında not tutmak zorunda kalmıştır. Bu araştırmada çevrimiçi derslerin ekran videolarının yakalanması nedeniyle öğrenen ders esnasında not tutmak zorunda kalmamış, dikkatini ve ilgisini dersin işlenişine verebilmiştir.

Çalışma esnasında teknik sorunlar da yaşanmıştır. Ekran videosu yakalama uygulamasının, üzerinde çalıştığı bilgisayarın kaynaklarını diğer uygulamalara göre daha fazla tükettiği görülmüştür. Bu nedenle ekran videosu yakalama uygulaması çalıştığında bilgisayarda belirgin bir yavaşlama gerçekleşmektedir. Gelecekte uygulama geliştirilirken daha gelişmiş kitaplıklar kullanılarak bu sorunun çözülmesi gerekmektedir.

SONUÇ VE ÖNERİLER

Çevrimiçi uzaktan öğrenme derslerinin ve etkinliklerinin bir yaşam günlüğü sistemiyle yakalanmasının sağladığı avantajlar şunlardır:

- Ders içerikleri kurumun öğrenme yönetim sisteminin dışarısında çıkartılarak, kişisel öğrenme ortamına taşınabilmektedir.
- Rasgele gerçekleştirilen bir kayıt sistemine göre daha düzenli ve etkili bir deneyim arşivi sisteminden yararlanılmaktadır.
- Diğer yaşam etkinlikleriyle aynı zaman çizgisi üzerinde konumlandırılarak, kişisel bağlamlarla etiketlenebilmektedir.
- Pasif yakalama araçlarıyla yakalanan günlük verileri, ekran videosu yakalama aracıyla yakalanan içeriklere kişisel deneyim arkaplanı oluşturarak, birbirini desteklemektedir.

Uygulanan sistemin geliştirilebileceği yönleri bulunmaktadır:

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- Deneyimlerin yorumlanmasında yapay zekâ olanaklarından daha fazla yararlanılarak, ses tanıma, yüz tanıma, nesne tanıma, şekil tanıma, yazı tanıma, yer tanıma vb. araçlarla deneyimlerin bilgisayar tarafından bir ön yorumunun yapılmasını sağlayacak geliştirmeler yapılabilir.
- Sisteme Bluetooth ve hız algılayıcısı gibi yeni algılayıcılar eklenmesiyle ve varolan algılayıcıların birleştirilmesiyle (sensor fusion) çevredeki kişilerin tanınması ve yürüme, oturma, otomobille gitme vb. davranışların belirlenmesi sağlanabilir.
- İçerikler üzerinde gerçekleştirilebilecek veri ve metin madenciliği ile içeriklerin yorumlanması daha etkili hale getirilebilir.
- Yaşam günlüğü sistemi aktarım için buluttan yararlanmakta, değerlendirme işlemini yerel ortamda yapabilmektedir. Bütün verilerin bulutta tutulduğu ve değerlendirmenin bulutta gerçekleştirilebildiği etkili bir sistemin tasarımı yapılabilir.
- Yaşam günlüğü içerisinde seçili deneyimleri dışarı aktararak taşınabilir bir paket haline getirilmesi için tasarım yapılmalıdır.

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ÇEVRIMIÇI NEZAKET İLKELERI ÜZERINE YAPILAN ÇALIŞMALARIN İNCELENMESI

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Toplum içerisindeki bireyler sosyal yaşamda birbiri ile kurdukları iletişimlerde yazılı olmayan nezaket kuralları içerisinde hareket etmektedir. Her toplumun kendi içerisinde bu kurallar yazılı olmadan işlemektedir. Bu kurallar bölgeden bölgeye değişiklik gösterebilmekte, bir ortamdaki kurallar diğer ortamda farklılaşabilmektedir. Günümüzde bireyler gerçek ortamdaki bu etkileşimlerini sanal ortamlarda da sürdürmektedir. Ancak sanal ortamda bu kuralların net çizgilerle belirlenmesi pek mümkün görünmemektedir. Çünkü internet, sınırları belli olmayan, dünyanın farklı yerlerindeki kişileri bir araya getiren geniş bir alandır. Bununla beraber insanlar arasındaki yüz yüze iletişimlerde kullanılan jest, mimik, kahkaha ve vücut dili gibi sözel olmayan iletişim kriterleri de bireyler arasındaki ilişkilerde önemli rol oynamaktadır. Ancak yine sanal ortamda sözel olmayan bu kriterleri de sergilemek çok mümkün değildir. Bu sebeple küresel internet kültüründe ortak görgü standartları oluşturmak için girişimler yapılmaktadır. Buna bağlı olarak bu çalışmada çevrimiçi nezaket (netiquette) adı verilen bu görgü standartları hakkında yapılan çalışmalar ve alandaki araştırmacıların öngördükleri tavsiyelere yer verilmiştir. Araştırma kapsamında ulaşılan çalışmalar içerik analizi ile incelenmiştir. Elde edilen sonuçlar kullanıcıların sanal ortamda da canlı bir etkileşim halinde olduğunun farkında olması, ekranın diğer tarafında bir bireyin varlığından haberdar olarak saygılı ve nazik tavırlar sergilemesi gerektiğini göstermektedir.

Keywords: çevrimiçi nezaket, internet

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CHANGES IN CAREER DREAMS, FEARS, EXPECTATIONS AND PREPARATIONS OF SENIOR STUDENTS IN ADMINISTRATION WHO TAKES ELECTIVE "CAREER MANAGEMENT" COURSE

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ABSTRACT
Students in political sciences and public administration could chose most of career paths like academic, governmental, private or entrepreneurial. As we observe, Inonu University Political Science and Public Administration (PSPA) students even they are in senior class are not clear about their career. They do not know what they want, where to go, what they need and etc. So, as department of PSPA we added the elective "career management" course to curriculum. First aim of this course is to learn students' dreams, fears, and expectations about work life and to help them to work up to work life. In this study, we want to present some real data about our senior students' career dreams, fears, expectations, and preparations by a survey and also to compare them with the students who do not take the course. Our aim is to put an emphasis on students' foggy ideas about their careers, awareness of faculty administration and spread this type of courses to the other departments.

Key Words: Senior Students, Personal Career, Career Management Course

INTRODUCTION

Senior students of Political Science and Public Administration (PSPA) department have many questions in their minds about their career. They have fears are about the process of job hunt. In addition; they have dreams about their economic independence and they expect something from future. Furthermore; their knowledge is not enough for job hunt and organizational socialization. They are not clear about their career plans. The reasons of this situation could be personality characteristics, economic conditions of Turkey, employment problems, and lack of information about their selves and the world of work. As lecturers and researchers, we could not change their characteristics or economic conditions of country but we could prevent the lack of information. So as PSPA department we added a Career Management course to curriculum and try to prepare the students to work life. This course is an elective course and approximately half of the senior students have a chance to take the course.

The course consists of two parts; first is about personal career planning, second is about organizational career. Especially, we insist on the personal career planning of students. Focus of the course is the discovery and the installation stages of career. Aim of this course is to understand students' fears, dreams and expectations about their career and to prepare them to work life. For example; self-identity, writing a CV, making presentation, interview techniques, and sharing some experiences of employees are the subjects of the personal career planning part.

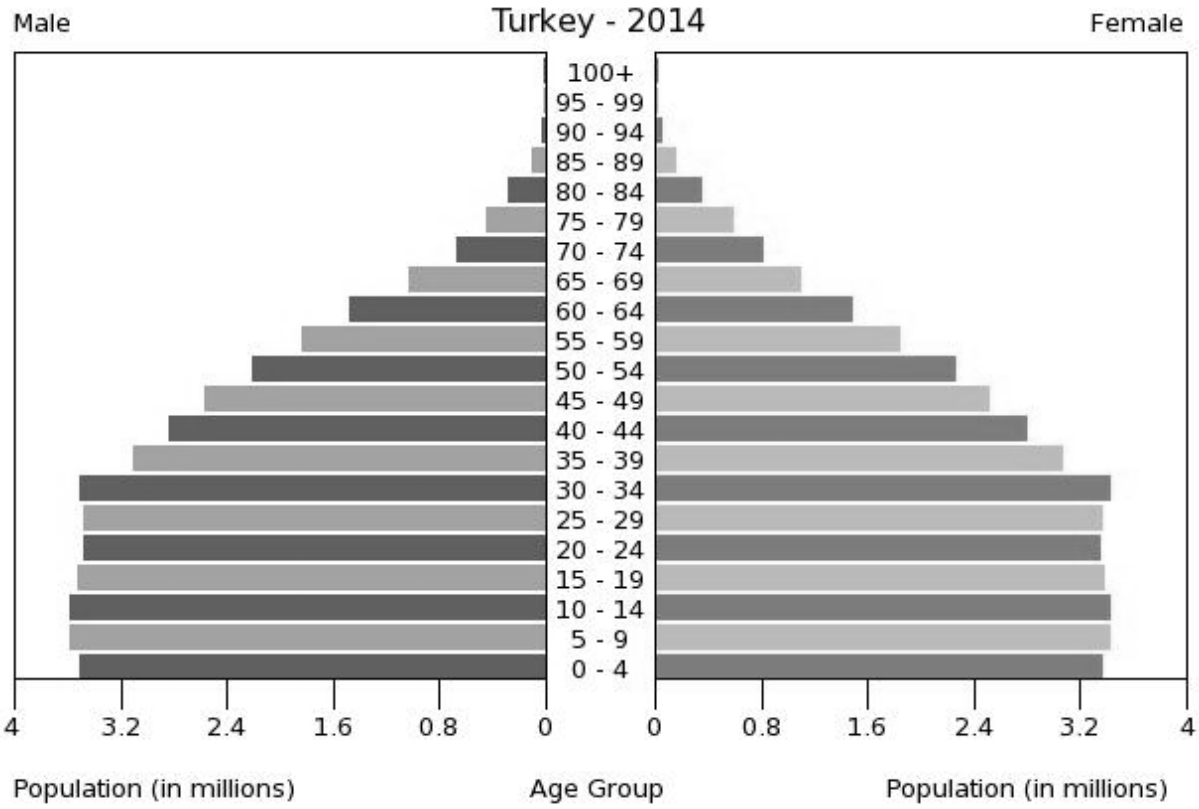
But the success of the course is not clear. So, in this study we compared fears, expectations, dreams and preparations of senior students who takes elective Career Management course and not. We tried to understand their fears, dreams, expectations and the course's value to change something. We took a poll to all senior students who take the course or not, in order to search their fears, expectations, dreams and preparations about their career and compare them. The question is "Is taking the Career Management course changed students' fears, expectations, dreams and preparations about their personal career usefully? We asked this question in order to consider our curriculum and to spread the successful courses to other departments. The survey questions prepared according to real situations about our students. Some situations are universal and some are unique to Turkey.

Turkey is a developing country. According to Turkish Statistical Institute (April 2015), the population of Turkey is app. 78 million. 17% of the population is 15-25 years old, 43% of it is 25-54 years old (CIA, 2015). As seen

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on the Chart 1, the population of the job hunter who are between 19 and 27 have a respectable percentage. So unemployment rate is 11.3 %. GDP per capita is app. 9.000 USD at current prices.

Chart 1: Population of Turkey



Source: https://www.cia.gov/library/publications/resources/the-world-factbook/geos/tu.html

THE STUDY

The question of the study is "Is taking the Career Management course changed students' fears, expectations, dreams and preparations about their personal career usefully? The survey prepared to understand the answer of this question in the Department of Political Science and Public Administration of Inonu University.

Totally 112 students joined the pool. Number of students who do not take "career management" course is 49, and who takes "career management" course is 63. There are 14 sentences about fears, 8 about expectations, and 4 about dreams. A student gives a number for each sentence to show his/her mind. "1" means "strongly disagree, "2" means disagree, "3" means not sure, "4" means agree, and "5" means strongly agree.

There are 14 sentences about preparations which are in yes/no type. All of the questions and answers could be seen on Table 1, 2, 3, and 4. Means of the letters on the tables: CM-the students who takes the course, M-male, F-female, T-total. For example; column number "1" means the students who do not take the course and choose strongly disagree. Column "1 CM" means the students who take the course and choose strongly disagree. As sees on the Table 1, the students who choose "1" for the first sentence is totally 12 which is 24.48% of 49 students who do not take the course.

FINDINGS

CAREER FEARS

Career fears could be result from many different reasons. Some of them are personal characteristics (anxiety, irrational beliefs, pessimism and etc.), bad economic conditions of country, familial factors, gender, lack of information. Regardless of reason, the real thing is the fear of students about their career. Especially in developing and underdeveloped countries, students have many pessimistic thoughts about their personal career. While making this study, we discussed the widespread fears between senior students of PSPA in our university.

As seen on the Table 1, there are 14 judgement about students' career fears which they numbered between 1-5. Generally, students who take the course or do not take the course have same ideas about career fears. But there

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are some differences. The answers about judgement B shows that the students who take CM course are more obsessed about success. Additionally, answers for judgment F shows that students who take CM course want to satisfy their family more. They also have less fear about handle work and home life together (judgement G). They are more hopeful about finding a job (judgement N). They know that job is important, but it is not the most important thing of life (judgement I). Most of students trust their occupational knowledge but students who take the course are more. Thus, the course changed some of their fears usefully but unfortunately, the percentage is not enough for the success of the course.

Table 1: Career Fears

	1	**1 CM**	**2**	**2 CM**	**3**	**3 CM**	**4**	**4 CM**	**5**	**5CM**
A. It is impossible to change my decision about my career after make a decision.	10 M 2 F 12 T 24.48%	4 M 6 F 10 T 15%	14 M 6 F 20 T 40.81%	10 M 18 F 28 T 44.44%	8 M 0 F 8 T 16.32%	2 M 10 F 12 T 19.04%	2 M 4 F 6 T 12.24%	3 M 6 F 9 T 14.28%	0 M 1 F 1 T 2.04%	2 M 1 F 3 T 4.76%
B. During my career, I will be successful or not. No in between.	6 M 4 F 10 T 20.4%	6 M 3 F 9 T 14.28%	8 M 2 F 10 T 20.4%	6 M 10 F 16 T 25.39%	6 M 2 F 8 T 16.32%	0 M 5 F 5 T 7.93%	6 M 3 F 9 T 18.36%	3 M 16 F 19 T 30.15%	9 M 2 F 11 T 22.44%	6 M 7 F 13 T 20.63%
C. I can't be happy if I can't be successful at work life.	6 M 2 F 8 T 16.32%	9 F 2 M 11 T 17.46%	6 M 2 F 8 T 16.32%	4 F 2 M 6 T 9.52%	4 M 2 F 6 T 12.24%	3 M 2 F 5 T 7.93 %	8 M 4 F 12T 24.48%	3 M 12 F 15 T 23.80%	10 M 3 F 13 T 26.53%	7 M 14 F 21 T 33.3%
D. Women can only work in jobs suitable for women .	8 M 4 F 12 T 24.48%	6 M 12 F 18 T 28.57%	6 M 4 F 10 T 20.4%	3 M 10 F 13 T 20.63%	5 M 0 F 5 T 10.20%	1 M 6 F 7 T 11.11%	8 M 1 F 9 T 18.36%	4 M 8 F 12 T 19.04%	6 M 3 F 9 T 18.36%	6 M 5 F 11 T 17.04%
E. Men can only work in jobs suitable for men.	10 M 3 F 13 T 26.53%	7 M 13 F 20 T 31.74%	6 M 6 F 12 T 24.48%	2 M 12 F 14 T 22.22%	5 M 1 F 6 T 12.24%	2 M 3 F 5 T 7.93%	5 M 1 F 6 T 12.24%	4 M 7 F 11 T 17.46%	7 M 2 F 9 T 18.36%	9 M 5 F 14 T 22.22%
F. My job also must satisfy my family (mother, father etc.)	7 M 0 F 7 T 14.28%	3 F 1 M 4 T 6.34%	5 M 2 F 7 T 14.28%	2 M 2 F 4 T 6.34%	4 M 3 F 7 T 14.28%	6 F 0 M 6 T 9.52%	11 M 6 F 17 T 34.69%	21 F 8 M 29 T 46.03%	6 M 1 F 7 T 14.28%	7 M 9 F 16 T 25.39 %
G. I can't handle home and work life together.	19 M 6 F 25 T 51.02%	23 F 11 M 34 T 53.96%	10 M 3 F 13 T 26.53%	15 F 5 M 20 T 31.74%	2 M 2 F 4 T 8.16%	2 M 1 F 3 T 4.76%	1 F 0 M 1 T 2.04%	1 F 0 M 1 T 1.58%	3 M 0 F 3 T 6.12%	1 F 1 M 2 T 3.17%
H. I can need to wait for years to find a job.	8 M 3 F 11 T 22.44%	6 M 8 F 14 T 22.22%	7 M 3 F 10 T 20.40%	9 M 10 F 19 T 30.15%	7 M 3 F 10 T 20.40%	1 M 7 F 8 T 12.69%	8 M 3 F 11 T 22.44%	1 M 12 F 13 T 20.63%	4 M 1 F 5 T 10.20%	2 M 4 F 6 T 9.52%
I. I want nothing than a job.	10 M 4 F 14 T 28.57%	6 M 5 F 11 T 17.46%	9 M 1 F 10 T 20.40%	20 F 6 M 26 T 41.26%	4 M 1 F 5 T 10.20%	3 F 3 M 6 T 9.52%	6 M 6 F 12 T 24.48%	3 M 7 F 10 T 15.87%	4 M 0 F 4 T 8.16%	5 F 2 M 7 T 11.11%

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J. I can have difficulties adopting my new institution.	15 M 4 F 19 T 38.77%	13 F 8 M 21 T 33.33%	11 M 6 F 17 T 34.69%	17 F 6 M 23 T 36.50%	5 M 2 F 7 T 14.28%	7 F 1 M 8 T 12.69%	2 M 1 F 3 T 6.12%	3 F 2 M 5 T 7.93%	1 M 0 F 1 T 2.04%	1 F 1 M 2 T 3.17%
K. I'm not sure about my abilities and skills.	19 M 5 F 24 T 48.97%	16 F 7 M 23 T 36.5%	7 M 3 F 10 T 20.4%	14 F 7 M 21 T 33.3%	5 M 3 F 8 T 16.32%	9 F 2 M 11 T 17.46%	1 M 0 F 1 T 2.04%	2 F 0 M 2 T 3.17%	1 M 0 F 1 T 2.04%	3 M 0 F 3 T 4.76%
L. I can act in a confused manner at first years of work life.	6 M 3 F 9 T 18.36%	6 F 5 M 11 T 17.46%	11 M 5 F 16 T 32.65%	10 F 4 M 14 T 22.2%	12 M 3 F 15 T 30.61%	17 F 3 M 20 T 31.74%	2 M 2 F 4 T 8.16%	5 F 4 M 9 T 14.28%	3 M 0 F 3 T 6.12%	3 F 1 M 4 T 6.34%
M. My occupational knowledge is not enough to find a job.	9 M 3 F 12 T 24.48%	8 F 5 M 13 T 20.63%	10 M 4 F 14 T 28.57%	17 F 7 M 24 T 38.09%	9 M 2 F 11 T 22.44%	5 F 6 M 11 T 17.46%	3 M 3 F 6 T 12.24%	8 F 1 M 9 T 14.28%	3 M 1 F 4 T 8.16%	2 F 1 M 3 T 4.76%
N. It is possible not to find any job.	12 M 5 F 17 T 34.69%	11 K 9 E 20 T 31.74%	8 M 2 F 10 T 20.4%	14 F 7 M 21 T 33.3%	7 M 3 F 10 T 20.4%	9 F 2 M 11 T 17.46%	5 M 2 F 7 T 14.28%	2 F 0 M 2 T 3.17%	2 M 1 F 3 T 6.12%	4 F 1 M 5 T 7.93%

CAREER EXPECTATIONS

All students expect something monetary or moral from their career. The background of these expectations could be result from their family, personal characteristics, opportunities of the country, universities and etc. Whatever the reason, students have many expectations from their rest of the life. Table 2 shows the expectations of the PSPA senior students. Generally, students who take the course or not take the course have same expectations. But as seen from judgement B, social dignity is more important for CM students. A steady life is important for all students but CM students are more strong minded (judgement D). The other difference between students is CM students chose strongly agree about a peaceful working environment. The other expectations have same importance for all students. It could be said that the course made little change about their expectations.

Table 2: Expectations

	1	**1 CM**	**2**	**2 CM**	**3**	**3 CM**	**4**	**4 CM**	**5**	**5 CM**
A. The most important thing of work life is earnings.	5 M 3 F 8 T 16.32%	6 F 6 M 12 T 19.04%	9 M 2 F 11 T 22.44%	15 F 6 M 21 T 33.3%	7 M 3 F 10 T 20.40%	2 F 2 M 4 T 6.34%	8 M 3 F 11 T 22.44%	13 F 3 M 16 T 25.39%	5 M 1 F 6 T 12.24%	5 F 2 M 7 T 11.11%
B. The most important thing at work life is social dignity.	2 M 2 T 4.08%	4 F 1 M 5 T 10.2%	3 M 1 F 4 T 8.16%	3 F 4 M 7 T 14.28%	8 M 8 T 16.32%	5 F 2 M 7 T 14.28%	10 M 4 F 14 T 28.57%	19 F 7 M 26 T 41.26%	11 M 7 F 18 T 36.73%	10 F 4 M 14 T 22.2%
C. Social security is very important at work.	2 M 2 T 4.08%	3 F 3 M 6 T 9.52%	1 M 1 T 2.04%	1 F 2 M 3 T 4.76%	3 M 1 F 4 T 8.16%		14 M 5 F 19 T 38.7%	24 F 6 M 30 T 47.61%	14 M 6 F 20 T 40.81%	13 F 8 M 21 T 33.3%

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D. The most important thing about work life is a steady life.	2 M 2 T 4.08%	4 F 1 M 5 T 7.93%	2 M 2 T 4.08%	1 M 1 T 1.58%	5 M 5 T 10.2%	2 F 2 M 4 T 6.34%	15 M 7 F 22 T 44.89%	23 F 7 M 30 T 47.61%	10 M 5 F 15 T 30.61%	12 F 7 M 19 T 30.15%
E. Peaceful working environment is the most important thing.	3 M 3 T 6.12%	2 F 2 T 3.17%	1 M 1 T 2.04%	1 F 2 M 3 T 4.76%	1 M 1 T 2.04%	2 F 2 M 2 T 3.17%	15 M 9 F 24 T 48.97%	11 F 6 M 17 T 26.98%	14 M 2 F 16 T 32.65%	25 F 8 M 33 T 52.38%
F. I expect an office of only mine.	3 M 1 F 4 T 8.16%	2 F 2 M 4 T 6.34%	5 M 1 F 6 T 12.24%	7 F 3 M 10 T 15.87%	7 M 5 F 12 T 24.48%	11 F 6 M 17 T 26.98%	13 M 4 F 17 T 34.69%	14 F 5 M 19 T 30.15%	6 M 1 F 7 T 14.28%	6 F 1 M 7 T 11.11%
G. It is enough to cover my basic commodities by my earnings.	4 M 1 F 5 T 10.2%	6 F 3 M 9 T 14.28%	12 M 4 F 16 T 32.65%	20 F 5 M 25 T 39.68%	4 M 4 F 8 T 16.32%	7 F 2 M 9 T 14.28%	9 M 1 F 10 T 20.4%	9 F 5 M 14 T 22.2%	4 M 2 F 6 T 12.24%	4 M 4 T 6.34%
H. I have to earn more than 3.000 TL at my first job.	3 M 1 F 4 T 8.16%	3 F 3 M 6 T 9.52%	6 M 2 F 8 T 16.32%	9 F 7 M 16 T 25.39%	11 M 2 F 13 T 26.53%	8 F 2 M 10 T 15.87%	6 M 2 F 8 T 16.32%	11 F 3 M 14 T 22.2%	8 M 5 F 13 T 26.53%	10 F 4 M 14 T 22.2%

CAREER DREAMS

All of our students have some dreams about rest of their life. Most of their dreams are about work life. Some of their dreams seem impossible but some of them are attainable. It is interesting that the students who take the CM course need more famous at work life (judgement A) and not sure about finding a job even after graduation (judgement D). Otherwise, the students who do not take the course seek more adventure. Of course, freedom is more important for all of them. According to the pool results, there is not a meaningful difference between their dreams which changed by the course.

Table 3: Dreams

	1	**1 CM**	**2**	**2 CM**	**3**	**3 CM**	**4**	**4 CM**	**5**	**5 CM**
A. I want too much to make a name for myself at work life.	4 M 3 F 7 T 14.28%	3 F 3 M 6 T 9.52%	11 M 3 F 14 T 28.57%	16 F 2 M 18 T 28.57%	2 M 1 F 3 T 6.12%	3 F 3 M 6 T 9.52%	8 M 4 F 12 T 24.48%	13 F 8 M 21 T 33.33%	8 M 1 F 9 T 18.36%	6 F 3 M 9 T 14.28%
B. I seek adventure at work.	3 M 2 F 5 T 10.20%	2 F 1 M 3 T 6.19%	8 M 1 F 9 T 18.36%	13 F 7 M 20 T 31.74%	8 M 2 F 10 T 20.4%	12 F 3 M 15 T 23.80%	6 M 7 F 13 T 26.53%	8 F 6 M 14 T 22.22%	8 M 8 T 16.32%	5 F 3 M 8 T 12.69%
C. Freedom is too important for me.	4 M 4 T 8.16%	3 F 2 M 5 T 7.93%	2 M 2 F 4 T 8.16%	8 F 8 T 12.69%	5 M 1 F 6 T 12.24%	6 F 2 M 8 T 12.69%	10 M 6 F 16 T 32.65%	12 F 8 M 20 T 31.74%	12 M 3 F 15 T 30.61%	11 F 8 M 19 T 30.15%
D. I can find a job even after graduation.	2 M 4 F 6 T 12.24%	2 F 3 M 5 T 7.93%	9 M 2 F 11 T 22.44%	6 F 4 M 10 T 15.87%	8 M 5 F 13 T 26.53%	25 F 7 M 32 T 50.79%	8 M 1 F 9 T 14.28%	5 F 3 M 8 T 12.69%	6 M 6 T 12.24%	3 F 3 M 6 T 9.52%

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CAREER PREPARATIONS

Main aim of a university student is to find a job after graduation. Students from prep to senior class make efforts to have qualifications to find a job and to be successful at job. Bu as observed, they are not sufficient about preparations. So, one of the aims of the course is to prepare them to job hunt and work life. As seen on the table 4, the CM students are more prepared for the work life. They have more information about drawing a CV, interview techniques, and making presentations which are the subjects of the course. They follow web sites to find a job, attend career days, make vocational trainings, go cram school, and attend social and cultural activities and certificate programmes more than other students. Additionally they want to have a master's degree more than other students. It can be said that the students of CM course are more prepared for job hunt and work life.

Table 4: Preparations

	YES	**YES CM**	**NO**	**NO CM**
A. I know to draw a CV.	15 M 3 F 18 T 36.73%	34 F 16 M 50 T 79.36%	16 M 8 F 24 T 48.97%	5 F 4 M 9 T 14.28%
B. I have detailed information about interviews.	16 M 4 F 20 T 40.81%	22 F 15 M 37 T 58.73%	15 M 7 F 22 T 44.89%	17 F 5 M 22 T 34.92%
C. I know techniques about making a successful presentation.	15 M 5 F 20 T 40.81%	30 F 13 M 43 T 68.25%	16 M 6 F 22 T 44.89%	9 F 7 M 16 T 25.39%
D. I use career web sites actively.	9 M 6 F 15 T 30.61%	19 F 10 M 29 T 46.03%	22 M 6 F 28 T 57.14%	19 F 10 M 29 T 46.03%
E. I follow job advertisements.	16 M 9 F 25 T 51.02%	19 F 16 M 35 T 55.5%	14 M 2 F 16 T 32.65%	19 F 4 M 23 T 36.50%
F. I think to have a master's degree.	17 M 7 F 24 T 48.97%	24 F 13 M 37 T 58.73%	14 M 4 F 18 T 36.73%	15 F 7 M 22 T 34.92%
G. I have attended career days.	13 M 6 F 19 T 38.77%	27 F 15 M 42 T 66.6%	18 M 5 F 23 T 46.93%	12 F 5 M 17 T 26.98%
H. I have worked in part time jobs.	10 M 5 F 15 T 30.61%	9 F 12 M 21 T 33.3%	21 M 6 F 27 T 55.1%	29 F 8 M 37 T 58.73%

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I. I have gone cram school for job hunt.	15 M 7 F 22 T 44.89%	25 F 12 M 37 T 58.73%	16 M 4 F 20 T 40.81%	15 F 8 M 23 T 36.50%
J. I have made vocational training.	8 M 2 F 10 T 20.4%	16 F 6 M 22 T 34.92%	23 M 9 F 32 T 65.3%	24 F 14 M 38 T 60.31%
K. I have attended social and cultural activities.	24 M 8 F 32 T 65.3%	36 F 20 M 56 T 88.8%	8 M 3 F 11 T 22.44%	3 F 3 T 4.76%
L. I have attended vocational certificate programmes.	23 M 8 F 31 T 63.26%	31 F 15 M 46 T 73.01%	7 M 3 F 10 T 20.4%	9 F 5 M 14 T 22.2%
M. I know one or more foreign language.	12 M 1 F 13 T 26.53%	9 F 11 M 20 T 31.74%	18 M 10 F 28 T 57.14%	31 F 9 M 40 T 63.49%

CONCLUSIONS

This study made to compare career fears, expectations, dreams, and preparations of the Inonu University Political Science and Public Administration senior students who take the Career Management Course and who do not. In order to see the differences and similarities a poll made for all senior students. Actually, aim of the study is to understand success of the course. According to the results; all students are more optimistic than we think. They do not have overblown fears and the course do not have a meaningful impact on their fears. All of their expectations are high but students of CM course are more strong minded because they generally choose "strongly agree" and not choose "not sure". So, the course have a little impact on the students' expectations. All of PSPA senior students have dreams but students of CM are more optimistic about work life. The course has a little impact again. The most important influence is about preparations. Students of CM course are prepared strong than others. They are more conscious, ready and in a strong position. The course has a respectable influence for good in preparations for job hunt and work life. Thus, as PSPA department we have to make some changes in the contents of the course in order to get more success.

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CHANGES IN EDUCATION

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The changes that are occurring in contemporary society should also be viewed from an educational perspective. In the case of the European Union, an example can be seen in the ongoing effort to arrive at a unified education system. It seems clear that the so-called freedom of circulation for E.U. citizens and their ability to work and study in different countries is closely linked with a similarity in educational backgrounds.

The steps taken by each European country to move in this direction vary widely, with some countries already in line with E.U. expectations.

On the other hand, other countries have been (and still are) dealing with greater challenges. Italy, for example, faced with multiple reforms of its educational system—starting in 1992 with its secondary schools and up to its universities—has incurred in a number of problems. In my opinion, the first of these problems is the fact that there has not been any change for many years, particularly at the university level, with teaching remaining the same for a long time, irrespective of how society and students may have changed.

At the same time, changes have been viewed as meaning: 1. a lower level of education quality; 2. an increased quantity of unpaid work, 3. a violation of teaching freedom and legal rights.

Obviously, given this climate, reforms have been perceived only in terms of their negative implications, without paying any attention to the fact that our educational system urgently needs some changes (for example, it is extremely closed, with low mobility, which does not allow students to reach certain levels of education).

More specifically, the latest OECD studies show a lag for Italy and Russia in providing their citizens with an educational system with more inclusive opportunities, particularly in comparison with the systems of other countries, such as those in Scandinavia and Germany.

This lag is mainly due to teaching methods, which are still based on a vertical approach: the teacher or professor explains a certain topic, assigns some books and other reading material to study and then verifies whether the students correctly understood the topic by means of an oral discussion. Before the reform, tests or written essays were very rarely used to verify student skills and provide them with any help that might be necessary to achieve an acceptable level of learning.

There is also a different level of discussion when it comes to computers and the implications of the internet revolution and the need for changes, with a different approach to knowledge and the multitasking opportunities of the new generations.

Keywords: educational reform

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PROSPECTIVE CHEMISTRY TEACHERS' REFLECTIVE DIARIES and REFLECTIVE THINKING LEVELS in BASIC CHEMISTRY LABORATORY

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ABSTRACT
Within this study, it was aimed to investigate the reflective diaries written by prospective teachers taking Basic Chemistry Laboratory II and their Reflective Thinking Levels. And it was also aimed to determine the effects of reflective diaries on students' Reflective Thinking Levels. Sample of the study consists of 14 students attending Hacettepe University, Faculty of Education, Department of Secondary School Science and Mathematics Education. Students' reflective diaries and Reflective Thinking Questionnaire, developed by Kember et al (2000), and was adapted into Turkish by Çiğdem (2012) were used as data collection tools. This questionnaire was aplied at the beginning and in the end of the study. Students wrote 4 diaries during 7 experiments. In order to evaluate the results of reflective diaries, descriptive analyses and for analysis of quantitative data descriptive analyses and Wilcoxon test will be used.

INTRODUCTION
Classroom discourse has been recognized as important to the educational experience of students. "Speech Reflective thinking is a concept which overlaps with the views held in progressivism based on pragmatic phylosposhy, which keeps evolving, and which is constantly emphasised in teacher training (Ünver, 2003; quoted by Güvenç, 2012). Reflective thinking is defined as thinking on any piece of knowledge in an effective, constant, and careful way. According to Dewey, "we do not learn from our experiences. We learn from reflections we make on our experiences". Experiences alone do not ensure learning. The main factor promoting learning is the reflections made in relation to experiences.

"Reflective thinking requires that teachers and students think about what they actually do while doing something, and thus revise what they have done accordingly. In this way, students can question during a class what they will learn and why they will learn it, and they can be more conscious and active in the learning process. Teachers, on the other hand, revise carefully after the class what they have done. Students can set their own learning objectives in reflective system of education, they can feel the responsibility of their learning, they can correct their mistakes, they can motivate themselves by noticing their positive behaviours, and they can reveal their views freely (Ünver, 2003).

In order for learning to occur through reflective thinking, individuals should be ready to consider diverse opinions, and they should be able to evaluate the self critically so that they can make significant modifications (Clinefielter, 2010).

One of the aims of teacher training programmes is to ensure that students can make evaluations concerning their own applications. As was emphasised by John Dewey (1964), if we - teachers - equip learners only with theoretical knowledge and if we do not give them the opportunity to see the relations between their own applications and their theoretical knowledge, they – as prospective teachers – will be inadequate in some respects, and thus children's education to occur in the future will be harmed (Alkan, Gözel, 2013).

Diaries are frequently employed in teacher training as a strategy developing reflective thinking, and they are regarded as one of the most widespread and successful instruments through which prospective teachers can perform reflections (Wesley and Buysse, 2001; Berg, Woody and Bauser, 2002; Yeh, 2004; Parsons and Stephenson, 2005; Artzt, 1999). Lab diaries, which are also regarded as an educational technique in lab applications, are the vehicles through which students can state what they have done and what they have observed as well as the topics they have difficulty with and they wonder, the conclusions they have arrived at, and their impressions (Dolapçıoğlu, 2007). This strategy of teaching provides learners with opportunities to determine their individual learning needs and to design their learning experiences accordingly (Stark in Riley-Doucet, quoted by Kok, Chabeli, 2002).

Although research studies in which prospective teachers perform reflective thinking in their courses such as teaching practice, school experience, and special teaching methods, and in which their reflective diaries are evaluated from different perspectives are available in the literature; studies concerning prospective teachers'

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reflections during their classes are more restricted in number. Yet, developing prospective teachers' reflecting skills in relation to their field of study, and analysing those skills is extremely important.

In research conducted by Güven (2013), where prospective elementary school teachers' reflective diaries and their epistemological beliefs are analysed during their lab applications, improvement was found in prospective elementary school teachers' reflective diaries in a 7-week study preformed within the framework of "Science and Technology Lab Applications II" course. It was also found in the same research that there were interactions between prospective teachers' reflective diaries and each sub-dimension of their epistemological beliefs. Erduran-Avcı (2008), in their research conducted with seventh graders in science and technology education, asked the students to write a diary each week. It was pointed out in their research that the diaries written in later weeks received higher scores than those written in the earlier weeks. It was found through student interviews that the majority of the students liked writing diaries, that their teachers understood them better thanks to the diaries, and that they were able to share their feelings and thoughts more easily. Moreover, it was also emphasised that diaries contributed to make students' learning permanent. Şahin (2009), who studied prospective science teachers' reflective thinking abilities with the help of their diaries, found that their descriptive reflective thinking skills were prominent; but that they failed to display reflective thinking.

PURPOSE

Within this study, it was aimed to investigate the reflective diaries written by prospective teachers taking Basic Chemistry Laboratory II Course and their Reflective Thinking Levels. And it was also aimed to determine the effects of reflective diaries on students' Reflective Thinking Levels. In line with these aims, answers were sought to the following questions:

1. What is the level of prospective teachers' reflective thinking prior to and after the application?
2. What is the effect of writing reflective diaries on prospective teachers' levels of reflective thinking?

METHOD

Descriptive analyses were employed in evaluating prospective teachers' diaries. Descriptive analyses and Wilcoxon test were used in order to evaluate the results of reflective thinking questionnaire.

SAMPLE

Sample of the study consists of 14 first year students attending Hacettepe University, Faculty of Education, Department of Secondary School Science and Mathematics Education, and taking General Chemistry Laboratory II course.

DATA COLLECTION TOOLS

Students' Reflective Diaries, and Reflective Thinking Questionnaire developed by Dolapçıoğlu (2007) were used as data collection tools.

Reflective Thinking Questionnaire:

Reflective thinking scale is a five-point Likert type scale, and it contains such alternatives as Never (1), Very rarely (2), Occasionally (3), Very often (4), and Always (5). The scale was developed by Kember et al (2000), and it was adapted into Turkish by Çiğdem (2012). The scale includes four dimensions such as habits, understanding, reflecting, and critical reflecting. Four items in the scale (1, 5, 9, and 13) are about habits, four items (2, 6, 10, and 14) are about reflecting, and four items (4, 8, 12, 16) are about critical reflecting. The Cronbach Alpha coefficients for the sub-scales of Reflective Thinking Scale (RTS) were found as .54 for habits, .66 for understanding, .80 for reflecting, and .72 for critical reflecting.

Reflective Diaries:

Reflective diaries may be written in different forms and sizes. Structured diaries were used in this study.

"Structured reflective diaries have a restricted structure. They are beneficial to both teachers and students. Teachers can obtain easily the knowledge that they intend to get in a certain format or in a certain way. Those diaries provide teachers with feedback and enable teachers to focus on knowledge related to learners' thinking and learning processes. Such diaries facilitate teachers to compare students' answers and reflections and to identify how students learn and reflect in groups" (Güven, 2013).

Prospective teachers were asked to write diaries containing their views of the sub-headings of

- What questions emerged in your head while doing this experiment?
- What knowledge and concepts have you learnt with this experiment?

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- Which stage made you think in this experiment?
- What concepts did you have difficulty in understanding during this experiment?

after they had done the experiment that they were required to do. Totally 64 diaries were investigated.

Stages of Implementation

The study was conducted along with four experiments within the framework of General Chemistry Laboratory II course, which was taught 2-hours a week. Prospective teachers included in the study were offered basic knowledge on reflective thinking, the importance of reflective thinking and its place in teacher training, reflective diaries, writing reflective diaries, and the effects of reflective diaries on reflective thinking; and the process was explained to them in details. Reflective Thinking questionnaire was given to them as the pre-test. Following this, experiments on Chemical Equilibrium, Acid-base Titration, Redox Titration, and Copper Covering through Electrolysis" were done. After each experiment, prospective teachers wrote their diaries and then handed them in to their teacher. Having checked the diaries, the ones with inadequacies and needing correction were returned the next week for feedback. At the end of the application, Reflective Thinking questionnaire was given again as the post-test.

Table 1: The Experiments Done During the Application, and their Goals

Experiment	**Goal**
Chemical Equilibrium,	To investigate the existence of equilibrium in the reaction between KSCN and $Fe(N0_3)_3$ solutions according to the change of colour, and to comprehend the working principle of Le Chatelier principle
Acid-base Titration,	To titrate sodium hydroxide solution with an acid whose concentration is unknown, and thus to determine the titration of the acid; and to acquire the skill of titrating by using the necessary laboratory aids and materials. .
Redox Titration	To understand Redox reactions and to determine the Fe^{2+} amount in an aqueous solution through redox titration.
Copper Covering through Electrolysis	To cover a piece of metal with copper by applying the principles of electrolysis. To calculate the mass of the copper covered metal using Faraday's Laws.

DATA ANALYSIS

In order to evaluate the results of reflective diaries, descriptive analyses and Wilcoxon test were used.

FINDINGS

Descriptive analyses were done in relation to the sub-problem "What is the level of prospective teachers' reflective thinking prior to and after the application?", and prospective teachers' responses to the items of reflective thinking questionnaire were descriptively analysed. The findings are shown in Table 2.

Table 2: The Pre-test and Post-test Descriptive analysis Results for Reflective Thinking Questionnaire

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	Items	X (pre-test)	SS (pre-test)	X (post-test)	SS (post-test)
1.	I do not think what I am doing while doing some activities.	3,50	1,22	3,93	1,27
2.	This course requires that we learn the concepts taught by the lecturer.	**4,36**	,84	**4,42**	,85
3.	I sometimes question how others do something, and I try to find a better way to do it.	3,93	,92	**4,28**	,82
4.	I changed my perspective of looking at myself at the end of this course.	3,78	1,12	3,93	1,14
5.	We repeat some of the things in this course so often that I have begun to do the things without thinking about them.	3,57	1,22	**4,07**	1,07
6.	We need to understand the course content in order to pass the exams.	**4,71**	,47	**4,78**	,42
7.	I like thinking about the things I am doing and then considering different ways for doing it in a better way.	**4,07**	1,14	**4,28**	,91
8.	This course conflicts with ideas which I stick to.	3,21	1,25	3,64	,93
9.	As long as I have lecture notes for the exams, there are no problems to think about.	2,86	1,17	3,07	1,27
10.	I have to understand the things that the lecturer taught so that I can fulfil the applied tasks.	**4,57**	,75	**4,57**	,75
11.	I frequently revise what I have done, and thus check if I have made any progress	3,78	,89	**4,21**	,80
12.	As a result of this course, I changed the ways I had followed when doing things.	3,07	,92	3,21	1,05
13.	If I apply what the lecturer says in this course, I don't need to think about anything else.	2,78	1,31	2,78	1,31
14.	We need to constantly think about the subject taught in this course.	3,43	1,16	3,43	1,16
15.	I take lesson from what I do, and I frequently assess my activities in order to do them better the next time.	**4,07**	,83	**4,07**	,83
16.	During the course, I discovered that I had mistakes which I had previously believed they were correct.	3,36	,84	3,36	,84

On examining the pre-test and post-test descriptive analysis results for reflective thinking questionnaire on item basis, it was found that prospective teachers had quite high levels of reflective thinking. A close examination of the pre-test results made it clear that the average was above 4 in items 2, 6, 7, 10 and 15. It was also found that the average was above 4 in items 2, 3, 5, 6, 7, 10, 11, and 15 for the post-test results.

In relation to the sub-problem "what is the effect of writing reflective diaries on prospective teachers' levels of reflective thinking? , the Wilcoxon Signed Rank Test results for Reflective Thinking Questionnaire pre-test and post-test scores are given in Table 3.

Table 3: The Results for the Wilcoxon Signed Rank Test conducted for the Reflective Thinking Questionnaire pretest- posttest Scores

Posttest-pretest	n	Rank average	Rank total	z	p
Negative rank	1	1,50	1,50	-2.953*	0.003
Positive rank	11	6,95	76,50		
Equal	0	-			

* Based on negative ranks

As it is clear from Table 3, a significant difference is available between prospective teachers' Reflective Thinking Questionnaire pre-test and post-test scores ($z=2.953$, $p<05$). Considering the rank averages and totals of the difference scores, it is found that the difference is in favour of the positive ranks- that is, in favour of the post-test scores. Accordingly, it may be said that the practice of writing reflective diaries leads to a rise in

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prospective teachers' levels of reflective thinking.

Some of the statements that the prospective teachers wrote in response to the questions they needed to consider while writing their diaries were as in what follows:

- **What questions emerged in your head while doing this experiment?**

For the experiment on chemical equilibrium:
"I wondered what changes would occur in colours in the reactions." I thought about why colour changes occurred while doing the experiment and when colour change occurred, I thought about why the balance was achieved."
For the experiment on acid-base titration:
"I had problems in reading the burette, in reading the volume as the first volume and the last volume." I wondered what colour we needed to see."
For the experiment on copper covering through electrolysis:
"why did we wash the metal with diluted NaOH and HNO_3?" "I mean, how copper would cover the metal was not clear to me." "I thought about how electron would be released from copper." The solution used in this experiment was different, and what changes this would cause in the experiment?"

- **Which stage made you think in this experiment?**

For the experiment on chemical equilibrium:
"The stage I had difficulty in understanding was definitely stage 4. I couldn't understand the reaction occuring after adding crystals. I interpreted only by making guesses about the direction of the balance.
"I was confused about the stages that Le Chatelier's principle was about."
"I thought about the question " if the test tubes had waited a little more, how would the colour have changed?""
For the experiment on redox titration:
"Determining the moment of colour change made me think. I am not sure whether it was the exact time".
"I wondered why change occured colour a bit late."
"Continuously shaking the erlenmeyer while titrating made me think."
For the experiment on copper covering through electrolysis:
"I wondered why we connected the coin to the negative pole and the copper cord to the positive pole. "
"I thought about how to do the calculations".
"I thought about how to find the current."

- **What concepts did you have difficulty in understanding during this experiment?**

For the experiment on chemical equilibrium:
"The concept I found difficult to understand was the addition of a catalyst. But later I learnt that the catalyst did not have any effects on balance, but that it accelerated the reaction so as to reach the balance."
For the experiment on acid-base titration:
"I had difficulty in understanding the concepts of equivalence and turning point."
For the experiment on redox titration:
"I had difficulty in understanding reduction, reducer, and oxidizing agent."
For the experiment on copper covering through electrolysis:
"I had difficulty in calculations with Faraday's Laws."

CONCLUSIONS AND DISCUSSION

This study, which aimed to analyse students' diaries written in the Basic Chemistry Laboratory II course as well as their levels of reflective thinking, and to determine the effects of diaries on reflective thinking, found that prospective teachers had quite high levels of reflective thinking. These are the findings parallel to the ones obtained in Good and Wang (2002), and in Lee (2000).

On examining the diaries written by the prospective teachers, it was found that they were able to do evaluations about themselves, that they were able to think again on the experiments they had done in the laboratory and re-focus on the learning process, and that they were able to determine the aspect they needed to improve.

It was found in this research that there was a significant difference between Reflective Thinking Questionnaire pre-test and post-test scores in favour of post-test scores. Based on these results, it may be said that the practice of writing reflective diaries led to a rise in prospective teachers' levels of reflective thinking. These results are compatible with the view stated by Moon (1999) as "... reflective capacity changes from person to person, and it improves along with age, and it improves even more in educational environments". In a similar vein, in their study conducted by Schweiker, Holmes and Pula (2003) so as to find whether or not reflective thinking skills

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improved, it was found that there was a significant difference between the experimental group's and the control group's post-test scores.

RECOMMENDATIONS

- Emphasis may be placed on reflective thinking, its importance, and the ways of promoting it during the training of prospective teachers beginning with the first year.
- Prospective teachers may be made accustomed to thinking about their learning experiences and to doing self-evaluations.
- The number of research studies concerning the methods, vehicles and techniques to develop reflective thinking and to be used in teacher training programmes may be increased.

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CHILDHOOD MEMORIES FROM INFANCY TO SENIORITY - 2 (THE AGE OF 7 TO 70)

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Once we all were children… Is there any adult that doesn't remember or long for his/her childhood? Our years spent in childhood are the mirror of our past and carry links to our future.

Throughout centuries, unlike all the changes that occurred, a child's desire and need to play is one of the things that hasn't changed at all. However, with the effects of technology and urbanization many changes were seen and continue to be seen on child games and the toys they play with. Our childhood periods and the memories we have collected can differ according to this change.

In addition to alot of older unforgettable memories erased from memory it has a different meaning for everyone in the child. Sometimes a scent, a desert you eat, a flower you see, a colour, a toy etc. takes you back to your childhood. I know there much more in each and every one of you about our childhood.

Study is conducted with a scanning method on 951 people (the totalnumber offemales 579 and total males 372) that have lived and still live in 71 cities of Turkey and 10 cities of Europe from the ages of 7 to 70. As a data collection tool a 24 clause "My Childhood" evaluation form which developed by the writer was used (colour, month, song, desert, goods, toy, clothe, fruit, vegetable, food, drink, time zone, flower, animal, car, profession, junk food, relative, day, game, film, scent, city/ country, book/magazine). Research over the place due to the retention of the analysis are discussed in three parts, research results were presented at the St Petersburg-2014 V. European Conference on Social and Behavioral Sciences of the eight items (colour, desert, toy, clothe, food, drink, car, profession, game) that make up the first part and is to be published.

In this research is located eight other items (month, song, clothe, goods, fruit, flower, time zone, city/ country) that make up the second part of the study. The data were collected by asking our test subjects to read every clause in the form one by one and to write what the word reminds to them about their childhood to the opposite column of the word. In the statistical analysis (SPSS), while percentage calculations, the variables were studied in order to determine whether there was a difference according to age and gender.

Keywords: childhood memories

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CHOOSE A DISABILITY GROUP THAT YOU WOULD NOT WANT TO WORK WITH: THE VIEWS OF UNDERGRADUATES

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ABSTRACT

Being a qualified teacher demands gaining the necessary knowledge and skills for instruction and collaboration as well as positive attitudes toward the learners themselves. Personnel preparation programs in special education are the first step to becoming a qualified teacher, where pre-service teachers are equipped with those knowledge, skills and attitudes needed to work with students with disabilities. Special education is one area where attitudes toward students with disabilities are shown to be an important variable in teaching success. These attitudes are in part formed during the undergraduate years and shaped throughout the in-service years. Thus, knowing teacher candidates' attitudes toward students with disabilities may have important implications for shaping personnel preparation programs in the future. Therefore the aim of this study was to investigate the attitudes of pre-service teachers toward students with disabilities.

METHOD

The participants were a total of 118 second grade undergraduate students enrolled in one of the two departments of special education in two different universities in Ankara, the capital of Turkey. Fifty of the participants (42.4%) were pre-service teachers of students with visual impairments (TVI) – School A [male: 13 (11%), female: 37 (31.3%)] while the remaining 68 (57.6%) were of students with intellectual disabilities (TID) – School B [male: 34 (28.8%), female: 34 (28.8%)].

Students were asked one open ended question at the end of their final exam on the "Changing Attitudes toward People with Disabilities" course. A negative question was preferred by the authors with the assumption that asking the participants directly would be a practical way to investigate the potential negative attitudes of the participants which would probably not have been observed otherwise. The question was *"If you were given a choice, which disability group would you prefer not to work with during your beginning years in in-service and why?"*

Descriptive analyses included: (1) frequencies regarding the disability groups chosen and (2) the reasons put forward by the participants for choosing that specific disability, which were conducted independently by the two authors. The Interrater reliability coefficient for category formation was 84%. Discrepancies among the categories regarding the reasons put forward by the participants were solved through a 1 hour meeting by the two authors.

RESULTS AND DISCUSSION

A total of 129 responses were recorded for disability group preferences among the participants. Some of these responses included "the disability group the participant would prefer to work with", "an emerging positive attitude towards a disability group where s/he would not have preferred to work with before" and "no discrimination among disability groups". Table 1 shows the frequencies of participant preferences across disability groups.

Table 1. *Participant Preferences across Disability Groups*

	School 1 (TVI)		School 2 (TID)		Total
	Female	Male	Female	Male	
Type of disability not preferred to work with					
Intellectual disability	14	2	12	10	**38**
Multiple disability	6	3	4	1	**14**
Hearing impairment	1	2	2	6	**11**
Autism	-	-	7	2	**9**

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Visual impairment	-	-	4	4	**8**
Physical disability	-	-	4	-	**4**
Severe disability	-	1	-	3	**4**
Learning disability	-	1	-	1	**2**
Emotional disorder	-	-	-	1	**1**
Mild disability	-	-	1	-	**1**
Students with self injurious behaviors	-	-	1	-	**1**
Aged students	1	-	-	-	**1**
Other responses					
No discrimination among disability groups	8	1	1	6	**16**
Preference in working only with a specific disability group	6	4	-	-	**10**
An emerging positive attitude toward preference for working with a specific disability group	4	1	2	2	**9**
Total	**40**	**15**	**38**	**36**	**129**

As seen in Table 1, intellectual disability and multiple disabilities were the most undesirable disability groups by the participants and were followed by hearing impairment, autism and visual impairment disability groups.

Four general categories with a total of 213 responses were formed for the reasons put forward by the participants. These categories are depicted in Table 2.

Table 2. *The Rationale for Choosing Among Types of Disabilities*

General category	Subcategory	School 1 (TVI)		School 2 (TID)		
		Female	Male	Female	Male	Total
Rationale for not preferring to work with a specific disability group	Lack of professional competency (modifying instruction, behavior management, classroom management, collaborating with families, lack of experience)	14	9	31	21	75
	Participant's personal characteristics (lack of patience, lack of physical strength, anger, negative prior experience, lack of desire to take responsibility)	15	3	16	16	50
	Incorrect information on the developmental and learning characteristics of students with disabilities (aggression, strength, not teachable, lack of self care skills)	8	1	13	18	40
	Negative working conditions and lack of support services	-	-	9	6	15
Rationale for preferring to work with a specific disability group	Competent only in VI*	4	1	-	-	5
	Characteristics of students with VI match those of the participant's	1	2	-	-	3
	Can only tolerate VI	-	1	-	-	1
	Students with VI can learn	1	-	-	-	1
	Willing to give MD** time and energy	1	-	-	-	1
An emerging positive attitude	The positive effect of the undergraduate program (gaining the	3	-	-	2	5

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toward preference for working with a specific disability group	knowledge and skills, direct observation)					
	Personal characteristics (patience and motivation to overcome difficulties)	2	-	-	-	2
Rationale for not discriminating among types of disability	No liberty to discriminate among students with various disabilities	2	-	-	1	3
	Focusing on individual differences rather than the diagnosis	1		1	1	3
	Focusing on modifying teaching rather than the diagnosis	1	1			2
	No problem with type of disability as long as the participant is equipped with the knowledge and skills	1	-	1	-	2
	The undergraduate program is very effective	2	-	-	-	2
	Wouldn't discriminate on the basis of ease of working with a specific disability				1	1
	Motivation to learn and teach with alternative techniques to students of various disabilities	-	-	-	1	1

* Visual impairment
** Multiple disabilities

DISCUSSION

The results displayed above may be discussed as follows:

- It is interesting to note that the disability group that TID did not prefer to work with was intellectual disability, the specific group those pre-service teachers are trained to work with. This finding fits with the attitudes toward disabilities literature in the sense that intellectual disability is the least favored disability in society. In our case, building knowledge and skills of people (i.e. pre-service TID) do not seem to affect attitudes as much as is desired.
- Multiple disability is one group pre-service teachers seem to fear and the reason may be that the more the number of disabilities a student has, the harder instruction becomes. However, the important thing the pre-service teacher should know is that the type, severity and the number of disabilities should not be a matter once a teacher is well equipped with the knowledge and skills needed to work with students with disabilities. We believe that helping pre-service teachers gain this viewpoint is the job of personnel preparation programs.
- The new legislation in special education claims that TVI, TID and teachers of the hearing impaired will be employed in any of the special schools across the nation and this means that a TID may have to work with students with hearing and/or visual impairments. Participants seem to have little or faulty information regarding the developmental characteristics of students with disabilities. Therefore, although personnel preparation programs are involved with one specific disability, they have to focus on building information including all types of disabilities at the undergraduate level.
- Participants who claimed to have experienced a change in negative attitude towards a specific disability believed that this positive change was the result of the undergraduate courses. This shows that an increase in knowledge and skills in the profession is valuable but that programs should work harder to increase the number of pre-service teachers who will build similar attitudes.
- Responses of the participants who did not discriminate among disability groups showed that sensitivity and respect to individual differences as well as competency in assessment and instruction seemed to be effective in such preference. Thus, working on building positive attitudes toward persons with disabilities and assessment and instruction skills may be thought to have important benefits for special education teachers and accordingly, special education in general.

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CONCLUSION

Attitudes begin to emerge in the childhood years and change throughout the life cycle by way of various experiences with various others. A person comes across a personnel preparation program during the late teenage and early adulthood years and this program serves to shape attitudes as well. Surely, it is nearly impossible for the undergraduate program to shape an undergraduate's attitudes all by itself. However, it can in certain ways help its students in building a positive look toward the profession by developing their knowledge, skills and attitudes.

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ÇİZGİ FİLMLERİN ÇOCUKLAR ÜZERİNDEKİ EĞİTİCİ ROLÜNÜN ANALİZİ: CAİLLOU ÖRNEĞİ

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Televizyonda çocuklara yönelik olarak yayınlanan çizgi filmler, çocukların gerçek dünyadan sıyrılıp hayal dünyasına geçmesini sağlayan bir kapı niteliği taşımaktadır. Bu yönüyle çizgi filmler çocuklar için bir oyun sahası oluşturmakta, bir oyun kurgulaması için çocuklara yol, yöntem göstermektedir. Çizgi filmler, çocuklara eğlenceli ve renkli bir dünya sunarken göndermiş olduğu iletiler vasıtasıyla bir takım kültürel, eğitsel ve sosyal öğelerin çocuklar tarafından benimsenmesini ve doğru tutum, davranışların sergilenmesini sağlamaktadır. Çünkü çocuklar, televizyon karşısında çizgi filmlerin bir parçası haline gelmekte, orada gördükleri davranışları kendi hayatlarında da sergilemekte ve çizgi film karakterlerini içselleştirmektedir. Belli bir mesaj gönderimi amacı taşıyan çizgi filmler bu anlamda amaçlarını daha kolay elde etmektedir. Çünkü yaşları daha küçük olan çocukların sorgulama yeteneklerine de henüz gelişmemiştir ve çocuklar çizgi filmlerin eğitsel dokusunda yer alan anlamları, emmeye eğilimli bir tavır içerisindedir. Bu çalışma, Caillou adlı çizgi filmin eğitici rolü üzerinde durmakta ve ne türden eğitici mesajları nasıl ilettiğini analiz etmektir. Bu doğrultuda çalışmada nitel içerik analizi yöntemi uygulanmış olup Caillou'nun bölümleri izlenerek yapılan analizlerle çizgi filmin eğitici işlevi tartışılmıştır.

Anahtar kelimeler: Çocuk eğitimi, eğitici mesajlar, çizgi film, Caillou, nitel içerik analizi.

THE ANALYSİS OF ROLE OF EDUCATİONAL ON CHİLDREN OF CARTOONS: EXAMPLE CAİLLOU

ABSTRACT
The cartoons are broadcasted on television to make children go into a dream world after slipped from the real world. With this aspect, cartoons create a level playing field for kids and guide the children to create up a game. While cartoons offer children fun and colorful world, they try to make children adopt right social, cultural and educational behaviors through the messages sent by cartoons. Because children are a part of the cartoons when they are in front of the TV and display similar behaviors on their lives and internalize the comic characters. The cartoons send their message to achieve their goals in an easier way because small children have not developed the ability of reasoning yet and children more tend to receive messages of cartoons on the educational base. This study focuses on the educational role of Caillou which is a cartoon character on television and analyzeswhat kinds of educational messages Caillou send to children. In this study, qualitative content analysis methods were used andeducational functions of cartoons were discussed.

Keywords: Child education, educational messages, cartoons, Caillou, qualitative content analysis

GİRİŞ

Son yarım yüzyıldan fazla süredir insan hayatında olan televizyonun eğitme, eğlendirme, bilgilendirme, boş zamanları değerlendirme gibi çok sayıda işlevi söz konusudur. İnsanlar tarafından çok tercih ediliyor olması televizyonun insanlar üzerinde çok fazla etkisinin olduğunu da göstermektedir. Her evde yer alan televizyonun etkisi daha çoğunlukla çocuklar üzerinde görülmektedir. Çevrelerini ve yaşamı tanımaya çalışan çocuklar için televizyonlarda çizgi filmler yayımlanmaktadır. Bu çizgi filmler kimi zaman çocukların gerçek hayattan sıyrılıp hayal dünyasına kapılmalarına neden olmakta ve hayal dünyasında kurguladıkları hayatı gerçek yaşamda da hayata geçirmelerini sağlamaktadır. Televizyonlardaki çizgi filmlerin çocuklar üzerindeki en önemli etkisi eğitici bir rol üstlenmiş olmalarıdır. Çizgi filmlerde renkli ve eğlenceli olarak sunulan eğitsel iletileri çocuklar daha keyif duyarak ve kolay bir şekilde alarak hayatlarında uygulamaktadır. Her çizgi film yapımı içinde oluştuğu kültürün yansıması olmakla birlikte kimi durum ve olaylarda evrensel düzeyde kabul edilen eğitsel tutum ve davranışlar söz konusu olabilmektedir. Bu çalışmanın amacı; çocuklara çeşitli mesajlar ilettiği düşünülen Kanada yapımı Caillou adlı çizgi filmin çocuklar üzerindeki eğitici rolünün analizini yapmak ve ne türden eğitici mesajları taşıyıp onları nasıl yaydığını belirlemektir. Bu doğrultuda çalışmada nitel içerik analizi yöntemi uygulanmış, Caillou'nun rastgele bir yöntemle seçilen 100'ün üzerinde bölümü izlenerek yapılan analizlerle çizgi filmin eğitici işlevi belirlenmeye çalışılmıştır.

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Televizyon ve Bir Eğitim Yöntemi Olarak Çizgi Filmler

Kitle iletişim araçlarından biri olan televizyon toplumsal yaşamda çok önemli bir yere sahiptir. İzleyicinin aktifliği ve pasifliğiyle ilgili kuramsal düzeyde çok fazla tartışma yapılmıştır. İzleyicinin kitle iletişim araçlarından gelen iletileri alırken aktif olduğunu savunan yaklaşımların başında gelen "kullanımlar ve doyumlar yaklaşımı, medya içeriklerinin ne amaçla kullanıldığını araştıran izleyicinin medyayı kullanım amacının yanı sıra medya içeriklerinden elde ettiği hazzı, doyumu ve bu anlamda beklentilerinin ne yönde ve ne kadar karşılık bulduğu sorularından oluşmaktadır" (Jensen ve Rosengren, 2005: 58-60). Aktif izleyici yaklaşımı ise, izleyicilerin yalnızca iletilenleri alımlayan kişilerin olmadığı, bunun yanı sıra iletileri kendi beklentileri doğrultusunda kullanan, yorumlayan, yeniden anlamlandıran, yani metne müdahale edenler durumunda olduklarını (İrvan, 1997: 205) savunur. Böylelikle kitle iletişim araçları ile izleyici arasında karşılıklı bir iletişim sürecinin söz konusu olduğu görülmektedir.

Kitle iletişim araçları arasında en yaygın olarak kullanılan araç olan "Televizyon, çocuklar ve yetişkinlerin büyük çoğunluğu tarafından paylaşılan bir deneyimdir" (İlhan ve Çetinkaya, 2013: 323). Televizyon, her ne kadar başlangıçta insanları eğlendirmeye yarayacak yeni bir oyuncak olarak kabul edildiyse de, farklı zaman dilimlerinde ve mekânlarda cereyan eden hadiseleri bulunulan yerden görmeyi, duymayı sağlamak suretiyle bilinç ve gerçeklik ilişkisinde algının sınırlarını genişleterek belirsizleştiren yeni boyutlar katan teknolojik bir gelişme (Şentürk, 2009: 20) olarak da yorumlanabilmektedir. Televizyon bireylere toplumsal değerleri aktarmada onların bilgi düzeylerini artırmada ve dış dünyaya açılmalarında görsel bir köprü görevi görerek (Yağlı, 2013: 709) izleyicilere göremediklerini görebilme şansı vererek dış dünyaya açılabilme imkânı sağlamaktadır. Televizyon, yeni medyaya rağmen giderek etki alanını genişletmesi ve insan yaşamının hemen her alanına nüfuz etmesi sayesinde birey/toplum üzerindeki etkisi noktasındaki tartışmalarda başı çekse de (İlhan ve Çetinkaya, 2013: 318) görüntüyü ve sesi bir arada kullanan bir teknolojiye sahip olması, aynı anda birden fazla duyuya hitap etmesi televizyonun etki gücünü artırdığını (Şirin, 1998: 13) söylemek yanıltıcı olmamaktadır.

Televizyon icat edildikten sonra toplum arasında hızla yayılmış ve "İzlenme mekânı ev olmuştur. Bildik nesnelerle dekore edilmiş, evcilleştirilmiştir. Televizyon bizi aileye mahkûm etmektedir ve televizyonun kendisi de tıpkı kullanılan bir nesne gibi ev eşyasından biri haline gelmiş" (Barthes, 1987: 188) hatta evlerin başköşesine oturtularak en önemli eşya statüsüne yükseltilmiştir. "Televizyon, etki bakımından aileyle rekabet etmektedir ve ailenin görece denetleyebildiği diğer sosyalleştirme araçlarına oranla denetlenmesi daha zordur" (Mutlu, 1999: 120). Çünkü televizyon oturma odası eşyasının bir parçası olmuş ve izleyicinin dikkatini çekmek için ev halkı ve diğer ev içi aktivitelerle rekabet eder hale gelmiştir (Gledhill, 1997: 337-386). Anne-babalar çocuklarını beslemek için bile televizyondan yararlanmışlardır. Televizyon izlerken, televizyonun büyüsü içinde çizgi film, reklam ve dizilere odaklanan çocuğu beslemek, çalışan ve yorgun kentli anne-babaların kolayına gelmektedir. Ana babalar, çocuk eğitimi ve çocuk yetiştirme gibi zorunlu, bir o kadar da ulvî görevlerini 'elektronik bakıcı' olarak tanımlanan televizyona devretmişlerdir (Doğan ve Göker, 2012: 6). Bu elektronik biberon (televizyon) çocuğa kendi kurallarını, kendi kodlarını ve tüketim kültürünü vererek çocuğun dünyasını daha kolay şekillendirecektir (Bevillard'an akt: Yağlı,2013: 709).

Çocuklar iki-üç yaşından itibaren televizyonla karşı karşıya kalmakta, özellikle üç yaşından itibaren sistematik bir dikkatle televizyon seyretmektedir (Şirin, 1998: 89). Televizyon bir eğitimci vazifesi edinmiş ve onlara bir dünya görüşü kazandırmaya başlamıştır (Groombridge, 1976: 11). Televizyon ekme kuramının öncüsü Gerbner de çocukların farkında olmadan öğrendikleri birçok şeyi televizyon aracılığıyla sağladığını, yaşamın bilinmeyen, aşina olunmayan yönlerini bu yolla edindiklerini ileri sürmektedir (akt: N. Yetim ve Ü. Yetim, 2008: 99). Çocuklar televizyondan olumlu davranışların yanı sıra olumsuz davranışları da öğrenmektedir. Yani "çocuklar televizyonda izledikleri yayınların etkisi ile arkadaşlık, paylaşma, işbirliği, yardımlaşma, sevgi gibi sosyal davranışlarını olumlu yönde geliştirdikleri gibi; şiddet, ahlaki yozlaşma, ihtiras gibi zararlı mesajları da alarak, olumsuz yönde etkilenmektedir" (Doğan ve Göker, 2012: 6-7). Ekrandaki renklere hareketlere adlarını bilmeden baktıkları bu görüntülere çok hassas olan çocuklar, bunları sevmekte; göz alışkın olmadan bile çok hızlı bir şekilde içgüdüsel olarak bunları algılamakta ve keşfetmektedir (Henriot'an akt: Yağlı,2013: 709). Çocuklar soyut düşünemediklerinden ve gerçekle hayali ayırt edemediklerinden televizyonda gördükleri görüntüleri somut zannetmekte ve gerçek hayatta uygulamaya çalışmaktadır. Bu yaşlarda çocuklar izledikleri çizgi filmlerde yapılan hareketleri yapmaya çalışmaktadır (Doğan ve Göker, 2012: 9-10). Gerbner'a göre televizyon öykü anlatıcı işlevini yerine getirirken, aynı dersleri defalarca tekrar sunan mesaj sistemlerini anlatma eğilimi taşımaktadır. Dolayısıyla çok fazla televizyon izleyen bir çocuğun dünyayı algılama biçimi de etkilenmektedir (Işık, 2008: 139). Çocuklar, yaşlarından dolayı, kurmaca ile gerçek arasındaki farkı çoğu kez yetişkinler kadar kolay algılayamamaktadır (Çaplı, 1996: 1335). Çünkü çocuklar yetişkinlerden farklı olarak televizyon etkisine açık, muhakeme yeteneği henüz gelişmemiş, savunmasız ve korunması gereken bir konumdadır. Televizyonun en fazla çocuklar tarafından seyredildiği de bilinmektedir. Çocukların televizyon seyretme süresini ölçen araştırmalar günde 3-4 saatin televizyon karşısında geçirildiğini ve bu sürenin okulda geçirilenden daha fazla olduğunu ortaya koymuştur.

Çocukları iki yaşından itibaren cezbeden televizyon onların kişilik gelişiminde zaman zaman ailenin bile önüne geçerek birincil derecede etkide bulunabilmektedir (Şeker, 2009: 185).

Türkiye'de yapılan bir araştırmanın sonuçlarına göre çocukların televizyonda en çok izledikleri programlar %72'yle çizgi filmler (Yorulmaz, 2013: 439) olmuştur. Gündelik hayatta ilkokul çağındaki çocukların büyük bir kısmı çizgi film izlemekte ve olumlu veya olumsuz etkilerine maruz kalmaktadır (İlhan ve Çetinkaya, 2013: 317). Çizgi filmlerin en çok hitap ettiği kitle okul öncesi ve ilköğretim çağındaki çocuklar olsa da günümüzde yetişkinlere hitap eden çizgi filmler de yapılmaktadır (Yağlı, 2013: 710). Çizgi film hedef kitlesi çocuklar olan ancak yetişkinler tarafından da büyük bir ilgi ile izlenen, kültür endüstrisinin önemli eğlence ürünlerinden biridir (Gökçearslan, 2010: 366). Çizgi film; çizerinin, sihirbazının, güzel sanatlar alanında çalışan bir sanatçının, müzisyenin, kamera operatörünün ve film yönetmeninin yeni bir sanatçı türü olan canlandırmacıyı yaratmak için bir araya geldiği bir süreçtir (Wells, 2002: 3-4). Çizgi filmler çocuğun sosyal hayatına, davranışlarına ve bilişsel gelişimine önemli katkı sağlamaktadır. Çocuklar çizgi film seyrederken birçok davranışı ve bilgiyi farkında olmadan erken öğrenmeye başlamaktadır (Yağlı, 2013: 707). Çizgi filmlerin çocuğun gelişmesine ve eğitim sürecine katkılarını, "Çocukların daha erken yaşta kavrama ve öğrenmesine katkı sağlar. Çocukların sadece duygu ve düşünce dünyasını değil aynı zamanda estetik zevkini de geliştirir. Hayata bakış açılarını zenginleştirir, evrensel ve milli değerleri eğlenerek öğrenmelerine katkı sağlar. Dilsel ve bilişsel becerilerini geliştirir ve onları düşünme ve karşılaştırma yapmaya yöneltir. Çocukların iyilik yardımseverlik gibi bazı olumlu davranışları taklit ederek öğrenmelerini sağlar. Çizgi filmlerdeki görselliğin ve işitmenin devreye girmesiyle çocuklarda öğrenme daha etkin hale gelir, bununla birlikte çizgi film kahramanlarının çizgi romana uyarlanmasıyla çocuklara daha çabuk okuma alışkanlığı kazandırılabilir (Yağlı, 2013: 718) şeklinde sıralanmaktadır.

Çizgi filmler, çocukların yaşamında belli bir dönemin hâkim unsuru konumundadır. Söz konusu dönemde çocuklar için çizgi filmler, gerçek dünyadan hayal dünyasına açılan bir kapıdır. Çocuk, bu diyarda kendisini istediği gibi kurgulamakta ve bu esnada içine girdiği dünyadan öğrendiklerini/gördüklerini gerçek yaşama taşımaktadır. Dolayısıyla çizgi film dünyası ile çocuğu ve bir anlamda onun yaşam şeklini biçimlendirmek mümkündür (Türkmen, 2012: 139). Çizgi filmlerdeki görsellik, efektler, maceralar, hayali kahramanlar, çeşitli yaratıklar, çocukları günlük yaşantılarından uzaklaştırarak onlara farklı boyutlarda heyecanlar yaşatmaktadır. Çizgilerin büyülü dünyasındaki macera dolu olayların gerçek olmaması çocuğu pek ilgilendirmez onun için önemli olan şey eğlenirken düşler kurmak, o gizemli dünyaya hayali yolculuklar yapmaktır (Yağlı, 2013: 710). Çizgi filmler, masal işlevlerini izleyicilerine sunması ve tıpkı masallardaki gibi ayrıntıya inmemesi, olağanüstülüklerle dolu olması vb. özellikleri sebebiyle masallara benzediği görülmektedir yani çizgi filmler, bugünün masallarıdır denilebilmektedir. Ayrıca çizgi film kahramanlarının çocuk ya da çocuklar gibi kendi dünyalarındaki büyükler yanında küçük duran karakterler olmaları ve devamlı olarak büyüklerle mücadele içerisinde bulunmaları, en güçsüz/sıradan varlıkların beklenmedik başarılar göstermesi, tıpkı masallardaki gibi her zaman iyilerin kazanıp kötülerin kaybetmesi/cezalandırılması, iyilerin kalpleri kadar dış görüntülerinin güzel; kötülerin ise içleri kadar dışlarının çirkin olarak aksettirilmesi de onların çocuklarca çok sevilmesinin gerekçeleri arasında (Türkmen, 2012: 142) yer almaktadır.

Caillou Adlı Çizgi Filmin Çocuklar Üzerindeki Eğitici Rolünün Analizi

Bir Kanada yapımı olan Caillou adlı çizgi filmin çocuklar üzerindeki eğitici rolünün analiz edildiği bu çalışmada ilk olarak Caillou ve yan karakterlerle ilgili bilgi verilmiş olup daha sonra rastgele seçilen bölümlerin çocuklar üzerindeki eğitici rolü incelenmiştir.

YÖNTEM

Çalışmada nitel içerik analizi yöntemi kullanılmıştır. İçerik analizi, sosyal gerçeğin belirgin içeriklerinin özelliklerinden, içeriğin belirgin olmayan özellikleri hakkında çıkarımlar yapmak yoluyla sosyal gerçeği araştıran bir yöntemdir (Merten'den Akt: Gökçe, 2001: 25). İçerik analizi aynı zamanda, metinlere ve kullanıldıkları bağlamlara yönelik anlamlı ve geçerli çıkarımlar yapabilmek için kullanılan bilimsel bir araştırma yöntemi (Krippendorff, 2004: 18) şeklinde de tanımlanmaktadır. İçerik analizi tekniklerinin amacı, bir söylemi anlamada ve yorumlamada, öznel etkenlerden kurtulmayı sağlamaktır (Bilgin, 2006: 1). Çalışmada içerik analizinin çözümleme birimlerinden biri olan ve nitel analizde kullanılan tematik çözümleme uygulanmış (Atabek ve Atabek, 2007), çizgi filmin 100'ün üzerinde bölümü rastgele seçilerek izlenmiş, bölümlerin içeriği oluşturulan çözümleme kategorilerine yerleştirilmiştir. Yapılan seyirler sonucu, bölümlerde verilen mesajları sınıflandırmak için iki kategori yeterli bulunmuştur. Bu kategoriler; tutum ve davranış değiştiren eğitici mesajlar ve bilgi veren eğitici mesajlar şeklinde adlandırılmıştır. Çizgi film, Türkiye'de Yumurcak TV, Samanyolu TV, Euro D, Smart Çocuk ve Kanal D gibi kanallarda çeşitli dönemlerde yayınlanmış ve yayınlanmakta olup analize tabi tutulan bölümler internet üzerinden seyredilmiştir

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Caillou Hakkında Bilgiler

Yazar Christine L'Heureux ve çizer Hélène Desputaux'un kitaplarından televizyona uyarlanan Kanada yapımı çizgi film olan Caillou, 4 yaşındaki Caillou adlı bir erkek çocuğun insanlarla ilişkilerini ve günlük yaşamını konu almaktadır. Orijinal dili Fransızca olan çizgi film, farklı dillere çevrilmiş ve Amerika, Almanya, İngiltere ve Türkiye gibi pek çok ülkede yayımlanmıştır. Caillou, Fransızcada 'çakıl taşı' anlamına gelmekle birlikte bu sözcük saçsız baş anlamında da kullanılmakta ve filmde yer alan Caillou karakterinin de saçı bulunmamaktadır. Filmin ana karakteri olan Caillou, dizideki olayların onun yaşamı etrafında aktarıldığı 4 yaşındaki bir erkek çocuktur ve genellikle kırmızı yakalı sarı bir tişört ve mavi bir şort giymektedir. Ayrıca sarı çorapları ve kırmızı ayakkabıları vardır.

Caillou haricinde söz konusu çizgi filmde yer alan ana ve yan karakterler ile bunların özellikleri şu şekildedir: Caillou'nun annesi rolündeki Doris, sekreterlik yapmakta ve Caillou bir şeye gereksinim duyduğunda onu karşılamaktadır. Caillou'nun babası rolündeki Boris, babacan ve iyi yürekli biri olarak yansıtıldığı halde tamir işlerinde çok yetenekli olmadığı görülmektedir. Caillou'nun kız kardeşi rolündeki Rosie, Caillou'dan 2 yaş küçüktür ve saçları turuncudur. Caillou'nun büyükannesi, genellikle Caillou'nun sorunlarına yaratıcı çözümler üretmektedir. Caillou'nun büyükbabası, genellikle Caillou'yu gezmeye götürmekte ve onunla ilgilenmektedir. Filmde sıkça görülen Gilbert, Caillou'nun kedisidir. Bayan Martin, Caillou'nun öğretmenidir. Caillou'nun filmde yer alan arkadaşları ise; Clementine, Leo, Sarah, Xavier, Emma ve Andre'dir (http://tr.wikipedia.org/wiki/Caillou, 15 Nisan 2015). Bu tür kalabalık bir kadroyla, aile ilişkilerinin kopmaya başladığı bir çağda, anne, babadan başka diğer aile bireylerine de çocukların gelişim süreçlerinde ne kadar ihtiyaçları olduğu gösterilmiştir. Caillou'nun gelişmesinde sadece anne baba ve diğer aile fertlerinin değil komşularının da katkısı sağlanmıştır (www.editions.chouette.com/, 05 Nisan 2015).

Caillou'nun doğumundan 6 yaşına kadar olan süreçteki gelişmelerini bir yayınevi 120'den fazla başlıkla bir katalogda toplamıştır. Dünya çapında büyük yankı uyandıran Caillou albümü 15 milyondan fazla satmış ve birçok dile çevrilmiştir. Caillou okuyucularıyla birlikte hem etrafındaki dünyayı hem de kendi benliğini keşfederek büyür. Caillou kumral, kızıl, esmer ya da sarışın gözlüklü bir çocuk değil o tüm çocukları temsil eden evrensel bir karakterdir. O tüm çocuklara benzer ve bütün çocuklar onunla kolay iletişim kurar ve âdeta onunla özdeşleşirler. Caillou'nun hayatı gerçekte her ailede yaşanabilecek hayattan kesitleri içermektedir; bu da Caillou'yu okul öncesi çocuklara hitap eden seriler içerisinde ayrıcalıklı kılmaktadır. Her bölüm çocuğun gelişmesinde görülebilecek gerçek problemlerden yola çıkarak hazırlanmıştır. Caillou 4 -5 yaş arası bir çocuğun sözcük dağarcığına sahiptir. O anne babaların istediği gibi değil gerçek çocukların kullandığı sözcüklerle konuşan bir çocuktur. Basit resimler ve Caillou'nun dünyasındaki canlı renkler doğal olarak çocukların dikkatini çekmekte ve onları hikâyeye yönlendirerek daha kolay anlamalarını sağlamaktadır (www.editions.chouette.com/, 05 Nisan 2015).

Çizgi film başlamadan önce görüntüye gelen bir büyükanne iki torununa Caillou hikâyelerinden birini seçerek anlatmaya başlamaktadır. Caillou maceralarını seyrederken çocuklar bu dış sesi sık sık duymaktadır. Caillou'daki olaylar genellikle Caillou'nun etrafında gelişmekte ve diğer karakterlerin ona eşlik etmesiyle şekillenmektedir. Her hikâyede Caillou bir sorunla karşılaşmakta ve bu sorunun çözüm aşamaları başka olayları da beraberinde getirmektedir. Çocuklar Caillou'yu seyrederken buradaki güncel hayatın akışı içerisinde kendilerini bulmaktadır. Çünkü Caillou annesiyle okula gitmekte, arkadaşlarıyla oynamakta, dedesiyle alışveriş yapmakta, küçük kız kardeşine ağabeylik yapmakta, annesine ev işlerinde yardım etmekte; kısacası Caillou sıradan günlük işler yapmaktadır. 'Caillou okula gidiyor, Caillou sokakta, Caillou kurtarıcı, Caillou plajda, Caillou diş doktoruna gidiyor' gibi konularda geçen olaylar çocukların eğlenirken öğreneceği şekilde hazırlanmıştır. Caillou'nun bu olaylara bakışı duyguları, düşünceleri onların akışı içerisinde ön plana çıkartılmıştır (Yağlı, 2013: 713).

BULGULAR

Caillou adlı çizgi filmin çocuklar üzerindeki eğitici rolünün olduğunun analiz edildiği bu çalışmada Caillou'nun çocuklar üzerinde iki türden önemli eğitici rolünün olduğu görülmüştür. Bunlardan bir tanesi bir takım kavram ve durumlarla ilgili tanımlamalar yaparak onların ne olduğunu gösteren eğitici işlev, diğeri ise çocukları doğru davranmaya yönlendirme noktasında onların tutum ve davranışlarını değiştirmeye yönelik eğitici işlevdir. Buna göre Caillou çizgi filminde verilen eğitici mesajlardan bazıları şu şekildedir:

"Başladığın işi bitirmen gerekiyor. Kendi yatağını toplamak sorumluluk ister. Verdiğin bir sözü yerine getirmek çok önemlidir. Bir şey ters gittiğinde olumlu düşünmek en iyisidir. Bazen işler ters gitse de sonucu güzel olabilir. Kötü bir gün yaşıyor olsak bile her şeye iyi tarafından bakmayı hatırlayacağız." Bu tarz mesajların yanında, "Eğer dışarıda arkadaşının evinde kalınacaksa anneden izin almak, uyumadan önce el ve ayakları yıkamak, yemeklerden sonra dişleri fırçalamak, başarıdan gurur duymak, azimle her şeyi başarabileceğini göstermek, temizlikte sorumluluk alabilmek ve temizlik yapma alışkanlığı kazanmak, yeni tatlara karşı açık olmak, yazarlık konusunda yaratıcılık aşılamak" şeklinde mesajlar söz konusu olmuştur. Ayrıca teşekkür etme, rica etme, izin isteme,

selamlaşma, tokalaşma, özür dileme gibi nezaket kuralları da verilen diğer eğitici mesajlar Caillou adlı çizgi filmde sık sık görülmektedir.

2.3.1. Tutum ve Davranış Değiştiren Eğitici Mesajlar

Caillou adlı çizgi filmin çocukların hem tutumları hem de davranışları üzerinde eğitmeye yönelik bir işlev gördüğü söylenebilmektedir. Söz konusu çizgi filmde Caillou'nun anne, baba, büyükbaba ve büyükannesinin çocukları doğru davranmaya yönlendirdiği dikkat çekmektedir. Bu durum, anne, baba, büyükanne ve büyükbabanın sürekli eğitici rollerini yerine getirdiklerini göstermektedir.

Ailelerin en çok yakındığı durumların başında çocuklarının oynadıkları oyuncaklarını dağınık şekilde bırakmaları gelir. Caillou'da bu duruma, *"Caillou oyuncaklarını topluyor"* adlı bölümde dikkat çekilerek oyuncakların ortalıkta dağınık bir şekilde bırakılmaması gerektiğinin bilgisi verilmektedir.

Ev temizliğinin genellikle anne rolündeki kadınlar tarafından yapıldığına yönelik genel inanışın aksine *"Caillou temizlik yapıyor"* adlı bölümde, bu görevin sadece kadınlara ait olmadığı, evi paylaşan tüm bireyler tarafından yapılması gereken bir sorumluluk olduğu yansıtılmaktadır. Aynı bölümde, Caillou'nun babasının bahar temizliğine camları silerek yardım etmesi dikkat çekmektedir. Babaların, çocuklar tarafından bir model olarak alındığı bilinen bir gerçektir. Bu bölümde de babasının camları sildiğini gören Caillou'ya babasının nasıl temizlik yapması gerektiğini öğrettiği dikkat çekmektedir.

Kahve, çocuklar için zararlı bir üründür. *"Tıpkı babam gibi"* adlı bölümde babasının kahve içtiğini gören Caillou'ya kahve için yaşının henüz küçük olduğu ve kahvenin ona ağır geleceği öğretilirken bu durumun tüm çocuklar için geçerli olduğunun altı çizilmektedir. *"Caillou'nun yatılı misafiri"* adlı bölümde ise çocuklara eve gelen misafirlere nasıl davranılması gerektiğiyle ilgili mesajlar iletilmektedir. Bölümde Caillou'nun başlangıçtaki bazı davranışları babası tarafından yanlış bulunmakta, misafirlerin kendilerini rahat hissetmeleri için paylaşım ve hassasiyet gibi konular vurgulanmaktadır.

Çizgi filmin birçok bölümünde üzerinde durulan bir konu da kardeşler arasındaki çatışmadır. Bu tür krizler çıktığında büyük kardeşin daha anlayışlı olması gerektiği, küçük kardeşin yardıma ihtiyacı olduğu gibi mesajlar, Caillou ve kız kardeşi Rosie'nin kavgalarından yola çıkılarak izleyici çocuklara iletilmektedir. *"Tıpkı ben"* isimli bölüm buna örnek olarak verilebilir. Caillou, küçük kız kardeşi Rosie'ye, öğretici ve yardımcı bir tavır sergilemektedir. Böylelikle kardeşler arasında var olan çekişmeler 'yardım etme' eylemi öğretilerek yok edilmeye çalışılmaktadır. Caillou, kardeşi Rosie'ye nasıl yemek yenileceğini ve alfabeyi kolay bir şekilde öğrenmesi için şarkı öğretmektedir.

Yine başka bir bölüm olan *"Caillou alışverişe gidiyor"* adlı bölümde de Caillou'nun 'ağabey' olma rolü vurgulanmakta ve kardeşiyle ilgilenmesi daha çok ön plana çıkarılmaktadır. Aynı bölümde hem arabayı kullanan annenin hem de arabanın arka koltuğunda oturan Caillou ve kız kardeşinin kemer taktıkları dikkat çekmektedir. Böylelikle görsel olarak arabanın arka koltuğunda oturulsa da kemer takmanın önemi anlatılmaktadır. Yine aynı bölümde Caillou'nun alışveriş yapacağı listeyi hatırlamak için alacaklarını şarkıya dönüştürmesiyle, bazı şeylerin müzikle hafızada daha kolay tutulabileceğinin mesajı verilmektedir. *"Rossie Caillou'ya ağabey olmayı öğretiyor"* ve *"Caillou Rosie'ye bakıyor"* adlı bölümlerde kardeşler arasındaki ilişkinin nasıl olması gerektiği ve bir ağabeyin kardeşine karşı duyması gereken sorumluluk anlatılmaktadır. *"Arka bahçe bowlingcileri"* adlı bölümde büyükbabasından nasıl bowling oynandığını öğrenen Caillou, kız kardeşine de öğretmiş ve bu yüzden büyükannesinden özel bir ödül almıştır.

Yangın çıkma riskine dikkat çekilen diğer bir bölüm *"Caillou İtfaiyeci"* adını taşımakta ve bölümde yangın anında yapılması gerekenler öğretilmektedir. *"İtfaiye alıştırması"* adlı bölümde de yangın durumunda yapılması gerekenler uygulamalı olarak Caillou ve ailesi tarafından gösterilmiştir. Aynı bölümde annesi ve Caillou arasında geçen bir diyalogda, Caillou'nun isteği annesi tarafından "lütfen" kullanması şartıyla yerine getirilmiştir. Aynı bölümde evde çıkabilecek bir yangın durumunda ne yapılması gerektiğiyle ilgili yangın alıştırması yapılmış ve Caillou'nun babası ailesine böyle bir durumda ilk yapılması gereken şeyin evden çıkmak olduğunu söylemiştir. Dışarı çıktıktan sonra tekrar eve dönülmemesi gerektiği, herkesin dışarıda olduğundan emin olunduktan sonra komşunun evinden itfaiyenin aranması gerektiğini ifade etmiş ve izleyen çocuklara bu yolla mesaj iletilmiştir.

Caillou'nun maceralarının eğitici olarak anlatıldığı çizgi filmin *"Tam zamanında"* adlı bölümünde de zamanın ne kadar önemli olduğu vurgulanmış ve zamanında yapılmayan işlerin olumsuz sonuçlara neden olacağı belirtilmiştir. *"Köpek kızağı ilerliyor"* adlı bölümde doğru kaymanın taktikleri anlatılırken *"Caillou'nun büyük şutu"* adlı bölümde ise, başarısızlık durumunda hemen pes edilmemesi gerektiği ve başarı elde etmek için denemeler yapılması gerektiğine dikkat çekilmiştir.

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"Caillou düğüne gidiyor" adlı bölümde Caillou'nun izin istemeden insanları iterek aceleyle koşturması babası tarafından eleştirilmiştir. Caillou babasının telkini sonunda bölümün ilerleyen kısımlarında birkaç kez izin istemiş, izleyen çocuklara hem büyüklerin sözünün dinlenmesi hem de nezaket kurallarıyla ilgili eğitici mesajlar iletilmiştir.

"Caillou kütüphaneci" adlı bölümde kütüphanede kitap okuyan diğer insanları rahatsız etmemek için sessiz olunması gerektiği yani yüksek sesle konuşulmaması gerektiğinin altı çizilmiştir.

Sağlıklı olmak ve hızlı bir şekilde büyümekle ilgili *"Ben büyüdüm mü?"* adlı bölümde Caillou ve babası arasındaki diyalogda bir an önce uzamak isteyen Caillou'ya babası hızlı bir şekilde uzayabilmesi için, bol uyku uyumasının, egzersiz yapmasının ve meyve, sebze ve süt gibi sağlıklı besinler tüketmesinin gerekliliğini anlatmıştır.

"Caillou Antarktika'da" adlı bölümde oyun oynarken arkadaşları Caillou'nun üzerine kazayla düşer. Canı yanan Caillou, onları babasına şikâyet eder. Bunun üzerine babası, oynarken bu tarz istenmeyen kazaların olabileceğini, oyun arkadaşlarının bu tarz durumlarda birbirlerine kırılmaması ve özür dilenmesi gerektiği mesajını iletmiştir.

Caillou'nun *"Kayıp kedi"* adlı bölümde kaybolan bir kediyi sahibine vermek istemeyen Caillou üzerinden duyarlı olmak, paylaşmak ve empati kurmanın önemi anlatılmaktadır. Yine *"Caillou artık korkmuyor"* adlı bölümde Caillou'nun insanlar tarafından anlatılanlar doğrultusunda bir komşularından ve evinden korkması konu edilmektedir. Bölüm sonunda Caillou korkusundan kurtulmuş, insanlara karşı önyargılı olunmaması gerektiği, onları tanımanın gerekli olduğu mesajı verilmiştir.

"Kopyacı Clementina" adlı bölümde Caillou, arkadaşı Clementina'in sürekli kendi fikirlerini çalarak onun çalışmalarını taklit etmesinden rahatsızlık duymaktadır. Ancak bölümün sonunda Clementina'nın fikirlerin asıl sahibinin Caillou'nun olduğunu açıklaması iki arkadaş arasındaki tüm sorunları ortadan kaldırmış ve Caillou'nun gurur duymasına neden olmuştur. Bölümde, insanların fikirlerini başkalarıyla paylaşmasının güzel bir davranış olduğu vurgulanmıştır.

"Caillou'nun posteri" adlı bölümde Caillou, bir poster yaparken tüm arkadaşlarından yardım almasına rağmen posteri sadece kendi yapmış gibi davranmış ancak sonrasında bu durumdan rahatsızlık duyarak posterin kendisinin ve arkadaşlarının ortak ürünü olduğunu ifade etmiştir. İzleyen çocuklara bencil davranılmaması, herkesin hak ettiği değeri görmesi gerektiği mesajı verilmiştir.

"Oyun evinde buluşma" adlı bölümde Caillou, arkadaşıyla birlikte bir oyun evi yapmıştır. Tam oyun evinde oynayacakları günde arkadaşının hastalanması üzerine oyunu iptal eden Caillou'nun davranışı mesaj içeriklidir. Bu mesaj, arkadaşlığa değer vermenin önemi, yardımlaşma ve zor zamanlarda yanında olmanın önemi üzerinedir. Bu bölümde aynı zamanda yeri geldiğinde değer verilen arkadaşlar için bazı şeylerin ertelenebileceği, arkadaşlığın ne kadar önemli olduğu vurgulanmıştır.

"Caillou yaralanıyor" adlı bölümde Caillou bisikletten düşerek yaralanmaktadır. Bu tarz olumsuz bir sonucun yaşanmaması için kask takılmasının öneminin dile getirildiği bu bölümde aynı zamanda karşıdan karşıya nasıl geçilmesi gerektiği, "önce sağa sonra da sola bakmamız gerekiyor" ifadeleriyle anlatılmış ve bisiklete binerken tehlikeli hareketlerin yapılması durumunda istenmeyen kazaların meydana gelebileceği gösterilmiştir.

"Caillou'nun inşaat macerası" adlı bölümde ise, inşaatlarda güvenliğin çok önemli olduğu, ayaklara kalın botların giyilmesi, başı korumak için de baret kullanılması gerektiği öğretilmiştir. *"Caillou uçağa biniyor"* isimli bölümde ise uçak kalkışı ve inişi sırasında kemerlerin bağlanıp arkaya yaslanılması gerektiği belirtilmiş, bölümde çocukları uçağa binmeye hazırlama amacı güdülmüştür. Çocuklar hem okudukları masalların etkisiyle hem de hayal güçlerinin kuvvetli olması nedeniyle kimi zaman olmayan şeyleri varmış gibi düşünebilmektedir. Bu tarz durumların sadece hayal ürünü olduğunun vurgulandığı *"Caillou karanlıktan korkuyor"* adlı bölümde tüm çocukların korktuğu canavarların gerçek değil hayal mahsulü olduğu için bu tarz şeylerden korkmamaları gerektiği anlatılmıştır.

2.3.2. Bilgi Veren Eğitici Mesajlar

Bilgi veren mesajlar bir konuyla ilgili açıklama yapmak, bir şeyi tanımlamayı içermektedir. Caillou adlı çizgi filmde tutum ve davranışları değiştirmeye yönelik mesajları içeren bölümlerin yanında birçok konuda bilgi veren bölümlerin de olduğu görülmüştür.

Dişçiye gitmenin anlatıldığı *"Caillou'nun doktor kontrolü"* adlı bölümde diş sağlığının ve bunu sağlamak için dişçiye gitmenin önemi anlatılmıştır. Her çocuğun dişçiden korktuğu gerçeğinden hareketle dişçiden korkulacak

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bir şeyin olmadığı ve dışçiden korkmamanın gurur duyulabilecek bir durum olduğu ifade edilerek çocukların dışçiye gitmeleri için bir yönlendirmenin olduğu görülmüştür.

"Caillou sebzeden nefret ediyor" adlı bölümde tırtılların yaprak yediği ve böylelikle kelebeğe dönüşmek için gerekli enerjiyi elde ettiklerini, kuşların kurtçuk yediğini ve güneye uçmak için gerekli enerjiyi sağladıklarını, sincapların da ceviz yedikleri böylelikle soğuk havalarda soğuktan korundukları anlatılarak sebzelerin insan sağlığı için ne kadar önemli olduğu vurgulanmaya çalışılmıştır.

Hayvanların sağlığı da insanların sağlığı kadar önemlidir. Bunun önemine dikkat çekilen *"Kedinin sesi"* adlı bölümde hayvanların uzun süre sağlıklı kalabilmeleri için veterinere kontrole götürülmesinin gerekliliğinin bilgisi verilmiştir. *"Ulu meşe"* isimli bölümde ağaç dikmenin önemi ve onun nasıl yetiştirildiği öğretilmiştir. *"Kaymak için bekle"* isimli bölümde buz pistinin nasıl yapıldığı anlatılmıştır. Aynı bölümde, "İyi şeyler beklemeye değer" ifadeleriyle sabırlı olmanın önemi vurgulanırken benzer bir mesaj, *"Caillou'nun sürprizi"* adlı bölümde Caillou'nun annesi için hazırladığı sürpriz üzerinden de verilmiştir. Burada bazı şeylerin beklemeye değer olduğu mesajının yanı sıra bazı konularda sabırsız olunmaması gerektiğinin altı çizilmiştir.

"Sera tatilde" adlı bölümde, kuş evinin nasıl yapıldığı öğretilirken *"Caillou elma toplamaya gidiyor"* adlı bölümde çocuklara elmaların nasıl yetiştirildiği, olgunlaşması ve çeşitleriyle ilgili bilgi verilmektedir. *"Caillou Antarktika'da"* adlı bölümde buzullar tanıtılırken *"Caillou akvaryum inceliyor"* adlı bölümde ise akvaryumdaki balıklar ve onların bakımlarıyla ilgili bilgiler verilmiştir. *"Caillou hastalanıyor"* adlı bölümde 'kızamık' hastalığı ve tedavisi için yapılması gerekenler üzerinde durulmuştur. Bu hastalık durumunda kaşınmamanın gerekli olduğu belirtilmiştir. *"Caillou kuşları izlemeye gidiyor"* adlı bölümde kuşların dünyası tanıtılmış ve ıslık çalarak onlarla konuşmanın mümkün olabileceği ima edilmiştir. *"Caillou ormanlar kâşifi"* adlı bölümde yağmurun yağması durumunda çiçekleri sulamaya gerek olmadığı bilgisi verilmiştir. Çıkrığın ne olduğu ve hangi amaçla kullanıldığının öğretildiği, *"Caillou koyunlarla tanışıyor"* adlı bölümde ayrıca koyunyününün nasıl ipliğe dönüştürüldüğü, koyunun yününün nasıl ve neden kırpıldığı, koyun yavrularına kuzu denildiği ve onların da sütü sevdiğiyle ilgili bilgiler verilmiştir. *"Ördek ailesi"* adlı bölümde ördeklerle kendi dilleriyle nasıl konuşulacağı öğretilirken *"Filler"* adlı bölümde annesi, Caillou ve kız kardeşini hayvanat bahçesine götürmüş ve başta filler olmak üzere birçok hayvanı tanıtmıştır. *"Gökyüzünde bir ev"* adlı bölümde karıncalarla ilgili bilgi verilmiştir. Bu bölümde karıncalara büyüteçle bakılmış ve böylelikle daha büyük görünmeleri sağlanmıştır. Aynı bölümde yüksek binalara gökdelen denildiği belirtilmiştir. *"Caillou astronot"* adlı bölümde güneş sistemi ve gezegenlerle ilgili bilgi verilmiştir. *"Caillou'nun kardan adamı"* adlı bölümde kardan adamın nasıl yapıldığı öğretilirken, *"Caillou dinozor avcısı"* adlı bölümde Caillou ve ailesi dinozor müzesinde giderek dinozor kalıntılarını görmüş, dinozorlarla ilgili bilgi almış ve *"Caillou bataklıkta"* adlı bölümde ise, bataklıkta yer alan çok sayıda hayvan türü tanıtılmıştır.

Bazı bölümlerde bazı şeylerin tanımlamaları yapılmıştır. *"Yeni yaprak"* adlı bölümde büyükbaba, Caillou'ya aile geleneğini, 'ailenle her sene yaptığın şey' diyerek tanımlarken, *"Caillou Gilbert'ı arıyor"* adlı bölümde annesi Caillou'ya ipucunun bir şeyi bulmaya yarayan işaretler olduğu söylemiştir. *"Caillou bir yol işçisi"* adlı bölümde bir oyun üzerinde yolların nasıl yapıldığı anlatılmıştır. Ağaçların çok özel olduğunun vurgulandığı aynı bölümde arkadan/ etraftan dolanmanın bir yere varmak için farklı bir yol kullanmak demek olduğu ifade edilmiştir. *"Caillou'nun 1 Nisan Şakası"* adlı bölümde 1 Nisan şakasının ne demek olduğu anlatılarak 1 Nisan şakasının insanların birbirinin kırmadan incitmeden eğlenerek şaka yapmaları anlamına geldiği belirtilmiştir. *"Caillou'nun koleksiyonu"* adlı bölümde Caillou'nun babası Caillou'ya koleksiyonun bir takım şeyleri toplayıp onları düzenli bir şekilde saklamak olduğunu söylerken, *"Caillou korkuluk yapıyor"* adlı bölümde ise annesi, Caillou'ya korkuluğun ne olduğuyla ilgili "korkuluk şapkası ve kıyafeti olan sopadan adamdır. Kuşları bahçeden uzakta tutmak için bahçede durur" şeklinde bilgi vermiştir. *"Caillou'nun bandosu"* adlı bölümde tören bandosunda, davul, trampet ve saksafon gibi müzik aletlerinin kullanıldığı belirtilmiştir. Caillou'nun büyükannesiyle birlikte büyükannesinin arkadaşlarını ziyaret etmek için huzurevine gittiği bölümde, büyükannesi huzurevinin tek başına yaşayamayan insanların gittiği ve bakıldığı yer olduğunu söylemektedir. Bunun üzerine Caillou'nun "Ama sen de yaşlısın büyükanne! Sen neden onlarla yaşamıyorsun?" şeklinde sorması üzerine büyükanne, "Hala kendime ve büyükbabana bakabilecek kadar gencim" şeklinde cevap vermiş, bu sayede Caillou'nun ve izleyen çocukların huzurevinin ne ve nasıl bir yer olduğunu öğrenmesi sağlanmıştır.

Yağmurun oluşum serüveninin anlatıldığı *"Caillou hikâye anlatıyor"* adlı bölümde suyun ilk olarak göllerde ve nehirlerde oluştuğu, sıcak havayla buharlaştığı ve bulut kümeleri oluşturduğu ve sonra yağmura dönüştüğü anlatılmaktadır. Bu bölümde ayrıca, "Kitaplar yağmurlu günlerde eğlenmenin en iyi yoludur" denilerek kitap okumanın önemi anlatılmaktadır. Kitaplardaki resimlere illüstrasyon denildiği belirtilmiş ve yaratıcılığa teşvik etmek için Caillou'nun kendi kitabının illüstrasyonunu yapması istenmiştir. En sonunda annesinin kitap yazan

Caillou'ya 'ailemizde gerçek bir yazar olduğu için gurur duyuyorum' demesi çocukları yazmaya yönlendiren bir davranış olarak değerlendirilmiştir.

"Merhaba İlkbahar" adlı bölümde yaz geldiğinde karların eridiği ve ilkbahar mevsiminde günlerin uzadığı, çiçeklerin açtığı ve havanın ısındığı bilgisi verilmiştir. Aynı bölümde yaprakların gübreye dönüştürülmesi anlatılmıştır. Kızıl gerdan kuşlarının karınlarının kırmızı olduğu ve solucan yediği bilgisi aynı bölümde verilirken yaban kazları da gösterilmektedir. Aynı zamanda yazın kuşların geri döndüğü ve ayıların kış uykusundan uyandığıyla ilgili bilgi verilmiştir. Mevsimlerin birbirini takip etme sırası da 'ilkbahar, yaz, sonbahar ve kış' şeklinde tekrarlanmıştır. Yazın ilk çiçeklerinin çiğdem adlı çiçekler olduğu belirtilmiştir.

Çizgi filmde kimi zaman yapılan mesleklerle ilgili de bilgi verildiği görülmüştür. *"Caillou polis memuru"* adlı bölümde annesiyle trafikte giden Caillou, "Bu 'dön' işareti anne. Kırmızı ışık anne! Bu 'dur' demektir. Yeşil, 'geç' demektir" şeklinde trafik işaretleriyle ilgili bilgi vermektedir. Işıkların çalışmaması üzerine polis memurunun trafiğe yön vermesi annesi tarafından açıklanmıştır. Kreşe giden Caillou, öğretmenine polislerin sadece kötü insanları yakaladığını sandığını söylemiş, öğretmeni polislerin insanların güvenli bir şekilde araba sürmelerine yardımcı oldukları, yolunu kaybetmiş arabalara yol gösterdiklerini ve çocukların kaybolması durumunda onların ailelerini bulmalarını sağladıklarını söylemiştir. Aynı bölümde polis memurunun bir araca ceza yazdığını gören Caillou, bunun sebebini sorar. Polis memuru arabanın yangın musluğunun önünde durmaması gerektiği halde durduğunu ve bir yangın durumu olursa itfaiyecilerin hortumu takamadıkları için çok kötü sonuçlar ortaya çıkabileceğini söylemiştir. Böylelikle bu bölümde hem polislerin görevleri anlatılmış hem de kimi konularda insanların duyarlı davranması gerektiği ima edilmiştir.

SONUÇ

İletişim araçlarının alıcılar üzerindeki etkileri iletişim araştırmacıları tarafından halihazırda rağbet gören bir konudur. Özellikle televizyon, etki konusunda başı çeken iletişim aracı konumundadır. Yaygınlığı çok yüksek olan televizyonun, eğitmek, eğlendirmek, bilgilendirmek ve boş zaman etkinliği şeklinde sıralanabilecek işlevleri bulunduğu söylenebilir. Yapılan araştırmalar televizyonun etkisine en fazla çocukların açık olduğunu ortaya koymuştur. Çocuklar özellikle izledikleri çizgi filmlerden etkilenmekte ve çizgi film karakterlerinden öğrendiklerini kendi kişiliklerine uyarlayabilmektedir.

Caillou adlı çizgi filmin eğitici işlevinin analiz edildiği çalışmanın bulguları söz konusu çizgi filmin çocuklar üzerinde önemli derecede eğitici bir işleve sahip olduğunu, her bir bölümde çocukların gelişimine, sosyal ilişkilerine katkı sağlayacak mesajlar aktarıldığını göstermiştir. Bölümlerde verilen mesajların Caillou'nun yaşantısı içerisinde ve görsel olarak verilmesi çocukların verilen mesajları farkında olmadan, daha net ve anlaşılır bir şekilde kavramalarını sağlamaktadır. Çizgi film izleme çağında olan çocukların verilen mesajları emmeye hazır olduğu kabulünden hareketle, Caillou'da aktarılan arkadaşlık, kardeşlik ilişkileri, ebeveynle olan ilişkiler, hayvan sevgisi, okuma yazma aktiviteleri gibi mesajların da hedefine ulaştığı söylenebilir. Özellikle başlanan işin bitirilmesi, kendi yatağını kendisinin toplaması, verilen sözün tutulması, bir şey ters gittiğinde olumlu düşünülmesi, her şeye iyi tarafından bakılması gerektiği, başarının ödüllendirilmesi, azimle tüm zorlukların üstesinden gelinebileceği gibi mesajlar çocukların gelişimine önemli katkılar sağlamaktadır.

Caillou da kimi zamansa istenmeyen sonuçları engellemek için, bisiklet kullanırken kask takmak, trafik işaretlerine uymak, inşaat alanlarına girerken tedbir almak gibi hayat kurtarıcı eğitici mesajlar da vermiştir. Çizgi filmde teşekkür etmek, rica etmek, bir hata durumunda özür dilemek gibi kavramların da sık sık işlendiği gözden kaçmamaktadır. Caillou'nun çevreyi ve olayları sorgulayan, merak eden karakteri, izleyen çocukların da çevrelerinde olup bitenlere karşı daha duyarlı, daha meraklı olmalarını sağlayan bir işlev görecektir.

Caillou adlı çizgi filmin sadece çocuklara değil aynı zamanda çocukların ailelerine yönelik olarak da bir takım eğitici mesajlar verdiği görülmüştür. Filmde ailelere; çocukların bir sorunla karşılaşması durumunda sorunu birlikte çözmek, yeri geldiğinde çocuklara sorumluluklar vererek kendilerine güvenmelerini sağlamak, çocuklarına odalarını toplamak gibi yapabilecekleri görevleri vererek ve buna ikna ederek hayata hazırlamak, banyo yapmak istemeyen çocuklar için banyoda oyunlar düzenleyerek onlara banyo alışkanlığı kazandırmak, bir hata yapıldığı durumlarda çocuğa kızmak yerine biraz sabır gösterip olumlu davranış değişikliği kazanabilmeleri için ona sevgi ve anlayışla yaklaşmak, çocukların büyüdükten sonra değil büyürken eğitilebileceğini göstermek şeklinde mesajlar verilmektedir.

Genel itibariyle çalışmaya konu olan çizgi film içeriklerinde bahsedilen eğitici ve öğretici öğelerin ön planda olduğu açıkça ortaya konmuş olup ortaya konan eğitici ve öğretici öğelerin çoğunun tek bir kültüre ait olmayıp tüm dünya ülkeleri tarafından kabul gören öğeler olduğu bulgulanmıştır.

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ÇIZGI FILMLERIN OKUL ÖNCESI ÇOCUKLARININ GELIŞIM DÜZEYINE UYGUNLUĞUNUN İNCELENMESI

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Bu araştırmanın amacı, çizgi filmlerin okul öncesi çocuklarının gelişim düzeyine uygun olup olmadığının belirlenmesidir. Araştırma amacını gerçekleştirmek üzere nitel araştırma türlerinden doküman incelemesi yöntemi kullanılmıştır. Araştırma kapsamında 2014-2015 yılları arasında Türk televizyon kanallarında yayınlanan 20 yerli ve yabancı çizgi film çeşitli unsurlar açısından değerlendirilmiştir. Veri toplama aracı olarak, ilgili literatürden elde edilen bulgular kullanılarak ve uzman görüşü alınarak araştırmacılar tarafından hazırlanan rubrik kullanılmıştır. Çalışmanın sonucunda, çizgi filmlerde ele alınan diğer unsurlara göre değerler unsuruna daha çok yer verildiği, cinsellik ve batıl inanç unsurlarına ise daha az yer verildiği tespit edilmiştir. Ayrıca yerli çizgi filmlerin olumlu özelliklerinin oranının yabancı çizgi filmlere kıyasla daha yüksek olduğu görülmüştür.

Keywords: Okul öncesi dönemi, Çocuk gelişimi, Çizgi filmler.

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CLASSICAL TEACHING METHODS VERSUS TEACHING METHODS USING INNOVATIVE TOOLS, MULTI-TOUCH BOOK (MTB) IN BASIC LIFE SUPPORT AND DEFIBRILLATION (BLS-D) IN THE LICEO ARTISTICO "CADEMIA" ORTISEI (BOLZANO), ITALY.

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Objective:
Verify the educational effectiveness of innovative didactic tools (Multi-Touch Book, MTB) in comparison with classical teaching methods in a Basic Life Support and Defibrillation (BLS-D) project

Methods: 16 high-school students were trained with classical teaching methods and 16 with MTB. All students were trained with dummy and defibrillator

Results: All the students obtained positive results in the learning questionnaires administered at the end of the lesson. After 11 days the acquired knowledge was retained by 100% of the students trained with innovative method compared to 66% of those traditionally trained

Conclusions: MTB makes the educational process more complete, accessible, easier,enjoyableand interactive

Keywords: New communication tools, Multi Touch Book, innovative teaching methods, hig school, University, Basic Life Support, Higer Order Thinking

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CLIL IN MATHEMATICS EDUCATION

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ABSTRACT
The approach CLIL is a relatively new trend in education. It is a combination of content and language learning (from the English: Content and Language Integrated Learning). The article is focused on using the CLIL in the Czech Republic. The article presents research results of the influence on students´ motivation in mathematics lessons with CLIL.

INTRODUCTION

Education should always reflect the current social trends, the requirements of the labour market and the development of the society and technology. Today, we live in an era of information technology, information explosion and migration in order to find better employment. Accordingly, there are increasing requirements for some basic skills in the present-day society. People need to be able to critically evaluate information, speak foreign languages and, at least to some extent, work with the computer, which is an inherent part of many jobs. The CLIL approach may contribute to the improvement of students' language skills.

CLIL APPROACH

The CLIL abbreviation was used for the first time by David Marsh in 1994. It is the abbreviation of the concept of Content and Language Integrated Learning. The author of the concept, David Marsh, defines CLIL in one of his recent publications as follows:

"Content and Language Integrated Learning (CLIL) is a dual-focused educational approach in which an additional language is used for the learning and teaching of content and language with the objective of promoting both content and language mastery to pre-defined levels." (Marsh, 2012)

As can be seen above, the author defines the concept as a dual-focused educational approach in which a foreign language is used for the learning and teaching of a non-language subject. Therefore, skills are improved both in the foreign language and in the non-language subject in question.
The most frequent languages taught in the Czech Republic are naturally English, German and French, but the occurrence of other languages, such as Russian, is possible as well. English, however, is dominant.
CLIL can thus bring many advantages. One of the advantages is for example the expansion of field-specific vocabulary. In language courses as such, there is little time for specific topics relating to scientific subjects such as Mathematics, Physics and Chemistry. Students then lack such vocabulary, which may prevent them from studying or working abroad in many cases. This may also be related to their insufficient confidence in being able to discuss specialist topics in a foreign language. If the CLIL approach is integrated into teaching, it will help students to train and become more confident in terms of foreign-language discussions or studies. Another advantage lies in the possibility of making lessons more interesting, as some activities conducted in a foreign language may vary the stereotype.
Naturally, CLIL constitutes certain disadvantages as well. One of them is the risk that students will be demotivated, especially in two cases. The first case is a situation where students are already experiencing problems with a non-language subject and the integration of a foreign language might mean that they will give up outright – "How am I supposed to solve the task in English when I don't even know how to do it in Czech?" The second case involves students who are talented in non-language subjects but who have problems with learning foreign languages – "I would probably know the solution in Czech but I can't do it in English." Both these cases can be addressed by positively motivating the students to try and solve tasks and participate in activities. Another disadvantage, which is a major negative according to the following research, lies in the relatively high demands placed on the teachers in terms of preparation and even the language skills of the teachers themselves. Insufficient language skills can only be improved by further education and enhancement of the communication skills of the teacher in the foreign language. As for higher demands on preparation, those can be very easily eliminated today. I will discuss these options in more detail in the last chapter.

CLIL - SURVEYS

Even though the issue of CLIL is relatively new in the Czech environment, there are relatively many different surveys with a focus on the integration of a foreign language into the learning and teaching of non-language subjects. I will mention the conclusions of some of them in the Czech Republic and abroad. Marylin Hunt of the Educational Institute at the University of Warwick, Coventry, UK examined the popularity of lessons conducted

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using the CLIL approach in 2011. 67 % of the students liked the lessons, 66 % liked the activities, and 63 % were looking forward to the following lessons conducted using CLIL. (Hunt, 2011) Similarly, in 2012, Pavlína Hořáková inquired into the issue as part of her dissertation thesis and found out that students who had experienced lessons taught using the CLIL approach viewed foreign languages more positively than students who had never experienced such lessons. (Hořáková, 2012) However, the survey results are frequently accompanied by the fear that it will be difficult and time-consuming to prepare such lessons. One of such examples is the research of Josephine Marie Moate of the University of Jyväskylä, who conducted a survey in 2011 and stated that the first two years of teaching using the CLIL approach had been difficult and demanding for most of the respondents (teachers). Nevertheless, the majority of teachers had then taken a fancy to the method and stopped seeing it as a burden. (Moate, 2011) Similar results were obtained by Světlana Hanušová under the project entitled "CLIL in Czech Educational Practice". The respondents (teachers) admitted that the integration of a foreign language into the teaching of non-language subjects was beneficial and advantageous. At the same time, however, they were unwilling to participate in the project and start using the approach actively. (Hanušová, 2012)

In my preliminary research, in which I was concerned with the current situation in terms of the use of CLIL at elementary schools and lower grades of grammar schools in the Olomouc Region and the South Moravia Region, I found out that CLIL was used by only 10 % of schools in the Olomouc Region and 13 % of schools in the South Moravia Region. These data were obtained from the managements of the individual schools. In both regions, English was predominant and was generally used in a wide range of subjects. The schools in the South Moravia Region mostly used CLIL in the teaching of Mathematics, Music and Art. In second part of my pre-research, I focused on the effect of the CLIL method on teaching mathematics. The sample consisted of 79 respondents - the pupils of the secondary level at a South-Moravian elementary school where the CLIL method had already been used for some time. Out of the 79 respondents, 32 were boys and 47 were girls. The pupils were given a questionnaire containing 22 statements with respect to which the pupils were supposed to express agreement or disagreement using a four-point scale. The questions focused on the climate in classes, the popularity of mathematics and whether it is worth it to use the CLIL method in classes. It was obvious that the pupils had good mutual relationships and there was a friendly atmosphere. The pupils also denied any derision in the event of failure of one of their classmates. This indicates a good climate for learning. The pupils also stated that the teachers were devoted to the subjects they taught and that the pupils were given tasks which they considered solvable. No classes thus indicated any problems, not even as far as mathematics teachers were concerned. The latest mid-year mathematics marks ranged from 1 to 4. This means that no pupil failed the subject. The general interest in mathematics was rather below average. However, when assessing mathematics taught by means of the CLIL method, there was a positive shift compared to lessons in which this method was not used. One of the frequent misgivings in connection with the integration of a foreign language into the teaching of non-language courses concerns the fear that pupils will not understand the task set in a foreign language. This was not confirmed in the case of these particular respondents, and hardly any of the pupils expressed any fear of non-understanding. What was also above average was the assessment of the pupils' activity; according to them, their activity in such lessons was increased. On the other hand, the lessons taught using the CLIL method were less focused on the actual subject in the pupils' opinion. This may be attributed to the fact that if foreign language activities take the form of games, pupils learn from such activities but do not see them as traditional lessons. This discrepancy between activity and focus on the actual subject deserves further research. Nevertheless, the assessment of the benefit of the method for the pupils' future lives was positive and slightly above average. In the use of a foreign language in mathematics, the pupils thus saw an advantage, whether in terms of their prospective studies abroad or their ability to discuss the issue of mathematics in the given foreign language. As regards the differences between the two sexes, they were not very profound. A relatively significant difference was found in the popularity of mathematics, where boys in general liked the subject considerably more than girls did. On the contrary, the popularity of mathematics taught using the CLIL method slightly decreased with boys, while girls liked the subject much more when taught in this way. Boys assessed their activity more positively than girls did, and participated more actively in the lessons. On the other hand, girls were generally the ones who found learning mathematics using the CLIL method beneficial.

It follows from the selected surveys that students and teachers see the integration of a foreign language into non-language subjects as beneficial, but the fear and unwillingness of teachers to integrate CLIL into their lessons are still prevalent.

CLIL AND ICT

As was mentioned in the first chapter, one of the reasons why teachers are reluctant to integrate CLIL into their lessons is the rather demanding nature of the preparation of such lessons, both in terms of time and content. When preparing an activity which integrates a foreign language, it is necessary to focus on the content in more detail, create the relevant vocabulary which will be new to the students, and prepare the activity so that it corresponds to the cognitive skills of the individual students, if possible. This may discourage many teachers, as

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indicated by the surveys mentioned in the second chapter.
However, currently there are many projects that not only aim at the examination of the influence of the integration of a foreign language into the learning and teaching of non-language subjects but also help create various methodological materials, which make it easier to prepare such lessons. In some cases, prospective teachers are already trained in such teaching methods during their studies at the Faculties of Education. An example may be the Department of Mathematics of the Faculty of Education of Palacký University in Olomouc, which offers a course entitled English Mathematical Terminology. It is based on CLIL and the university students of teaching fields can thus master English mathematical terminology and also the ways of integrating English into the teaching of Mathematics.
Teachers have yet another very effective tool at their disposal that can assist them in preparing and conducting their lessons. The tool consists in modern technologies. Modern technologies have become not only everyday part of the lives of most people, i.e. also the present-day youth, but also part of the educational process. Nowadays, most classrooms are equipped with data projectors and interactive boards, and most schools have computer classrooms. Recently, teachers have begun using tablets, which should further increase the efficiency of the use of ICT in teaching and make it more up-to-date. The actual advantages and disadvantages of using tablets in teaching will only be revealed over time; nevertheless, such technologies already constitute benefits for teachers who want to integrate a foreign language into their lessons. Many teachers who are considering the use of tablets criticise the lack of available applications in the Czech language. However, this does not necessarily present a problem in most cases. For instance, there are numerous high-quality Biology programs with pictures, animations, 3D models etc. These include Corinth Micro, Know Your Body and My Incredible Body. The teacher can use the graphical aspects of the applications, at any rate. And of course, they can also include the English biological terminology in their lessons. And what about Mathematics? There is also a wide range of applications, frequently in English. One of them is Mathematics designed for the Android operating system.
There is a number of English words which the students can learn when using the application – e.g. functions, equations, linear function with point and slope, etc.



Fig. 1 – User environment of the Mathematics program (Google Play)

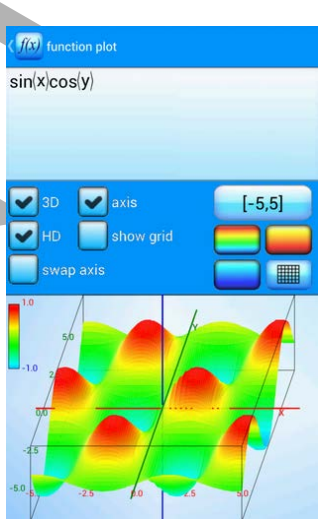
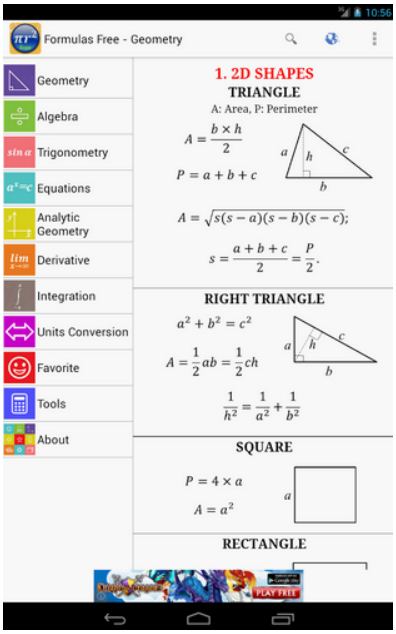


Fig. 2 – User environment of the Mathematics program (Google Play)

Another application is Formulas, again for Android. As can be seen, this application offers not only formulas for calculations but also a wide database of English mathematical terminology – e.g. triangle, area, perimeter, square, etc. Students can learn the vocabulary and also different labelling of perimeters, volumes, areas etc.

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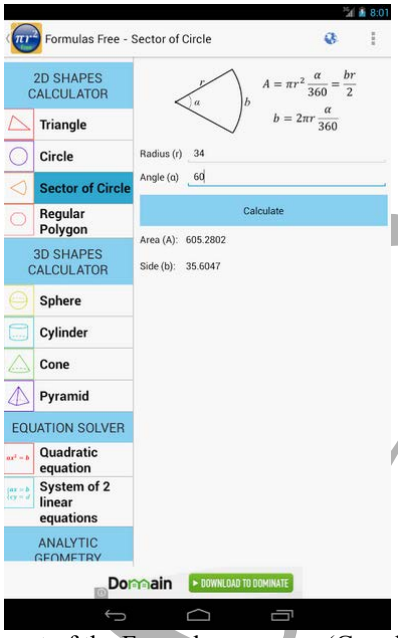


Fig. 3(left) and Fig. 4 (right) – User environment of the Formulas program (Google Play)

As a matter of course, there are many applications for younger children as well, to help them understand basic mathematical operations; again, such applications assist in the development of foreign-language vocabulary. One of such applications is iMath designed for the Windows 8 operating system.



Fig. 5 – User environment of the Mathematics program (Google Play)

The above programs constitute only a small portion of what teachers can use in teaching their non-language subjects. There are similar applications for subjects such as Physics, Chemistry, and Geography, among other things. The effective use of modern technologies, selected high-quality programs and well-chosen teaching methods together form a useful tool which makes lessons more attractive and also facilitates the teacher's work.

CONCLUSION

As the above research and surveys indicate, CLIL is a relatively popular approach in the educational process, which is however little-used in particular due to the relatively high demands on preparation. Modern technology and suitably chosen programs may eliminate such demands and apply multiple current trends in education – CLIL and ICT – at the same time. There are many high-quality teaching applications in foreign languages that can be used by teachers of a wide range of non-language subjects to improve the quality of their lessons.

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VIEWS OF CHILD DEVELOPMENT PROGRAM STUDENTS ABOUT INFORMATION AND COMMUNICATION TECHNOLOGIES

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ABSTRACT
This study aims to examine the opinions of students regarding the use of internet and information technologies. The research was carried out on students who are studying at child development associate degree at Vocational School of Health Services, Sakarya University. An emprical study was conducted to analyse the research question. A semi structured interview was designed by researchers in the light of literature. The results indicate that students generally use information technology for their communication, learning, research activities and having fun rather than for personel development and facilitating their Works. Students state that most positive aspects of information technology is to facilitate communication and to enable to be up to date about daily developments. However, findings show that informaton tecnology causes time loss and creates addiction as the negative aspects from the students' point of view. The results also come to conclude that students mostly access to internet at home and by mobile phones. According to the findings, the study emphasises that information technologies is rapidly developing and students needs to be prepared in the line with these developments. From this point, some suggestions are given at conclusion part.

Keywords: Child development, information technologies, internet.

INTRODUCTION

ICT (Information and Communication Technologies) became an important part of our daily lives with technology investments in our country and almost all countries in the world. ICT comes on the basis of current developments. Especially in recent years, rapid developments in ICT field made technology support necessary for the learning and teaching process in educational environments, and learning environments and ICT began integration. Information and communication technologies are technologies that provide collecting information, processing and storing it and transmitting the information if necessary or access to information from anywhere (Ceyhun & Çağlayan, 1997). On the other hand, Sarıhan (1999) explained the ICT as technologies serve gathering, storing, processing, accessing and distributing the information, all of the services and applications and the whole information on the system.

ICT stands for transmitting the technology, storing, uncovering, sharing and accessing it. As well as radio, television, video, DVD, phone, mobile phone, satellite systems, computer and network hardware and software; services and hardware provided by these technologies (video-conference and electronic mail) also included in ICT scope (UNESCO, 2006). ICT use increases and gains importance day by day in many fields such as education, medical, business and defense systems. In education field, ICT is used both as a purpose and as tool in learning and instruction process and management.

Considering the basic qualifications expected for the trained work force in current information society, it is expected from the educational institutions that prepare individuals in line the needs of the society to be in a system compensates these needs. Therefore, it is important to integrate ICT to the schools, widespread and use it as an effective material in learning and instruction process. ICT use as a support for education will cause to improve learning and instruction quality and achieve gaining attention of the students.

Preschool period the first step of the education process is an important step to determine the students' viewpoints to the school. Effective ICT use in this period improves students' education quality. Because of this reason, viewpoints of preschool teachers and assistant teachers to the information and communication technologies are important.

Students graduate from child development associate degree program as child development professional staff title and usually work in preschools connected to the MONE (Ministry of National Education), in private preschools, kindergartens and special education and rehabilitation institutions. Child development staff's viewpoint to the ICT is more important because they deal with children one to one and they guide the activities in classroom.

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Because of their role in preschool education, child development staff's use of ICT and awareness of its importance can provide to enrich the education contents and environments.

The effect of ICT on children were tried to be determined with different studies (Levin, Richardson and Arefah, 2002; Levin and Arefah, 2002; Frantom, Green and Hoffman, 2002). According to Köse and Gezer (2006) and Harmandar and Samancı's (2000) researches, it was determined that students' attitudes on computer and internet use are positive. On the other hand, according to Köse, Gencer and Gezer's (2007) research on associate degree students, students' attitudes on computer and internet use are positive but also male students have more positive attitudes on computer and internet use than female students do. Gök, Turan ve Oyman (2011) carried out a study with preschool teachers and examined their views about ICT use. Results showed that when preschool teachers use ICT effectively, these technologies have a positive effect on students' interest and attention levels.

Information and communication technologies are used in almost all environments beginning from preschool period. The important point in this scope is to explain and transfer these technologies to children consciously and correctly. For this mission, child development students working in preschool institutions have important responsibilities. If students from child development department recognize ICT correctly, they can transfer correct information about ICT to the students. Therefore, this research is important because of examining the child development students' views about information and communication technologies. In addition, this research can be a support for the qualitative studies about this subject area.

Aim of the Study

It is aimed to determine the views of child development associate degree students about information and communication technologies. Research questions are given below according to this basic purpose:

1. What are the information technologies that child development students use them in their daily lives?
2. How many years do the child development students use ICT?
3. What are the aims of child development students ICT use?
4. What are the views of child development students about positive aspects of ICT?
5. What are the views of child development students about negative aspects of ICT?
6. How many years do the child development program students use Internet?
7. How do the child development students access Internet?
8. What are the reasons of child development students Internet use?
9. What are the periods of child development student daily internet usage?

METHOD

This study aims to determine the views of child development students about information and communication technologies. Survey method is used to collect the research data.

Participants

Sakarya University, Medical Services Associate Degree, Child Development Program students in 2012-2013 semester are the participants of this study. There is not a sample for this study; instead, 62 students participated totally. All of the participants are female students between 18 and 24 ages.

Data Collection Tool

Data was collected with a tool developed by researchers. Open-ended questions were asked in the questionnaire about students' ICT and internet usage and their personal information such as gender, grade and age. Three different experts evaluated the data collection tool and after their feedbacks revisions done and tool was applied to the participants.

Data Analysis

Data collection tool was applied to the students by researchers. Researchers applied the questionnaire face to face. Data was analyzed with descriptive statistics such as frequency (f) and percentage (%). In addition, responses answered to open ended questions were added to the research findings.

FINDINGS AND COMMENTS

All of the child development program students answered **Yes** to the question "Do you use any kind of information technology product?" Responses for the question "Which technologies do you use in your daily lives?" are given below:

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Table 1: Information Technologies Used by Students in Daily Life

	f	%
Computer	52	48,60
Television	10	9,35
Phone	40	37,38
Internet	5	4,67
Total	107	100

According to the table students use mostly computer with a percentage of 48.60% and they use least internet with a percentage of 4.67%. In addition, they use mobile phone with a percentage of 37.38% and television with a percentage of 9.35% as information technologies.
Findings about the question "How many years have you used these technologies for?" are given below:

Table 2: Students' Information Technology Use Periods

	f	%
1-3 years	14	22,6
4-6 years	24	38,7
7-9 years	18	29,0
10 years and over	6	9,7
Total	62	100

38.7% of child development students have used these technologies for 4-6 years, 9.7% of them have used for 10 years and more.

Responses of child development students for the question "What is your aim to use information technologies?" are given below:

Table 3: Students' Aims of ICT Use

	f	%
Making course	12	10,34
Getting information	17	14,66
Fun	20	17,24
Chat (Social Networks)	9	7,76
Research	16	13,79
Communition	32	27,59
Play a game	4	3,45
Agenda	4	3,45
Personel development	1	0,86
Lives easier	1	0,86
Total	116	100

Child development students mostly use ICT for communication (27.59%) and fun (17.24%). They use ICT least for personal development (0.86%) and because it makes their lives easier (0.86%). In addition, they usually use ICT for homework, obtaining information and doing research. On the other hand, they use ICT for social media, following agenda and playing game rarely.

Responses of child development students for the question "What are the positive aspects of ICT?" are given below:

Table 4: Students' Views About ICT's Positive Aspects

	f	%
Convenience in Preparation Course	7	6,36
Communication	39	35,45
Amuse	9	8,18
Easy Access	12	10,91
Makes People More Conscious	2	1,82
Daily Life Convenience	6	5,46
Research	10	9,09
Research Homework	6	5,46
Following Agenda	19	17,27
Total	110	100

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According to child development students, the most positive aspects of ICT are communication (35.45%) and following agenda (17.27%). The least positive aspect according to them is that ICT makes people more conscious (1.82%). Easy access and being helpful while doing research are also positive aspects of ICT according to students.

Responses of child development students for the question "What are the negative aspects of ICT?" are given below:

Table 5: Students' Views About ICT's Negative Aspects

	f	%
Not To Spare The Real And Virtual	1	1,3
More Time Loss	31	40,26
Sociality Cuts	8	10,39
Health Damage	7	9,09
Addiction	16	20,78
Using the Aim of Outside	6	7,79
Incorrect Information Learning	2	2,6
Carelessness	1	1,3
Destroying the Reading Habit	1	1,3
Reliability	1	1,3
Negative Behavior Development	3	3,9
Total	77	100

Child development students determined the most negative aspect as time loss (40.26%). In addition, they expressed that ICT have an addiction effect on people (20.78%). However, some negative effects such as not to spare the real and virtual, carelessness, destroying the reading habit and inability to build trust are very little.

All of the participants stated that they use internet. Findings about students' internet use durations in terms of years are given below:

Table 6: Students' Internet Use Periods in Terms of Years

	f	%
1-3 years	20	32,3
4-6 years	20	32,3
7-9 years	19	30,6
10 years and over	3	4,8
Total	62	100

Child development students stated that 32.3% of them have been using internet for between 1-3 years and 4-6 years, 4.8% of them have been using it for 10 years and over.

Findings about child development students' responses for the question "Which method do you mostly use to access internet?" are given below:

Table 7: Students' Internet Access Methods

	f	%
Home	51	82,3
School	0	0
Internet cafe	1	1,6
Mobile Phones	10	16,1
Others	0	0
Total	62	100

A big part of students with a percentage of 82.3% expressed that they access internet from home and 1.6% of them expressed that they access internet from internet café. Another important finding is that 16.1% of students access internet from their mobile phones. This information shows that accessing the internet from mobile phone is increasing day by day.

Findings about the question "For which purpose do you mostly use the internet?" are given below:

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Table 8: Students' Internet Use Purposes

	f	%
Course	13	21,0
Research	26	41,9
Personel Development	3	4,8
Games	5	8,1
Chat	15	24,2
Others	0	0
Total	62	100

41.9% of students use internet for research, 24.2% of them uses it for chat, 21.0% of students use it for courses, 8.1% of them use it for playing games and 4.8% of students use internet for personal development.

The last findings about students' responses for the question "How many hours do you spend on internet?" are given below:

Table 9: Students' Daily Internet Use Periods

	f	%
0-1 hours	10	16,1
1-2 hours	17	27,4
2-3 hours	17	27,4
3-4 hours	13	21,0
4 hours and over	5	8,1
Total	62	100

27.4% of students spend 1-2 hours and 2-3 hours, 21% of them spend 3-4 hours, 16.1% of them spend 0-1 hours and 8.1% of them spend 4 hours and more on internet.

RESULTS AND RECOMMENDATIONS

Lifelong learning is a necessity for each individual because of our century is the information age. Students graduated from child development associate degree are take place in educational environments. At the same time, education has to prepare individuals to the new world situations. Considering the age group that will be guided by child development students, qualifications of that age period is important. First years of life create a basic for all learning situations. Therefore, preschool period staff has to be qualified for the new age, use ICT in place and effective and this staff has to be a guide and sample for children while using these information and communication technologies. It can be said that a big part of information produced in current period stored in computers, internet and smart phones and it is distributed with these tools. This result showed that students use mostly computer and smart phones for accessing the information.

Findings of the study showed that child development students use ICT mostly for fun and communication, they use ICT moderately for obtain information and research and they use it least for personal development and make things easier. At the same time, findings showed how much child development students use ICT for research and obtain information. According to Özmusul's (2010) study, students use ICT for obtain information and research in intermediate level. In another study, Rideout et al (1999) determined that students have fun most of the time they are spending with television and computer.

As a result, positive aspects of ICT are communication and following agenda and negative aspects of ICT are waste of time and addiction according to the students. Another result of the study is that child development students' internet use periods are in order of 1-3 years, 4-6 years and 7-9 years. It constitutes a large part of participants. Considering the average age of the participants, their first meeting with internet is on their childhood. This result showed that child development students met with internet early ages. Wright (2001) characterized the young age as internet users. Similar results gained in this study.

Findings of the study showed that child development students access internet mostly from home and their mobile phones. This result showed that students use mobile devices for internet access nowadays. In addition, this result showed that importance of learning with mobile devices is increasing. Another result of the study is that research and chat are main purposes of internet use. This result is similar with Tutgun Ünal (2012) and Tutgun, Deniz and Moon's (2011) studies. Other purposes of internet use are doing homework, playing games and personal development. Another important result in the study is students' internet use periods. According to the findings, 91.9% of students use internet in a 0-4 hour's period. 27.4% of them use internet for 1-2 hours and 2-3 hours.

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This study covers a limited participant group about ICT in education. Studies that are more detailed can be done with extending the participant group to support subject area. In addition, this study showed that use of mobile devices in education is increasing. Studies can be done about using mobile devices in education. Considering these results, it is recommended that necessary trainings have to be given to the students to make them use not only computer but also other ICT devices such as tablet, mobile devices and internet for their own benefit. It is recommended to provide necessary motivation to students in order to use internet for research and obtain information. In addition, organizing educations for students to make them use ICT more planned and in a disciplined way will be helpful for them.

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COGNITIVE MAPS OF INDIVIDUALS WITH BLINDNESS FOR FAMILIAR SPACES: CONSTRUCTION THROUGH TACTILE MAPS AND DIRECT EXPERIENCE

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ABSTRACT
The aim of the present study was to examine the ability of individuals with blindness to create cognitive maps of routes in familiar city areas through the use of two different means: tactile maps and independent movement (direct experience). Moreover, this study aims to compare the cognitive maps created with the use of these two means in regard to their accuracy and completeness. Twenty-four adults with blindness (16 males and 8 females) took part in the research. Their age ranged from 20 years to 61 years. The subjects participated in two experiments. During the first experiment the subjects walked in a familiar route and then they were asked to depict their cognitive map as a haptic model created by using a range of different materials. In the second experiment the subjects read a tactile map and then they were asked to depict cognitive map. The findings of the present study reflect the effect of tactile maps on the cognitive maps creation and contribute to the understanding of issues that concern the development of cognitive maps by individuals with blindness through the use of tactile maps and through the independent movement.

INTRODUCTION
Individuals with blindness are facing significant difficulties during their orientation and mobility in space. The majority of the researchers that examined spatial performance of individuals with visual impairments and sighted individuals came to the conclusion that visual experience influences decisively spatial behavior (Papadopoulos & Koustriava, 2011; Papadopoulos, Koustriava, & Kartasidou, 2011; Papadopoulos, Barouti, & Charitakis, 2014). Moreover, blindness has a negative impact on the development of blind people's spatial skills (Koustriava & Papadopoulos, 2010; Koustriava & Papadopoulos, 2012; Papadopoulos, Barouti, & Charitakis, 2014).

Maps constitute a significant orientation and mobility aid supporting the absolute and relative localization of streets and buildings as well as the estimation of directions and distances between two points (Brock, Truillet, Oriola, Picard, & Jouffrais, 2012). Supporting the relative localization of objects, maps lead to the acquisition of survey knowledge; a knowledge than can be obtained more quickly and with less effort than direct experience either from sighted individuals (Thorndyke & Hayes-Roth, 1982) or from individuals with visual impairments (Caddeo, Fornara, Nenci, & Piroddi, 2006). Especially in the case of individuals with visual impairments, maps contribute to the handling of daily living problems inducing autonomy, independence and a better quality of life (Espinosa, Ungar, Ochaita, Blades, & Spencer, 1998; Jacobson, 1998).

It is impossible for people with blindness to collect the external visual stimuli from the environment or to use conventional maps. Therefore, the provision of spatial information through tactile aids is important (Papadopoulos 2004; Papadopoulos & Karanikolas, 2009). The usefulness of tactile maps for spatial knowledge by individuals who are blind has been demonstrated in several studies (Ungar, Blades, & Spencer, 1993; Espinosa & Ochaita 1998). The view provided from a tactile map can replace to some extent, the visual view of the environment (Golledge 1991).

Researchers have pointed out that raised-line graphics of the spatial environment prepare individuals with visual impairment to travel an unfamiliar space more safely and efficiently than work with a verbal description or a sighted guide (Espinosa, Ungar, Ochaita, Blades, & Spencer, 1998), demanding a smaller cognitive load than direct experience (Thinus-Blanc & Gaunet, 1997).

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Cognitive mapping refers to the process during which an individual acquires, stores, recalls, and decodes information about the relative locations and attributes of the phenomena in his/her environment (Downs & Stea, 1973). Cognitive map is in effect a mental representation of spatial knowledge (Kitchin, 1994). While cognitive mapping of spaces is a prerequisite to develop adequate Orientation and Mobility skills (Lahav & Mioduser, 2008), most of the information required for cognitive mapping is gathered through the visual channel (Loomis, Klatzky, Golledge, Cicinelli, Pellegrino, & Fry, 1993). As a result in the case of visual impairment the greater piece of spatial information is missing and the cognitive mapping becomes a very difficult process. Gathering information through compensatory sensorial channels is considered a fundamental way to deal with cognitive mapping (Lahav & Mioduser, 2008). Cognitive maps of individuals with visual impairments appear to contain basic environmental features as streets, buildings, parks, fixed obstacles, bus stops etc. (Papadopoulos, 2004) and show that they understand spatial relationships between places when presented on a tactile map (Jacobson & Kitchin, 1995).

Kitchin and Jacobson (1997), and Jacobson and Kitchin (1995) review the techniques used to assess cognitive maps of individuals with visual impairments. A widely used technique to examine configurational knowledge is the reconstruction tasks where the participants are asked to build a model. In the present study, the reconstruction technique used to examine the cognitive maps of individuals with visual impairments.

STUDY

The aim of the present study was to examine the ability of individuals with blindness to create cognitive maps of routes in familiar areas through the use of tactile maps and through participants' direct experience of movement along the routes. The degree of precision of the created cognitive maps was also under investigation. Moreover, the study aimed at comparing the cognitive maps created through the use of tactile maps and the independent movement along the routes with regard to their precision/ accuracy and inclusiveness/ completeness.

Participants

An essential criterion to include a participant in the study was not to have a hearing impairment or other disabilities, apart from visual impairments. Twenty four adults with blindness took part in the research. The sample consisted of 16 males and 8 females. The age ranged from 20 years to 61 years (M = 35.0, SD = 11.76). Nineteen participants were blind or had severe visual impairments and 5 had the ability to detect very large objects. The visual impairment was congenital for 16 participants and acquired for the rest 8 participants.

The participants were asked to state the way of their daily move in outdoor places, by choosing one of the following: a) with the assistance of a sighted guide, b) sometimes myself and sometimes with the assistance of a sighted guide, and c) myself, without any assistance. Moreover, the participants were asked to indicate the frequency of their independent movement using a 5-point likert scale: always, usually, sometimes, seldom, or never. In addition, these two questions were answered from orientation & mobility (O&M) specialists, who were familiar with the participants and could assess the latter's ability of independent movement. Table 1 present the answers of the participants and O&M specialists.

Table 1

Ability and frequency of independent movement according to the answers of participants and O&M specialists - the score represent the number of participants in each group

	With or without sighted guide			Frequency of independent movement			
	with	with & without	without	seldom	sometimes	usually	always
Participants	2	9	13	0	2	17	5
Specialists	4	3	17	3	4	11	6

Instruments

The main research instruments were tactile maps of a familiar area in Thessaloniki. The area is extended around the special school for individuals with blindness in Thessaloniki, which means that the chosen familiar area was a well known place for the vast majority of people with blindness in Thessaloniki. All the participants presented experience of frequent movement in this area.

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Three tactile maps were created to represent three different routes (itineraries). This design ensures the variance of the difficulty degree between the routes, while in the same time it eradicates the factor of learning effect that could possibly affect participants' performance (see section Procedures). The choice of the routes was based on the following criteria: a) they had approximately the same length b) they all had the same number of turnings c) they had different shape and d) they were suitable for/accessible to people with visual impairments. In order to achieve the accessibility objective, researchers walked around the areas and examined whether they are accessible to blind people. The main concern was to avoid obstacles which would prevent blind people from passing through. These routes were considered suitable to be selected.

Researchers visited each route, recorded the spatial information (as far as absolute location and kind of information are concerned) and selected 30 of them to be mapped out. The number (30) was not random. The researchers calculated the mean number of the spatial information that the participants had identified during the first experiment – the independent movement within the familiar area. The choice of spatial information was made in a way that the existence of spatial information on every street of the route was assured. Moreover, the researchers carefully recorded all the tactile, audio and olfactory information with regard to their kind. So, an attempt was made in order to exclude the possibility of error in case of a specific type of spatial information is stored more easily or more difficultly on the cognitive map of individuals with blindness.

Adobe Illustrator CS6 was used for the creation of digital tactile maps. These maps were then printed in microcapsule paper, and consequently 3 tactile maps were developed. On each tactile map dots were placed at the locations of spatial information (e.g. trees, pillars, stores).

In the phase where their cognitive map was depicted, a range of different materials were used by the participants. The materials included a kappa fix carton on which an A3 sheet was fastened. Moreover, a string was placed in the position of roads, thumbtacks to fasten the laces and twist them when there were turnings were used, and different type of thumbtacks were placed in the position of obstacles.

Procedures

The subjects participated in two experiments: the independent movement within the familiar area (first experiment) and the use of a tactile map into the familiar area (second experiment). The sequence of the experiments was not the same for every participant in the purpose of eliminating a possible learning effect.

Moreover, a circular design of experiments' implementation was applied with reference to routes. For instance, the first participant walked down the first route during the first experiment, while he/she used the tactile map of the second route during the second experiment. In the same way, the second participant walked down the second route during the first experiment, and he/she used the tactile map of the third route during the second experiment, and so on. This design was applied in order to avoid any error resulting either from differences in the areas' degree of difficulty or from previous learning of the area structure.

Participants had been asked to point out verbally all the spatial information they would detect during the first experiment. The information detected was noted using a recorder. The mean number of information pieces was used to define the quantity of spatial information used on tactile maps.

In the first experiment, the participants moved along a route and afterwards they depicted the cognitive map resulted from their movement. Initially, the participants were informed about the procedure of the experiment and the haptic model they should create at the end. Next, the participants moved along the route independently using their white cane. Each time the researcher moved with the participant maintaining a short following distance from him/her and guiding him/her using verbal instructions (e.g. "in this point you should turn right"). In case of emergency where a participant could set him-/herself in danger, the researcher asked him/her to stop (uttering "stop"). When the participant had finished walking down the route, he/she and the researcher where moved in a quiet place in order to proceed with the next phase of the experiment – the representation of the participant's cognitive map by creating a haptic model of the route previously walked. The elapsed time from the completion of the route walking until the beginning of haptic-model-creation phase was 5 minutes on average.

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In the second experiment the examination consisted of reading the tactile map and then the participants depicted their cognitive map. The examination procedure was carried out individually in a quiet room. Initially, participants were informed about the procedure of the experiment and the haptic model they should create at the end and then each participant read via touch the tactile map. The maximum time that was offered for the map reading was 15 minutes, in which participants had to learn the route, street names and 30 pieces of spatial information. However, they could stop reading earlier if they wished to. A five-minute pause followed. Then the participants used the materials given by the researcher to create their cognitive map.

At the end of each experiment, the participants created a haptic model representing their cognitive map. There was no time limit for the creation of the haptic model. Each time a participant touched an item on the haptic model, the researchers pointed out what this item stood for so that he/she could make a review.

After the completion of the haptic model, the researchers were drawing the cognitive maps, by drafting the outline of the materials of the haptic model on the A3 sheet. The recording of the data on the cognitive maps and their analysis followed.

During the processing of the cognitive maps (haptic models), the following variables were recorded and calculated by the researchers as to their accuracy: the number of the streets, the names and length of the streets, the number and direction of turnings and the number of spatial information participants placed on the haptic model. Specifically, with respect to streets, variables that were examined included how many streets participants placed properly and how many wrong (placed wrong, placed in abundance or were missed). It was also measured how many names of streets were indentified right and how many wrong (indentified wrong, placed in abundance or were missed). Regarding the road turns, two variables were measured. One for the number of turns placed correctly and one for the number of turns that were placed wrong (placed wrong, placed additionally or forgotten).

Regarding the amount of spatial information, the variable "correct information" was calculated. This variable concerns the pieces of spatial information that result from the total spatial information used by a participant on his/her cognitive map, having firstly reducing the pieces of "wrong information".

Regarding the street length the average error of the length of the roads placed in the haptic model was measured. To make this measurement, the following procedure was followed for each participant: 1) the actual map of the area was printed, 2) a change of scale of the cognitive map in the scale of the actual map was implemented, 3) for each road the participant placed, the error length was measured; this is the divergence between the length of the actual and the length of the cognitive road (after scaling), and 4) the average error length for all the roads included in the cognitive map was calculated.

RESULTS

Initially, the scores of the following 8 variables were calculated: "number of streets-correct," "number of streets-wrong", "streets names-correct", "streets names-wrong", "turnings-correct", "turnings-wrong", "information-correct", and "streets length- error". The mean and standard deviation (SD) of scores are presented in Table 2. Each correct or wrong answer was scored 1. Concerning the number of streets and streets names, if any participant had placed all the streets and streets names correctly, his/her score would be equal to 8. Regarding the turnings if any participant had placed all the turnings correctly, his/her score would be equal to 7.

Table 2

Mean (M) and standard deviation (SD), of correct and wrong answers regarding the number of streets, streets names, turnings, and spatial information

	Independent Movement		Tactile map	
	M	SD	M	SD

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number of streets-correct	7.46	1.02	7.21	1.25
number of streets-wrong	.54	1.02	.83	1.31
streets names-correct	4.29	3.24	5.96	2.77
streets names-wrong	3.71	3.24	2.08	2.87
turnings-correct	6.46	1.02	6.25	1.29
turnings-wrong	.63	1.10	.88	1.39
information-correct	8.75	5.85	5.17	6.70
streets length-error	3.30	1.92	2.20	.91

Furthermore, repeated-measures ANOVAs were conducted to examine the differences between the cognitive maps created after the independent movement and the cognitive maps created after reading the tactile map (independent movement vs. tactile map). Repeated-measures ANOVAs were conducted for the 8 variables presented on the Table 2 (number of streets-correct, number of streets-wrong, streets names-correct, streets names-wrong, turnings-correct, turnings-wrong, information-correct, and streets length-error).

The implementation of repeated-measures ANOVAs revealed no significant differences for the variables: number of streets-correct, number of streets-wrong, turnings-correct, turnings-wrong, and streets length-error. Moreover, the implementation of the Repeated-measures ANOVAs indicated that the participants gave significantly fewer correct responses and made more mistakes after having walked down the route than having firstly read the tactile map, with reference to the following variables: streets names-correct [F (1, 23) = 5.022, $p < .05$], streets names-wrong [F (1, 23) = 4.708, $p < .05$]. On the other hand, participants gave fewer correct responses [F (1, 23) = 6.262, $p < .05$] after having read the tactile map rather than having walked down the route, with reference to the variable "information-correct".

CONCLUSIONS

The findings of the present study reflect the positive effect of tactile maps on the cognitive maps creation, and thus, their effect on the spatial knowledge of people with blindness. Previous studies (Espinosa & Ochaita 1998) have also revealed the contribution of tactile maps in spatial knowledge of individuals with blindness. Espinosa & Ochaita (1998) used three instructional methods – direct experience, cartographic representation and verbal description - and estimated their effect on the spatial knowledge of blind adults. The examination consists of a large, complex route where 8 landmarks were included. According to the results, a better practical spatial knowledge gained from participants when they used a tactile map for the route knowledge and not of the two other conditions.

In the present study, more than half of the participants appeared cognitive maps in precision, while the rest participants performed well at all the variables which were examined. Moreover, when the participants used the tactile map, 12 (50%) participants hadn't made any mistakes in streets names. On the contrary when the participants walked independently on the routes, 8 (25%) participants hadn't made any mistakes in streets names.

Correct spatial information is the only case in which the advantage of independent movement in relation to the reading of at tactile map is evident. This can be explained as the participants are likely to recall information related to the area that are familiar with –apart from the 30 items that are included in the tactile

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map - and incorporate them into their cognitive map. Whereas in the case of the experiment using the tactile map, the participants were required to store information such as the position and the type of those 30 particular items in the cognitive map. Therefore the information that probably existed in the cognitive map because the area was familiar, were not to be included in the cognitive map, thus they were not added to the total number of spatial information. This consists of a possible limitation of the present study.

The findings revealed the tactile map as an alternative means of knowledge of a city route. This is extremely important because there are cases where the independent movement in a route could not be performed, it may present difficulties or it is inadequate as a means of special knowledge (Bentzen, 1980).

The findings of the present study contribute to the understanding of issues that concern the development of cognitive maps in individuals with blindness through the use of tactile maps and through direct experience of movement along the route. Thus, the results of the study have implications for both educators and orientation & mobility specialists.

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ÇOK KATEGORİLİ PUANLANAN VERİLERDE DEĞİŞEN MADDE FONKSIYONU BELIRLEMEDE SIRALI LOJISTİK REGRESYON POLY-SIBTEST VE PARAMETRE KIYASLAMA YÖNTEMLERİNİN KARŞILAŞTIRILMASI

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Bu çalışmanın amacı değişen madde fonksiyonu belirleme tekniklerinden sıralı lojistik regresyon, poly-SIBTEST ve parametre karşılaştırma yöntemlerini karşılaştırarak uygulamada ortaya çıkan benzerlik veya farklılıklarını belirlemektedir. Çalışma TIMSS 2011 uygulamasına katılan 6928 öğrenci arasından seçkisiz olarak seçilen 1000 öğrenci üzerinde yürütülmüştür. Çalışmanın verileri TIMSS 2011 öğrenci anketindeki matematiğe yönelik tutumu ölçen ölçme aracından elde edilmiştir. Değişen madde fonksiyonu analizi cinsiyet grupları arasında yapılmıştır. Araştırmanın sonuçları, karşılaştırılan tekniklerin bazı açılardan birbirine göre benzerlik ve farklılıklar sağladığını göstermiştir.

Keywords: Değişen madde fonksiyonu, çok kategorili puanlama, yöntem karşılaştırma

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COMMUNICATION, EDUCATION AND RESPONSIBILITY. MAKING HEALTHIER CHOICES QUICKLY AND EASILY: THE CASE OF UK'S TRAFFIC LIGHT LABELLING

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ABSTRACT
Education and communication are inextricably linked. Making responsible choices is essential for education towards sustainable best practices. In agro-food sector, for example, a conscious consumer needs truthful information that requires a transparent, scientifically accurate and pedagogically connoted communication. Examining the case of *UK's traffic light labelling*, we analyse issues and ambiguities of this device. This kind of labelling led to the opening of an EU infringement procedure against the British Government with regard to an information system suspected of being misleading in relation to consumer education. The paper investigates the possible educational relevance of a "nutritional traffic light" against obesity.

INTRODUCTION
The data provided by the World Health Organization (WHO, 2014) relating to the problem of obesity show a sharp increase of cases detected, amounts to more than double compared to 1980: in 2014 there were more than 1.9 billion adults (18 years and older) overweight, of which more than 600 million obese. According to Margaret Chan (WHO, 2014), Director-General of the WHO, the majority of premature deaths due to "noncommunicable diseases", including those related to eating disorders such as obesity and incorrect lifestyles, are preventable. The phenomenon has reached very high levels of social alarm both among adults and among young people and it's therefore important not only a personal change of individual habits but also the development of appropriate policies by the governments, aimed at promoting greater knowledge and awareness regarding feeding behaviours. It can be found a great concern on the part of the major European and International institutions (WHO, 2014, COM, 2005, WHO, 2005) and there are many actions undertaken to define procedures and instruments. Among the main objectives there is *prevention* (WHO, 2005) with respect to which the education plays a key role in developing the ability to assume correct and healthy behaviours. "To change your eating habits simple medical information is not enough, but you need to *educate,* providing tools that allow to reach consciousness and, consequently, real freedom of choice" (Birbes, 2014, p. 142).

In this paper, examining the case *UK's traffic light labelling,* we will analyse issues related to the birth and the ambiguity of such a device. This kind of labelling led to the opening of an EU infringement procedure against the British Government with regard to an information system suspected of being approximate and misleading in relation to consumer education. The paper investigates the possible educational relevance of a "nutritional traffic light" against obesity.

BETWEEN EDUCATION AND COMMUNICATION
Education and communication are inextricably linked in many fields, including society, environment, economy and, of course, lifestyle and nutrition. Education marks each of us from birth throughout the life and plays a key role in the integral formation of the individual, providing growth paths within which it's possible to develop independent decisions based on knowledge, but also on observation and listening, reflection and experience, participation and critical thinking. Educating is a process that takes place in formal, informal and non-formal contexts, which can also be structured in not ordinary channels and that can therefore be carried out through a pedagogically connoted communication, accompanying the person to choose by virtue of messages and stimuli received.

Communication is always a primary need and a constituent of the human being, allowing him to build multiple relationships with people and the world around. At the same time, communication is increasingly becoming a key factor in pursuing development goals by society, institutions and businesses. Referring to the theory developed by Marshall McLuhan, who resumes by his own admission the thought of Harold Innis, it's necessary to wonder whether it's conceivable to dwell only on the content of communication or whether it's appropriate to analyse also the tools that transmit the message. To better express what's just reported, it's possible to mention

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the famous expression of the Canadian sociologist *"The medium is the message"* which in *Understanding Media: The Extensions of Man,* one of his most important works, points out that *"the latest approach to media study considers not only the «content» but the medium and the cultural matrix within which the particular medium operates"* (McLuhan, 1964). From this expression it can therefore be deduced that the structure itself of the instruments used to communicate, beyond the specific content that is expected to be delivered, may have an influence on the recipient.

Especially with regards to the channels through which it occurs, communication has become increasingly important in the context of educational processes, and this urges to a thorough reflection on the current forms of knowledge and elaboration of learning. Today the ability to decode signs and to process more or less abstract concepts must be understood in the light of the changes occurred in the way of perceiving and representing the experience, a transformation brought about by today's communication tools (Malavasi, 2011, p. 54). In the economy of what reported up to this point, it becomes therefore important to reflect on the issues and ambiguities that can specifically relate to the devices used to implement an education that focuses, in this case, on healthy and correct food lifestyles.

Making responsible choices in feeding today is an urgency that cannot be underestimated and an opportunity to speed up towards the education to best practices for sustainability and integral human development. Education aims to teach and train, to release the inner potential, to produce and transmit knowledge. "Wherever and however made, education cannot forgo agents, objectives, procedures and, if intentionally designed and conducted, it requires continuous feedback" (Malavasi, 2011, p. 52).

FROM THE FOOD EDUCATION TO THE CONSUMER AWARENESS

Hippocrates said that "the good state of health requires knowledge of the primary constitution of the person and individual attention for the food, the physical activity, the season of the year, the wind changes, the age of the individual and the situation of his house" (Hippocrates, 460-375 BC).

Nutrition education is a strategic element to undertake healthy and correct lifestyles and it starts from the consideration that the issues to be examined are various especially when, on closer inspection, the main attention should be oriented to a diet that should be as balanced and comprehensive as possible. According to Corinna Hawkes, head of Policy and Public Affairs at World Cancer Research Fund International in London and specialist in food policy, diet and public health, since 1992 governments, private sector and civil society have taken actions that can be seen as part of "food education" process (Hawkes, 2013), considering it, in the words of R. Isobel Contento (2011), as "any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviours conducive to health and well-being" (Contento, 2011). Likewise, the orientation of the European Union on this same theme is well defined, since it states that unhealthy diets is among the main causes of avoidable illness and premature death, also indicating the rising prevalence of obesity as one of the major public health concern in Europe. For the Council, in fact, it's important that the Commission studies ways of promoting better nutrition and that Member States, together with the Commission itself, conceive and implement initiatives aimed at promoting healthy diets (COM, 2005).

The awareness of the choices that are made in food and nutrition field is crucial and for this reason the possibility to access to proper education in this sense becomes essential, both through the paths that are developed starting from young age in the multiple educational and training contexts and through all those instruments deemed suitable to provide sufficient information to behave responsibly. While, therefore, "undertaking proper nutrition education, in order to feel good about themselves by eating in a healthy way and avoiding unnecessary waste, appears as an important investment for the future of the young generation" (Birbes, 2014, p. 140), in the same way offering adequate nutritional information of products is an important element: providing consumers with consistent information on the nutrient content of foods and educating them in a proper way it's possible to allow them to make informed food choices (COM, 2005).

VOLUNTARY FRONT-OF-PACK LABELLING: THE CASE OF UK'S TRAFFIC LIGHT SYSTEM

Among the tools used to provide consumers with information deemed most appropriate to make healthier choices quickly and easily, there are the compulsory and voluntary labelling systems. According to the EU, nutrition labelling is one way that information can be passed on to consumers and used to support healthy decision-making in relation to the purchasing of food and drink (COM, 2007). It's considered necessary to ensure that information is provided starting from a sound scientific basis so as not to mislead because of inaccuracies and, for this reason, at European level some directives and regulations have been issued (UE, 2011, CE, 2006). If through these systems it becomes possible to contribute to the education of consumers who can use

the information received to make informed choices with respect to their diet and the foods to be preferred, it's appropriate to wonder whether and how it's possible to identify potential elements of educational relevance.

The considered case concerns the introduction by the British Government of a voluntary front-of-pack labelling system based on a "nutritional traffic light" that, through the three colours green, orange and red, aims to communicate quickly and easily information concerning the content of certain nutritive substances in food. The origin and the birth of such a device is due to the strategies (HM Government, 2010, HM Government, 2008) put in place in the UK to counteract the high phenomenon of obesity that, according to several studies (Craig, 2008, Butland, 2007, Henderson, 2003), has reached very high levels among both adult population and young people. Preparatory to the definition of this traffic light labelling system, a study commissioned by the Food Standards Agency (Malam, 2009) analysed the use by consumers of different voluntary labelling systems which, until that moment, were already developed and which included different information in multiple formats. Among the objectives of the research, there was the desire to highlight any preferences, difficulties and misunderstandings by consumers and to acquire the necessary confirmations with respect to scientific evidences of the device. Also because of legislation on the issue that is not yet uniform and complete within the European Union, the single member states took steps to have instruments on their own. By the document "Guide to creating a front of pack (FoP) nutrition label for pre-packed products sold through retail outlets", published in June 2013, the British Department of Health and the Food Standards Agency defined the procedures for the voluntary spread of information through "nutrition labels that are compliant with the UK Health Ministers' Recommendation on the use of colour coding as an additional form of expression and with EU Regulation No. 1169/2011 on the provision of food information to consumers" (HM Government, 2013). For salt, sugars, fatty acids and saturated fatty acids, in addition to the numerical information of the amount in grams and the percentage Reference Intake (%RI), with the traffic light labelling system it's reported a visual signal through the three colours that are deemed, in intentions of those who created it, an instrument of instant reading to identify low, medium or high levels and, therefore, foods to which pay more or less attention during purchase and consumption, according to their reported content of substances. It's possible to deepen impact and effectiveness of this communication tool, referring in particular to some elements linked to the possible educational value of this "nutritional traffic light". If to address the problem of obesity it's essential to make, as stated before, conscious and informed choices, it's necessary a food education that allow to acquire adequate knowledge in terms of balanced diet and healthy nutritional intake. Thus, the examined tool can be analysed by outlining some considerations concerning certain proper aspects of the knowledge and of the related education that is necessary for its promotion.

A first perspective of observation in this regard focuses on the concept of *nutrition knowledge* by consumers, intended as the required background information to understand what the label communicates and to operate consequent food choices. It was found that there is usually confusion about the nutrients unlike the caloric values that are better understood (Grunert, 2007) and also that socioeconomic and educational levels are critical with respect to the basic nutritional knowledge (Campos, 2011). Thus, it may follow that a system as the nutritional traffic light, by its nature simpler and more explicit as it is based on a very direct communication, can facilitate the choices *at-a-glance* but nevertheless it remains insufficient in providing more complete and comprehensive information that, if oriented to an adequate consumer education, could ensure greater awareness. A proper nutrition education can foster acquisition and development of knowledge and skills in order to make people free to make their own choices: if on the one hand the investigated tool, which aims to make the message simpler and direct, can be a big advantage especially for those with lower and limited skills, on the other hand it cannot replace the will and the necessary commitment of promoting a real awareness of the choice. Otherwise, in fact, instead of providing an adequate and actual knowledge, the risk may be to offer a distorted vision of the action to be taken with the contemporary belief of having the required information to accomplish it in the best way. If the aim of the British government is to facilitate the voluntary communication by producers and retailers with respect to nutritional information in order to promote reflection and healthier behaviours, it should be well outlined the way this communication can play its educational activity.

The analysis leads consequently to consider a second field that refers to the notions of *perception* and *understanding* on the part of consumers. It's natural to wonder how the information provided are interiorized and reworked by those who are the recipients and so if a device such as this provides an effective educational contribution to develop greater awareness of choice by those who use it. What arises from different studies is that, generally, nutrition labels are considered a valuable source of significant information with regard to which, however, the meaning is not always clear. Among consumers there is the interest in deepening reported indications, even if the belief of many people is that what is reported on the label is not sufficient to distinguish between more or less healthy foods. This raises again the question of whether an educational impact can be found in relation to a device that, in the intention of those who promoted him, wants to help people make healthier choices quickly and easily. In this sense, one of the issues that, just about the perception and

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understanding, probably requires further study is the message that is transmitted through the displayed colours. The red, in the mind of the creators, would mean a large amount of a certain substance than the reference dose, without any wishes to report a "ban". However it's true that, in the presence of a traffic light system, whoever is in front of the green colour knows that he can proceed without constraints while, watching the red, he has the obligation to stop immediately. Its clear reference to common provisions that are implemented as part of the road traffic would seem to allow few possibilities, in the intentional simplicity and immediacy, to behave differently. The system effectiveness, in order to be verified, should undoubtedly give a feedback of a clear understanding of its meaning so to allow a fully aware use and to provide a decisive contribution to the individual education. The recent European regulation on labelling (UE, 2011) clearly states that these forms of expression provided for additional voluntary labelling, in accordance with Article 35, must "facilitate consumer understanding of the contribution or importance of the food to the energy and nutrient content of a diet" and, in accordance with Article 36, "shall not mislead, shall not be ambiguous or confusing". The intention of the legislator is therefore oriented to provide a transparent and truthful communication to promote the development of a proper awareness in terms of healthy and balanced diet, a necessary prerequisite for a proper nutrition education.

It becomes consequent a question on the concept of *use* by consumers, namely whether such voluntary labelling is used by those who are the primary recipients. A required consideration is to identify in practice how much a tool, such as the nutritional traffic light, shows the desired effectiveness in relation to a conscious choice to buy more or less healthy food, action that at least should partially reflect an educational impact on lifestyles. Even if it referred to a small sample of products, a study carried out in 2007 (Sacks, 2009) analysed the initial impact that the introduction of a traffic light labelling system had, after the first two months, on the sales in one of the major chains of supermarket in the UK. The results didn't show any changes compared to the purchase of foods marked as healthier and the conclusions stated that the use of this communication tool isn't enough to influence the behaviour of many consumers. As the authors remember and as reported before, it doesn't lead to a complete inability of a nutritional traffic light to offer a positive contribution with respect to health, but stresses the need to implement other joint activities so that explain how to use it and educate consumers to make healthier choices based on adequate knowledge, an aspect that is certainly crucial. A related issue to consider is the time factor, which in turn exerts a strong influence over the use of such a device. On the one hand, compared to the results of the previous study, it should be noted that the change of the habits is a process that requires quite a long time to be achieved. On the other hand, the consideration of the time dedicated to the shopping in a society that moves faster and faster and that compresses the opportunity to engage, with the necessary calm, to the preparation of the diet, surely draws a strong attention on how to consider the device. A system that allows you to grasp the message quickly and immediately, that is deemed as necessary when buying, doesn't invite to linger with proper calm and attention on choosing and on the resultant preparation of a balanced diet. A communication tool such as the one under consideration, sending a message with a strong visual impact related to the three colours, could be considered and used incorrectly, not reflecting the educational intentions declared by the promoters.

CONCLUSIONS

The analysis performed on the case of *UK's traffic light labelling* and on the possible educational relevance of this nutritional traffic light against obesity urges multiple reflections on communication, education and responsibility of choices, above all in the food sector. The complexity related to the lifestyle's change and to the definition of a healthy and balanced diet, necessary conditions to prevent those diseases that today afflict a large number of young people and adults in the world, requires tools and strategies, including communication, which exercise a strong educational activity. The voluntary adoption of correct eating habits requires a comprehensive educational path within which it can develop knowledge and awareness, essential elements in order to make those choices in an appropriate and responsible way. There are many informational devices which can be used but they have to meet those requirements of clarity and transparency, as well as of accuracy based on sound science, required by the major international agencies, including the World Health Organization and the European Union. To fully carry out their duties, including desirable education, it needs to be found obvious contributions in terms of development of knowledge, understanding and use among those who are the main users. The examined voluntary labelling system, alongside positive elements related to its clear potential to transmit messages simply and quickly, has led to make some reflections, with no claim of being exhaustive, on different issues related to its real efficacy in representing an effective tool to make healthier choices in food sector. The European Union itself, even as a results of several requests from some Member States, opened an infringement procedure against the British Government, having found some ambiguities with regard to this specific system adopted in the United Kingdom. The issues under debate regard its poor ability to allow an adequate differentiation between more or less healthy foods and possible unjustified disadvantages for some foods, not providing a comprehensive indication about the various nutrients contained and offering only limited information that could lead to diets not really balanced. To sum up, this case study highlights how the definition of a system to communicate significant information in relation to a balanced diet is a complex action that needs

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special care to be able to exert an effective educational impact on people in a clear and transparent way, paying a specific attention to all aspects. But the recognized need for an effective food education requires to further deepen the research of all these possible tools, so that they can fully contribute to the development of greater awareness and proper habits.

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INTE2015

COMPARISON OF BLOCK AND SERIAL APPLICATION EFFECT IN MANIPULATIVE SKILLS

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One of the problems faced by lecturers during their struggle in maximizing learning in applications is the sequence of subjects with different quantities within unit studies.

The aim of the study is to compare the application effect in individuals learning block and serial applications and manipulative skills. 30 university students with ages of 22,14±1,46 (15 males, 15 females) participated to the study voluntarily. The individuals participating to the study were separated into 2 groups by random block (n=15) and serial (n=15) application performing groups. To the block group only training by Minnesota Hand Skill Test (MHST) device was applied, to the serial group training by Perdue Pegboard (PPHST) device together with MHST was applied. During training MHST performances of all subjects in pre, intermediate and post testing were measured by chronometer with one week period between each and were recorded. PPEBT trainings were only applied as interference. According to repeated measure ANOVA statistics results made on data obtained from the study, significant difference according to time was determined in measurements $F(2.0;27.0)=17,10$ ($p<0,00$). Significant difference was determined in groupxtime interaction of Minnesota test $F(2.0;27.0)=7,85$ ($p<0,02$). Significant difference was determined between groups $F(1,28)=9,02$ ($p<0,00$). Significant difference was not be found between pre testings according to independent samples-t test used in group comparison (36,13±4,05sec);(34,11±3,88 sec) ($p>0,05$). Significant difference was determined between two groups in favor of serial group in intermediate and post test (35,58±4,49 sec;31,41;3,78 sec) (35,19±4,77 sec;29,23±29,23 sec) ($p<0,05$).

As a result it was determined that serial applications develop manipulative skill performance more than block applications.

Keywords: Minnesota, serial, block, Perdue Pegboard.

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COMPARISON OF PERCEPTION LEVELS OF STUDENTS AT THE SCHOOL TEACHING DEPARTMENT OF THE FACULTY OF EDUCATIONAL SCIENCES AND PHYSICAL EDUCATION AND SPORT TEACHING DEPARTMENT OF FACULTY OF SPORT SCIENCES CONCERNING PERSONAL JUSTICE IN TERMS OF THEIR DECISION MAKING STYLES

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ABSTRACT

The present study aims to determine whether personal justice perception levels (belief in just world) of students at the school teaching department and sport sciences departments at the faculty of education has significant impact on their decision making process. The present research is based on correlational aspect. Method and causal comparative method aim to determine possible causes of a certain behavior pattern by comparing individuals with behavioral pattern with the ones who do not.

Results: Concerning these dimensions, when arithmetic means of female and male students are taken into account, it was concluded that male students' perception of just world is significantly higher compared to the female students; and female students' panic decision making levels are significantly higher compared to male students. Consequently, it was found that mean score of students at the department of school teaching concerning their panic decision making style is significantly higher than the students at the department of physical education and sport teaching.

Keywords: School Teaching, Physical Education and Sport Teaching, Personal Justice, Decision Making.

INTRODUCTION

Hypothesis of belief in just world emphasizes protection motive of individuals (Lerner, 1975). This belief enables people to confront their physical and social environment as though it were stable and orderly (Peter et al., 2013). Based on this theory, human beings are inclined to accept that unfortunate persons who experience unpleasant things deserve what they faced and this happens because of them (Lipkus & Siegler, 1993). Many people are guided by values that they have internalised and that they accept as providing sensible and proper criteria by which actions can and should be judged (The Hon Sackville, 2014). According to Dalbert (2002), strong belief among persons who experienced adverse circumstances in just world accelerates recovery of these individuals afterwards the unpleasant experiences and accommodation process to the situation faced. Belief in just world has protective function for individuals from undeserved adverse outcomes psychologically (Pittinsky & Matic, 2005). Thus, beliefs can shape the learning process and the outcomes of teaching, which makes them a valuable research focus to investigate (Cephe & Yalcin, 2015). By integrating belief in just world and the point of view legitimizing the system, Kay et al., (2005) claimed in their study that considering the poor people more happy and honest than rich people relieves the justice motive and increase the support for status-quo (Jost et al., 2001). emphasized the view in their study that "consistent with their belief that the world is a just place based on living conditions, people tend to perceive the social systems and regulations in which they live as just; and accordingly they rationalize and support ongoing status-quo as just and legitimate thing. Especially in persistent injustice situations, persons with helping potential develop negative attitude toward victims such as humiliation and accusation (Reichle & Schmitt, 2002). Appelbaum et al., (2006) stated that although individuals try to better off their position, their belief in just world is jeopardized when they encounter someone needy. Therefore people with strong belief in just world try to protect this belief. According to Zuckerman (1975), individuals with strong belief in just world can explain the relationship between the outcomes and what is deserved with supernatural powers or divine interferences. Furnham & Proctor (1989), claim that when people who lack of their basic needs could not compensate their status, belief in just world is maintained by humiliation of poor people.

Decision making pertains to individuals who are competent in terms of mind, thinking, cognition, and free-will (Kocel, 2001). According to Bagirkan (1983), decision making is determination of the most appropriate result by evaluating a single or a series of issue that has to be resolved with its all dimensions. In the meantime, this

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complexity of decision making affects individuals negatively in decision making process. Individuals play different roles in an organization by acting as an individual manager, as a team member and as an organization leader. We now examine the role played by the individual in influencing decision making at different levels (Vallabh & Singhal, 2014). State that frustration or fear of frustration cause anxiety and individuals experience compulsion during decision making process (Atkinson et al., 1999). Scott & Bruce (1995), explain decision making styles as learned habit. Whereas appropriate and accurate decisions cause positive changes in a person's life, mistaken and erroneous decisions would affect alignment of life adversely (Gucray, 2003). Characterizes individuals in terms of decision making styles as spontaneous-systematic decision making and introvert-extrovert decision making (Johnson,1978). Report that majority of individuals do not use their cognitive capacities completely and they prefer short ways and shortcuts while they are making decision (Candangil, 2005). According to Ersever (1996), there is view for some individuals that decision can be made through rational and mathematical ways. Amount of information used during decision making process may vary according to decision maker (Driver & Mock, 1975). According to Newell at al., (2004) when faced with decision making requirement, it is not always possible to evaluate all options, their characteristics and their potential results simultaneously. Report that individual differences in decision making process are result of promptness of decision and amount of collected and evaluated information (Dunham & Pierce, 1989).

METHODS

The present research is based on correlational aspect. Method and causal comparative method aim to determine possible causes of a certain behavior pattern by comparing individuals with behavioral pattern with the ones who do not. There are at least two variables in correlation determination method using comparison. Groups are formed based on independent variables; and it is investigated that whether there is difference according to the dependent variable (Borg, 1985).

Sample and Sampling

The study group is consisted of 208 randomly selected students from the Usak University in fall semester of 2014–2015 academic years. Of these students, while 107 were selected from the school teaching department of faculty of education, 101 were from the department of physical education and sport teaching department of faculty of sport sciences.

Data Collection

One of the data collection tools is personal belief in just world scale (KADİÖ) developed by (Dalbert, 1999). This scale was adapted to Turkish and its validity and reliability studies were performed by (Goregenli, 2003). As another data collection tool, Melbourne Decision Making Scale was used, whose original was developed by (Mann et al., 1998). The Melbourne Decision Making Questionary was adapted to Turkish; and its reliability and validity studies were conducted by (Deniz, 2004).

Data Analysis

Collected data during the research was analyzed and evaluated by means of SPSS 13.0 statistical software. In order to portray participant students' demographic information a frequency (f) analysis. A three-point scale was used in the survey conducted in determination of decision making styles of students. As this survey is composed of two sections, six questions in the first section are to determine their self confidence level during decision making process. These questions are consisted of 3 positive and 3 negative expressions. Regarding positive expressions, value of 3 stands for "Correct", value of 2 stands for "Sometimes Correct", and value of 1 stands for "Incorrect". Regarding negative expressions, value of 3 stands for "Incorrect", value of 2 stands for "Sometimes Correct", and value of 1 stands for "Correct". In order to determine students' perception of just world and their decision making styles exhibit difference according to demographic status t test and one-way Anova test were conducted. In the survey to determine students' personal perception of just World, a 7-point scale was used; values of 1, 4 and 7 stand for "Strongly Disagree", "Neutral", and "Strongly Agree" respectively. In order to determine whether there is significant relationship between students' personal perception of just world and their decision making styles, the correlation coefficient between two groups were assessed. Assessment of Pearson Correlation coefficient is that "R 0.00 – 0.25 very weak relationship, R 0.26 – 0.49 weak relationship, R 0.50 – 0.69 medium level of relationship, R 0,70 – 0,89 strong relationship, R 0,90 – 1,00 very strong relationship".

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RESULTS

Mean score of students' answers given to the questions regarding their personal perception of just world is estimated as 3.70. Students' personal perception of just world is in proximity of 4 (neutral) value. Accordingly, it can be concluded that students' personal perception regarding just world is indecisive. (Table 1).

Mean score of the first 6 expressions which determine self confidence level of students' decision making is estimated as 2.46, which suggests CORRECT level. Accordingly, it can be said that self confidence levels of students in decision making is high. (Table 2)

The mean score of answers of students regarding careful decision making style is estimated as 2.54, which suggests CORRECT level. Accordingly, it is possible to say that students are usually careful while they are making their decisions (Table 3).

Based on Table 4, it can be observed that students' perception of just world and their aversive decision making styles do not differ according to their department ($p>0.05$) On the other hand, there is significant difference among self confidence in decision making, careful decision making, dilatory decision making and panic decision making styles according to students' sport practice levels (Table 4, $p<0.05$).

When these differences are taken into account; it is observed that self confidence levels of students at the physical science teaching department in decision making process are significantly higher compared to the students at the department of school teaching. Careful decision making, dilatory decision making and panic decision making levels of students at the department of school teaching were found higher compared to the students at the department of physical education teaching (Table 4).

According to Table 5, it can be observed that students' perception of just world does not exhibit difference in terms of self confidence in decision making, careful decision making, aversive decision making and dilatory decision making styles according to their residential places ($p>0.05$). On the other hand, regarding panic decision making style, it can be seen that there is significant difference according to students' residential place (Table 5, $p<0.05$).

It was observed that there is significant relationship between students' personal perception of just world and their self confidence in decision making. According to the correlation table, it can be seen that there is weak negative relationship between students' personal perception of just world and their self confidence in decision making ($R=-0.162$). Thus, it can be said that as students' personal perception of just world increases, their self confidence level in decision making decreases slightly (Table 6).

DISCUSSION AND CONCLUSION

Mean scores of students' answers given to the questions regarding their personal perception of just world is estimated as 3.70. Students' personal perception of just world is close to 4 (neutral) value. Accordingly, it is seen that students' personal perception of just world is at indecisive level. The mean score of the first 6 expression which determine self confidence levels of students in decision making is estimated as 2.46, which suggests CORRECT level. Therefore, it is possible to conclude that students' self confidence levels in decision making is high. The mean score of students' answers given to the question regarding careful decision making style is estimated as 2.54, which suggests CORRECT. Accordingly, it can be said that students are usually careful while they are making their decisions. The mean score of students' answers to the question regarding their aversive decision making style is estimated as 1.77, which suggests SOMETIMES CORRECT level. Accordingly, it is possible to say that students sometimes act aversively while they are making decisions. The mean score of students' answers to the question regarding their dilatory decision making style is estimated as 1.91, which suggests SOMETİMES CORRECT level. Accordingly, it is possible to say that students sometimes adopt dilatory attitude while they are making decisions. The mean score of students' answers to the question regarding their panic decision making style is estimated as 2.11, which suggests SOMETİMES CORRECT level. Accordingly, it is possible to say that students sometimes act in panic while they are making decisions. In the studies on personal justice (Belief in Just World), as it is consistent with the people's belief in that the World in which they live is a just place, it was reported that human beings tend to perceive social systems and regulations which they are part of them as fare; and thus, they support and rationalize status-quo (Jost, 2001). Eldeklioğlu (1996), revealed that the most appropriate family environment for development of decision making skill and effective decision making is a family environment adopting democratic attitude. Kasik (2009) was not able to find significant difference among mean scores of students' concerning their decision making styles of self confidence, careful, aversive and dilatory according to their gender. However, when students' decision making panic sub scale mean scores are considered, the researcher found a significant difference. According to Deniz (2002), whereas there is no significant difference between means scores of female and male university students in terms of independent, indecisive and internal-impulsive decision making strategies, nevertheless mean scores of female students were found significantly higher than males in terms of rational decision making strategy. Concerning these dimensions in our research, when female and male students' arithmetic means are considered,

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male students' perception of just world are significantly higher than female students; female students' panic decision making levels are significantly higher than male students. In other studies, existence of no significant differences among decision making styles based on gender exhibits accordance to findings of some researchers (Kose, 2002; Sinangil, 1993; Tasdelen, 2002). Avsaroglu (2007) found significant difference between mean scores of students' self confidence in decision making and their sub dimension of decision making styles (careful decision making, aversive decision making, dilatory decision making and panic decision making) according to their genders. Can (2009) reported that as individuals gain self confidence in decision making process, they would exhibit careful decision making style in their decision making process. In the meantime, individuals who lack self confidence level in decision making adopt dilatory, panic and aversive decision making styles in their decision making process.

It was observed that there is significant difference according to variables of gender, grade level, department, and residential place. Moreover, significant difference was found in dimension of perception of just world and panic decision making style between female and male students (Table 5, $p<0.05$). Concerning the self confidence in decision making and dilatory decision making styles, there is significant difference according to students' grade levels ($p<0.05$). For self confidence in decision making style, a significant difference was found between students at the departments of physical education and sport teaching. Accordingly, mean scores of students regarding self confidence level in decision making at the first grade were significantly higher than the students at the department of school teaching. For panic decision making style, a significant difference was found between students at the physical education department of faculty of sport sciences and department of school teaching at the faculty of educational science. Accordingly, it was found that the mean scores of students at the third grade regarding panic decision making was found significantly higher than the students at the first grade. We observed that students' perception of just World and aversive decision making styles do not exhibit difference according to their departments (Table 4, $p>0.05$). Concerning the self confidence in decision making, careful decision making, dilatory decision making and panic decision making styles, a significant difference is observed according to students' sport practice levels (Table 4, $p<0.05$). When these differences are taken into account; it was found that self confidence levels of students at the physical science education department in decision making were significantly higher compared to the students at the school teaching department. Concerning students at the school teaching department, their careful decision making, dilatory decision making and panic decision making levels were found significantly higher compared to the students at the physical education department. We observed that students' perception of just world do not exhibit difference in terms of self confidence in decision making, careful decision making, aversive decision making and dilatory decision making styles according to their residential places (Table 4, $p>0.05$). On the other hand, in terms of panic decision making style, a significant difference is found according to students' residential place ($p<0.05$). There is significant difference between students residing in town and city center in terms of panic decision making style. Accordingly, it can be concluded that mean scores of town-resident students' panic decision making styles are significantly higher than the city-resident students. As a result of correlation analyses carried out in order to determine whether there is significant relationship between students' personal perception of just world and self confidence in decision making and decision making styles, it was observed that there is no significant relationship between students' personal perception of just world and careful decision making style, aversive decision making style, dilatory decision making style and panic decision making style. According to correlation table, it can be seen that there is weak and negative relationship between students' personal perception of just world and their self confidence in decision making (Table 6, $R=-0.162$). Accordingly, it is possible to say that as students' personal perception of just world increases, their self confidence in decision making decreases slightly (Table 5).

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Table 1

What is the level of students' personal perception of just world**?**

Mean and standard deviation values concerning students' personal perception of just world

	N	MEAN	SD.
1. Whatever you say, some groups are more privileged than others.	208	3.19	1.70
2. All groups should be provided equal chance in life.	208	4.97	1.31
3. Superior groups should be dominant over low tier groups.	208	1.98	1.42
4. None of groups should be dominant within society.	208	4.68	1.53
5. If some groups keep quiet, there would be less problems.	208	3.94	1.63
6. The fact that some groups are superior and some are located at lower levels may be good thing.	208	2.68	1.54
7. Social equality should be our social target.	208	4.99	1.33
8. Sometimes other groups should be kept silent wherever they are.	208	3.36	1.65
9. It would be good if all groups are equal.	208	4.22	1.59
10. Equality among groups should be our ideal.	208	4.50	1.52
11. In order to reach our group's target, sometimes it is required to use force against other groups.	208	2.68	1.74
12. We should do our best to provide equal conditions for different groups.	208	4.50	1.45
13. Low tier groups should stay put on their positions.	208	2.04	1.50
14. If we had treated to different groups equally, now we would have less problems.	*208*	*4.40*	*1.66*
15. We should do our best to bring incomes to the more equal point.	*208*	*4.70*	*1.54*
16. Sometime we need to crush other groups so that we can progress in life.	*208*	*2.30*	*1.77*
GENERAL MEAN		*3.70*	*1.56*

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Table 2
What is the self confidence level of students in decision making process

	N	*MEAN*	*SD.*
1. I have confidence in my decision making skill.	*208*	*2.55*	*0.57*
2. I feel small more than many people after made my decision.	*208*	*2.59*	*0.67*
3. I consider myself as a successful person at decision making.	*208*	*2.43*	*0.66*
4. I feel so desperate that I give up on decision making trouble.	*208*	*2.57*	*0.60*
5. Decisions I made end up good.	*208*	*2.25*	*0.55*
6. It is easy for other people to convince me that their decisions are correct, not mines.	*208*	*2.34*	*0.65*
Mean		***2.46***	***0.62***

Table 3
Students' Careful Decision Making Style

Careful decision making style			
	N	*MEAN*	*SD.*
8. I would like to consider all options.	*208*	*2.66*	*0.62*
10. I try to reveal disadvantages of all options.	*208*	*2.44*	*0.64*
12. I think thoroughly about how I am going to apply my decision in a best possible way.	*208*	*2.63*	*0.55*
14. While making my decision, I would like to gather information as much as possible regarding the decision.	*208*	*2.40*	*0.65*
18. Before making my decision, I try to clarify my purposes.	*208*	*2.59*	*0.62*
Mean		***2.54***	***0.61***

Table 4
Comparison of students' personal perception of just world in terms of their self confidence levels in decision making and decision making styles according to their major department.

	Department	***N***	***MEAN***	***SD.***	***P***
Perception of just world	*Phy.Ed.Sport Teaching*	*101*	*3.71*	*0.75*	*0.835*
	School Teaching	*107*	*3.69*	*0.56*	
Self Confidence in Decision Making	***Phy.Ed.Sport Teaching***	***101***	***2.57***	***0.38***	***0.000***
	School Teaching	***107***	***2.35***	***0.38***	
Careful Decision Making	***Phy.Ed.Sport Teaching***	***101***	***2.48***	***0.47***	***0.044***
	School Teaching	***107***	***2.60***	***0.40***	
Aversive Decision Making	*Phy.Ed.Sport Teaching*	*101*	*1.80*	*0.44*	*0.408*
	School Teaching	*107*	*1.75*	*0.46*	
Dilatory Decision Making	***Phy.Ed.Sport Teaching***	***101***	***1.84***	***0.44***	***0.036***
	School Teaching	***107***	***1.97***	***0.45***	
Panic Decision Making	***Phy.Ed.Sport Teaching***	***101***	***1.97***	***0.44***	***0.000***
	School Teaching	***107***	***2.23***	***0.47***	

**P<0.05*

Table 5

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Comparison of students' personal perception of just world in terms of the variables of self confidence in decision making and decision making styles according to their residential places.

Variables		***Sum Of Squares***	***Mean Squares***	***F***	***P***
Perception of just world	*According to residential places*	*0.390*	*0.130*	*0.296*	*0.828*
Self confidence in decision making	*According to residential places*	*0.894*	*0.298*	*1.978*	*0.118*
Careful decision making	*According to residential places*	*1.213*	*0.404*	*2.122*	*0.099*
Aversive decision making	*According to residential places*	*0.496*	*0.165*	*0.801*	*0.495*
Dilatory decision making	*According to residential places*	*0.966*	*0.322*	*1.613*	*0.187*
Panic decision making	*According to residential places*	***2.096***	***0.699***	***3.238***	***0.023***

**P<0.05*

Table 6.

Correlation of between students' personal perception of just world and their self confidence in decision making

Correlation between students' personal perception of just world and their view of self confidence in decision making

		Perception of Just World	***Self Confidence In Decision Making***
Perception of Just World	*Pearson Correlation*	*1*	*-0.162*
	Sig. (2-tailed)		*0.020 ***
	N	*208*	*208*
Self Confidence in Decision Making	*Pearson Correlation*	*-0.162*	*1*
	Sig. (2-tailed)	*0.020 ***	
	N	*208*	*208*

*** Two-way correlation at 0.05 level.*

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COMPARISON OF TARGET SIZE AND TARGETING PERFORMANCE IN TENNIS

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The purpose of this study was to compare the performance increase due to the acquisition of tennis skills with the two versions of the same test whose target size and distance are different. Seventeen active college students, who had not played tennis before voluntarily participated in the study. Tennis technical practices were given to all subjects during 8 weeks (twice a week, two hours per day). The subjects were evaluated with Tennis Targeting Performance Test (TTPT) at 2nd and 8th weeks. During the test the tester threw 11 balls over the service T of the opposite field. The participants were asked to hit the balls with the forehand and backhand in turns. The two versions of the test were applied on the same day with a 60 minute interval. Also, every test was applied twice and average values were assessed in percentages. In the both tests the balls hitting the net and those outside the singles court received 0 point and those inside the service box received 1 point. However, in the first test (TTPT1) the balls in the back court of the opposite field (the area between base line and service line) are worth 2 points and in the second test (TTPT2) the balls near the base line are worth 3 points and those back the service line have been scored 2 points (the back court was divided into two equal sections). As a result there significant different between pre and post tests (TTPT1, Pre-test: 35.03±8.91%, Post-test: 55.88±19.07%, P=0.00; TTPT2, Pre-test: 36.63±7.47, Post-test: 47.59±12.53%, P=0.02). Meanwhile, TTPT1 and TTPT2 results were not different at pre-test (P=0.07), the significant difference was occurred at post-test (P=0.04). According to these results, size of the distant target is not important at the beginning of tennis training. However, while targeting performance improves via repetitions, size of the distant targets should be shrinking.

Keywords: Tennis, target, performance, test

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COMPARISON OF UNDERGRADUATE AND GRADUATE STUDENTS IN TERMS OF ATTITUDE TOWARDS SCIENTIFIC RESEARCH

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The aim of this study is to compare undergraduate and graduate students' attitudes towards scientific research. Under the quantitative research paradigm, the sample of the study consists of undergraduate Marmara University students at Ataturk Faculty of Education (N = 127) and graduate students from the same university at Institute of Educational students (N = 41). A scale of "Attitude towards Scientific Research" (Korkmaz, Şahin & Yeşil, 2011) is used as the data collection tool and t-test is used to analyze and compare the results. As a consequence, a significant difference in favor of graduate students is obtained.

Keywords: Scientific research attitude, graduate students, undergraduate students, teacher education

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COMPUTER TRAINING PROGRAMS IN SECONDARY SCHOOLS

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ABSTRACT
In the twentieth century in which a new social order was created under the name of information society, all countries were poised to compete in an environment of digital race especially in educational fields coherent with the demands of contemporary times.
In this study a draft of various programs needed for the use of computers in education and training was constituted. After this draft, such programs as Computerized Test Programs (CTP), Programs for Computerized Video Use (CVUP), Intelligent Educational Programs (IEP), Special Educational Utilities (SEU), Programs for Educational Games (EGP) and Simulation Programs (SP) together the objectives of these programs, their accurate use and their relationship with computers were briefly introduced.

Keywords: computerized education, computer training programs, education, student.

INTRODUCTION

So far, there are several studies on positive and negative impacts of Computerized Education (CE) on education process and the research on this issue is still continuing. Some studies contain important issues. In their study, Kulik J. A., Kulik C. C. and Cohen P. A. (1980) founded that students, who took courses based on CE, had significant 0.25 standard deviation according to their ability levels. In another study, Kulik J. A., Bangert R. L. and Williams G. W. (1983) analyzed 51 empirical studies and identified that attitudes of students from 6th to 12th grades were significant in terms of the results of CE courses. The grades of students on CE oriented courses increased from 50% to 63% and 0.32 standard deviation.

Computers provide productivity to today's education system however using computers is not enough to implement education and teaching activities; or in other words they do not solely make education real and productive. In this context, computerized education programs make learning easy and entertaining but some activities are expected from students. One of these is students' hard work and active participation in studies. In a computerized environment, where these two situation do not interact or where there is no motivation, even best experts and highly developed Computer Educational Programs (CEP) are not very useful or effective (ROSS, S. M., & Morrison G. R., 1988).

MATERIAL AND METHOD

Today use of computers in education has introduced new terms and concepts. Development of computer technology introduced more than 100 thousand words and phrases to the English language. This development also caused the necessity for developing countries to transfer or produce these new words into their own languages during to the process of new technology based education. Use of computers for educational purposes has begun as science education in enterprises since these devices were invented. Use of computers for administrative purposes has gained two significant functions called central administration and administration

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management. Use of computers by administrators or their contribution to administrators are concerned with writing reports, registrations, recording of accounting and student lecture notes, attendance status and control of all these (İsmail İPEK, 2001).

In addition to this general framework, teachers' main duty, although he or she does the teaching, is to perform as an administrator within the classroom. Teachers are responsible for some duties such as preparation of reports and class notes, copying of exam documents, preparation of student notes and their status in the end of the semester, filling data files of students and planning for the acquisition of necessary tools for teaching. These are activities that are not directly related to teaching but contributing to the teaching process. For example, different computer programs are used in order to calculate and keep student transcripts.

On the other hand, determination of students' individual needs, analysis and leading education process to provide these needs are very important educational processes. It is the teacher's duty to identify sources and present possible ways of solution and needs in solving student problems. There is a computer program developed to help teachers as administrators. This is called computer management instruction (CMI). This program helps all activities of teachers performed during the education process. It unites and combines all management activities of education process and it contains evaluation of student homework as well. The program is used for correspondence and quantitative data that are needed by students.

Another interesting point is that experts, students and their custodians confuse two terms: computer education and computer-based instruction. This situation is a significant mistake and a big problem in the Turkish Education System. Individuals, who are not expertise on computer use or who have limited experience with that, should understand organizational structure of computers, learn basic components and concepts of them as well as their applicability with regard to education. This is possible through computer education. Computer education is not education or instruction with computers, because the use of computers and new technologies may not necessarily require that each individual has a good knowledge of computer language. Some educators considered that teaching any language program is a waste of time.

RESEARCH FINDINGS

As a result of today's technological innovations, individuals and students should know rudiments, concepts, programming language, maintenance of technology and hardware and structure of computers. In addition to presentation of this information to users on a upper level, education programs that include *Computer Literary,* concerning different subjects (Jonassen, 2000). The purpose of these programs is to realize education through technology. The goals of these programs should be equipped with activities which would include future computer courses and realize knowledge and applications.

For us, computer-based instruction achieves educational and instructional goals with the help of computers. Computers here as a form of the new technology, contribute to the education process. This process helps students to adapt appropriate behaviors through proper Computer-Based Program (CBP) Visual learning process of an individual appears in cognitive process. Therefore, Computer-Based Instruction Programs (CBIP) have been designed. This situation is presented on figure 1 (Bashirov Novruz, 2006).
The figure illustrates the following programs:

1. Training and Trial Programs (TTP): The aim of Computer-Based Instruction Programs (CBIP) to lead students to practice and remind them about their knowledge. The trial technique does not depend of performance of computers and it is not used for instruction. In other words, this program does not involve teaching; instead it improves skills concerning a foreign language, vocabulary and grammar through practice. Therefore, it is essential to develop such programs for different subjects and different scientific fields. The main purpose of these programs is not teaching but making decisions and do practice with the help of given questions. Generally, such programs are used in mathematics, physics, chemistry and foreign languages.

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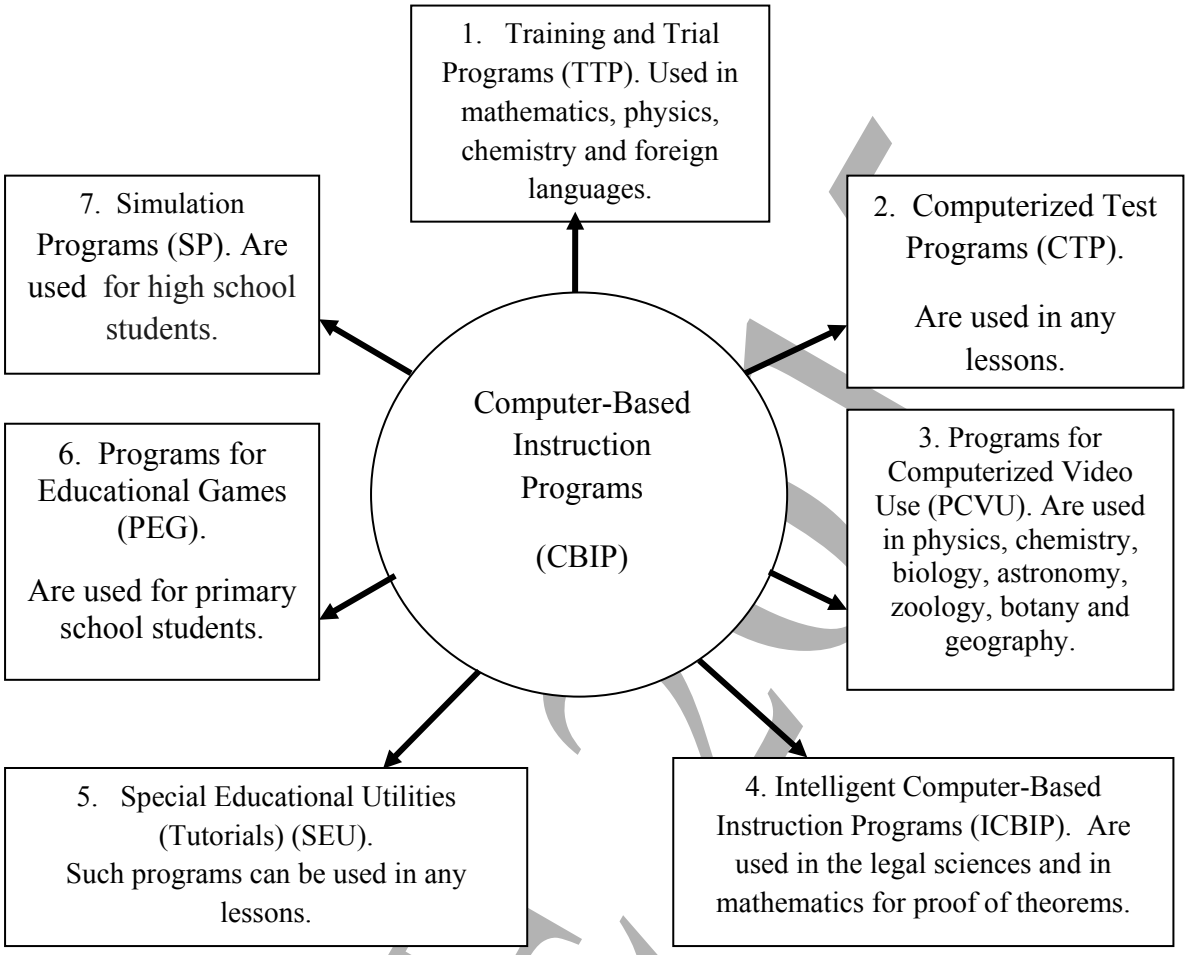


Figure 1. Computer-Based Instruction Programs

2. Computerized Test Programs (CTP): Although the word "learning" covers a very long period in education process, in our language it is frequently misused instead of the term "education". For this reason we prefer the word "education" and talk about "education process". Learning, education and program evaluation help to define elements in education process in a better way. In the end of this process, we can reach information about student's needs, education strategies and quality or effectiveness of the program. Through modern technology and creative programs, it is possible to achieve interaction and combine traditional education tools of measurement and evaluation. These data should be used in order to apply them into real situations of learning. Here, we confront computerized tests. Therefore, it is essential that education model should be based upon these rudiments. Such programs are used in any lesson.

3. Programs for Computerized Video Use (PCVU): New technologies are the main components of the mentioned multimedia systems. One of these components in video that is used in computer-based instruction. The video system is traditionally known as videotape or videodisk. These two systems, despite their educational and technical difference, carry the same information. During the computer-controlled use of these technologies, or the duration between "start" and "finish", "videodisk" rapidly transfers information and images to the screen; in other words it operates fast. Such programs are mainly used in physics, chemistry, biology, astronomy, zoology, botany and geography lessons.

4. Intelligent Computer-Based Instruction Programs (ICBIP): Here, we define innovative parts of Computer-Based Instruction Programs (CBIP), which are open to new ways of creativity and technological development, logical and talented, as Artificial Intelligence (AI). The research on Artificial Intelligence is a recent scientific field investigated by scholars whose potential scientific studies and findings are included. In a way, all tested findings were analyzed in this phase, become realized and presented to the market. Therefore Artificial Intelligence (AI) studies and Intelligent Computer-Based Instruction studies should coincide.

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Respectable scholars and CI experts such as Dede (1989, 1998), Jonassen (1988, 2000), Jonassen et. al. (1999), Kearsley (1989), Venezky and Osin (1991) wrote noteworthy articles on this issue. In addition, İpek (2001) did research on this subject. According to these studies, ICBIP approach contains the following major components:

a) Student model or approach
b) Scientific level of students
c) Pedagogic level and approach
d) The design, effective use and development of the system.

Developing such type of model requires a long term and great effort. Nevertheless, this system (*expert systems*) could be applied in smaller organizations and different levels of school in the future. The main purpose of these programs is to create intelligent environment for students. Such programs are used in legal sciences and in mathematics to prove theorems. The creation of these programs is very difficult.

5. Special Educational Utilities (Tutorials): The aim of this program is to provide an interactive environment through one-to-one education between a student and a computer. Therefore, when a topic is put forward, questions concerning this topic are asked to a student. Then decisions are made in accordance with the student's comprehension. During the process, the program (*tutor*) can provide new information, feedback on students' shortcomings (*review*) and additional information (*remediation*) to incompetent students. It is a suggested individual instruction technique for computer-based instruction. Such programs can be used in any lesson.

6. Educational Game Programs (EGP): Educational Game Programs provide students with motivation. In a way, it is a waste of time to use a computer-based instruction program without any educational value. It is very important how educational games influence education and instruction. In order to achieve this, student's control and qualifications of the program should be at high levels. The use of a quality program and its contribution to learning will make instruction effective. The important thing is that these game programs motivate students. These programs are designed as significant and realistic games. Therefore, during the learning process, students obtain valuable talents or information. It is impossible not to agree with this view. Most importantly, the properties of game programs with educational value should be developed. The main purpose of these programs is to give the knowledge to students through a variety of games. Such programs are used for primary school students.

7. Simulation Programs (SP): It is difficult to define and explain the impacts of simulation programs in the processes of education and instruction. In these processes, students imitate a learning situation and environment or establish similarities with reality, then, he or she finds opportunities to learn and realize it. In computer-based instruction, simulation programs might trigger a very creative and interesting way of learning. A sub-level of these programs is to present and demonstrate a virtual situation. However, the aims and process of learning are not realized in this phase. These programs only visually present some situations. Teacher can use a simulation program and present it to his or her students in a class activity. Such programs are used for high school students.

CONCLUSION

In conclusion, this study discussed the use of computers in education and instruction. Furthermore, the study evaluated computer-based instruction and its techniques, it presents basic functions of these techniques in terms of creative, critical and significant learning. At the same time, the study briefly discussed problem solving environments, intelligence computer-based instruction and interactive media technologies. The study briefly introduced methods and techniques of computer-based instruction and gave clues about the accurate use of these techniques and CBIP design. Here, considering our fields of expertise, experience and works, we prefer this definition because new terminologies used in Azerbaijan and Turkey generally begin with the contributions of experts who are engaged in technical education process. This approach is a suggestion and it also underlines a necessity for a vocabulary, which is convenient to our language and which might be widely accepted.

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CONCEPT IMAGES OF PRE-SERVICE MATHEMATICS TEACHERS IN EDUCATIONAL AND SCIENCE FACULTIES REGARDING THE BASIC CONCEPTS OF GEOMETRY

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ABSTRACT

The main purpose of this research is to determine the concept images of pre-service mathematics teachers in educational and science faculties regarding the basic concepts of geometry (line, line segment, plane, space, vectors and vector operations). The study group of the research was consisted of 90 pre-service teachers majoring in mathematics in a public university educational and science faculties. The Geometrical Concept Test about particular mathematical concepts including four open-ended questions was applied to pre-service teachers. The data of this study were evaluated by using qualitative and quantitative research methods. Quantitative data was obtained through frequency and percentages and qualitative data was collected by coding the responses provided by the pre-service teachers to the open-ended questions. An agreement over the data was reached by comparing the data which was coded independently by the researchers with each other. After deciding on the common evaluation criteria, concept images of the pre-service teachers regarding the basic geometrical concepts were analyzed. According to the findings obtained in this study, pre-service teachers both in educational and science faculties had inadequate concept images regarding the basic geometrical concepts according to their grade levels including freshman students with the lowest rates. Pre-service teachers reported that they did not recognize the importance of the concepts as they did not investigate the definitions of the concepts and the importance of this case was not emphasized. Suggestions were made for the future researchers in the light of the research findings.

Keywords: mathematics teachers

INTRODUCTION

When teaching and learning mathematics is considered, the structure of mathematics is one of the most important factors, which is needed to be paid attention. Mathematics as a discipline because of its axiomatic structure is different from other sciences and based on definitions and axioms. Although the concepts are used without knowing their definitions in everyday life, they are given with their definitions in mathematics. In this sense, they are different from the concepts in everyday life. Our first experiences regarding with the mathematical concepts are related with their definitions. The other concepts are learnt through these first experiences. For this reason, the basic necessity for learning mathematics conceptually is to construct concepts accurately.

Mathematic educators Tall and Vinner (1981) defined cognitive structure including all the mental images that individuals created in their minds, related with the mathematical concepts which are accepted as accurate by the mathematics authorities, as “concept image”. Since individuals create concept images regarding with the mathematical concepts through their own experiences and they have different experience processes about the concepts, the concept images of the individuals may not be in accord with the abstract mathematical definition of the concept. This situation is very important for the prospective teachers who will make the organization of an effective teaching. Because, preparing learning environments where prospective teachers can reach conceptual learning dimension is only possible when they have accurate and extensive concept images in themselves (Ma, 1999; McDiarmid, Ball, and Anderson, 1989). According to Brown and Borko (1992) one of the most important obstacles in front of the training of the prospective teachers is their limited knowledge of mathematics. It can be claimed that these opinions are also valid for teaching geometry (Brown and Borko, 1992; cited in: Bozkurt ve Koç, 2012).

Geometry is among the most important discipline areas of mathematics which improves multi-dimensional thinking abilities. According to Baykul (2004) geometry is a science related with point, line, plane, planar shape, space and spatial shape and correlations among them, For Hızarcı (2004) it is a science which helps

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individuals to have different perspectives, and enables them to reach a solution by visualizing figures. Teaching basic geometrical concepts is becoming more important when we consider geometry as a bridge for individuals to understand the environment where he/she lives and other mathematical subjects. At this point it is necessary to now conceptual information levels of prospective teachers who will construct basic geometrical concepts into students' minds.

It is seen that there are difficulties in defining geometrical concepts (Duatepe Paksu, Musan, İymen and Pakmak , 2012, Gutierrez and Jaime, 1999; Linchevski and others., 1992; Koç and Bozkurt, 2011; Tunç and Durmuş, 2012); they cannot think that there can be more than one definition referring to a single concept (Linchevski and others., 1992); they have memorized the definitions of the concepts (de Villiers, 1998) If individuals who are learning mathematics will study in a major about mathematics, they should learn definitions and how these definitions will be used (Vinner, 1991). In accordance with the facts stated above, carrying out studies which will present the concept images of the prospective teachers related with geometrical concepts will especially play an important role in evaluating how prospective teachers construct content knowledge in educational and science faculties that are training teachers. For this reason, it is necessary to increase the number of studies which set forth the importance of conceptual knowledge and measures the conceptual knowledge of prospective teachers. The purpose of this study is to analyze concept images of prospective teachers who are studying in the third year of teaching mathematics department of educational faculties and 1st and 4th year in science faculties related with the geometrical concepts such as line, plane, space and vectors. In this context it was searched how line, plane, space and vector concepts were defined by the participants.

METHOD

Research Design

This study was carried out according to both qualitative and quantitative research methods. While percentage and frequency were used as quantitative analysis, document analysis and observations were conducted during qualitative research procedure. The data obtained was evaluated by using 'content analysis' technique. The purpose of content analysis is to reveal the truths that can be hidden in the data and to describe the data. (Yıldırım and Şimşek, 2008). The basic operation in content analysis is to combine similar data around specific concepts and themes and interpret them by organizing the data in a way that readers can understand.

Working Group

The study group was consisted of 90 prospective teachers from a public university in Ankara. 30 of those students (21 female and 9 male) are third year students in teaching primary school mathematics department and freshman (20 female and 10 male) and senior students (23 female and 10 male) in mathematics department of a science faculty respectively. 71 % of the prospective teachers are female and 29 % of them are male.

Data Collection Tools and Collecting Data

The data were collected by using 'Basic Geometric Concepts Test (BGCT)' which was prepared by the researchers. This form prepared by the researchers was distributed to prospective teachers and they were asked to fill in this form. Prospective teachers were given 45 minutes (one course) to fill in this form. BGCT was consisted of 10 open-ended questions which were developed by researchers by taking expert opinions to determine the concept images of prospective teachers in basic geometric concepts. Only four questions of BGCT were evaluated for this study.

Data Analysis

The study started by conducting a test with ten questions to prospective teachers who are studying in teaching primary schools department of an educational faculty and mathematics department of a science faculty in a public university in Ankara . After the application of the test, the data were analyzed separately. Some questions were combined under one question again by considering the similarity of the students' answers. After the results of the evaluation, the agreement between the researchers and the experts was calculated by using the formula specified by Miles and Huberman (1994) as in the following *"The Ratio of Agreement = [Agreement /(Agreement + Disagreement)] x 100"*. It was determined that the agreement ratio between expert and researchers differed between 0.89 and 0.95. Thus, four basic questions which involved line, plane, space and vector concepts and that could serve the purpose of the study were considered and an evaluation was conducted over these four questions. In order to analyze the obtained data, first of all three criteria were determined by the researchers. These were; i) correct ii) acceptable iii) wrong and empty. In this sense, the analyses were carried out according to the criteria set by the researchers. The researcher and two experts from teaching mathematics major evaluated each problem separately and the results were then compared. The differences appeared were

discussed and then an agreement was obtained. In conclusion, the results of the evaluation conducted in a way to be related with each dimension were presented on the basis of frequency (f) and percentage (%).

The Reliability and Validity of Study

The validity in qualitative research means observing the searched issues objectively as much as possible and as it is (Kirk & Miller, 1986). In order to present a holistic picture of the searched topic, the researcher should confirm the data and outcomes of the study through variation, participant confirmation and colleague confirmation (Yıldırım & Şimşek, 2008). In this regard, data of this study was analyzed by two experts in the field of teaching mathematics other than the researchers and the validity of the study was provided through colleague confirmation.

The qualitative research begins with the thought that realities constantly change according to individuals and to environments and repeating the same study with similar groups may not create the same results. In this regard, in order to provide reliability to qualitative research, the researcher should define the individuals who are the source of information clearly (Yıldırım & Şimşek, 2008). In this study, to get reliability, the study group defined in details.

In addition to that, the data obtained were frequently given in the study. Besides, the results of the evaluation were presented on the basis of frequency (f) and percentage (%). The purpose here is to increase the reliability of the data, to reduce bias and to provide a chance to make a comparison between the data. Besides, the data presented in numbers in order to have an opportunity to repeat this small scale study later on to reach a wider sample with tools such as surveys (Yıldırım & Şimşek, 2008).

FİNDİNGS AND COMMENTS

In this part, the findings regarding with 'the concept images about the line, plane, space and vector concepts of prospective teachers who are respectively third year students in teaching primary school mathematics department, freshmen and senior students in mathematics department of a science faculty' were presented.

Table 1: 'BGCT' Test Results of Third - Year Prospective Teachers who are studying in Teaching Primary School Mathematics Department

	Correct	Acceptable	Wrong	Empty
1st Question (Line)	2/30**; %6.6**	12/30; **%40**	8/30; **%26.6**	8/30; **%26.6**
2nd Question (Plane)	5/30; %**16.6**	20/30**;%66.6**	5/30; **%16.6**	0/30; **%0**
3rd Question (Space)	12/30; **%40**	10/30**;%33.3**	4/30; **%13.3**	4/30, **%13.3**
4th Question (Vector)	1/30**, %3.3**	25/30;**%83.3**	3/30; **%10**	1/30; **%3.3**

According to Table 1, a few like 6% of the prospective teachers were able to describe correct equation defined in R^3 vector structure according to the change of the t parameter; while 40% of them gave acceptable and 26.6 % of them gave wrong answers to this question, 26.6 % of them did not answer this question. Also, while 16.6 % of the primary mathematics prospective teachers defined plane concept correctly, 66.6 % of them gave acceptable answers and 16.6 % of them gave wrong answers. Similarly, while 40 % of the primary mathematics prospective teachers were able to define space concept correctly, 33.3 % of them gave acceptable and 16.6 % of them gave wrong answers. 16.6 % of them did not answer this question by leaving empty to this question. On the other than while 3.3 % of the primary mathematics prospective teachers were able to define vector concept correctly, 83.3 % of them gave acceptable and 10 % of them gave wrong answers. 3.3 % of them did not answer this question by leaving empty to this question. According to these results, it can be said that prospective teachers have difficulties in expressing the conceptual meaning of the vector concept and also they were not able to construct the change of R^3 vector equation according to the situation of t parameter of given line. In general sense, it is thought that the percentage of giving correct answers for the 'space' concept is higher than the other concepts; this may be because of the fact that prospective teachers use space concept more in function subject of the courses such as General Mathematics and Analysis I, II and III.

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Table 2: 'BGCT' Test Results of First Year Prospective Teachers who are studying in Mathematics Department of a Science Faculty

	Correct	Acceptable	Wrong	Empty
1st Question (Line)	3/30**; %10**	4/30, **%13.3**	9/30**; %30**	14/30**;%46.6**
2nd Question (Plane)	2/30**; %6.6**	8/30,**%26.6**	18/30; **%60**	2/30; **%6.6**
3rd Question (Space)	11/30;**%36.6**	5/30**;%16.6**	8/30**; %26.6**	8/30, **%26.6**
4th Question (Vector)	1/30**, %3.3**	21/30; **%70**	2/30**; %6.6**	6/30; **%20**

According to Table 2, 10% of the mathematics prospective teachers were able to describe correct equation defined in R^3 vector structure according to the change of the t parameter; while 13.3 % of them gave acceptable and 30 % of them gave wrong answers to this question, 46.6 % of them did not answer this question. Also, while 6.6 % of the science faculty first year prospective teachers defined plane concept correctly, 26.6 % of them gave acceptable answers; 60 % of them gave wrong answers and 6.6 % of them did not answer this question. Similarly, while 36.6 % of the science faculty first year prospective teachers were able to define space concept correctly, 16.6 % of them gave acceptable and 26.6 % of them gave wrong answers. 26.6 % of them did not answer this question by leaving empty to this question. Besides, while 36.6 % of the science faculty first year prospective teachers were able to define vector concept correctly, 70 % of them gave acceptable and 6.6 % of them gave wrong answers. 20 % of them did not answer this question. According to these results, the concepts that science faculty first year prospective teachers gave most of the correct answers were first of 'space' and line concepts; the least number of correct numbers were given for the concepts of 'plane' and 'vector'. When acceptable answers are considered, although prospective teachers did not fully construct the concept of vector, it can be said that they still have information about this concept. When wrong answers are evaluated, it can be stated that prospective teachers have difficulties in describing the concept of plane. When all the wrong and empty answers for all the concepts are considered in general, it can be expressed that science faculty first year prospective teachers have weak concept images regarding the concepts within the scope of this study.

Table 3: 'BGCT' Test Results of Fourth Year Prospective Teachers who are studying in Mathematics Department of a Science Faculty

	Correct	Acceptable	Wrong	Empty
1st Question (Line)	6/30**; %20**	8/30, **%26.6**	11/30;**%36.6**	5/30; **%16.6**
2nd Question (Plane)	0/30**; %0**	5/30,**%16.6**	21/30; **%70**	4/30; **%13.3**
3rd Question (Space)	11/30;**%36.6**	6/30**;%20**	5/30**; %16.6**	8/30,**%26.6**
4th Question (Vector)	4/30, **%13.3**	22/30;**%73.3**	0/30**; %0**	4/30; **%13.3**

According to Table 3, 20% of the science faculty fourth-year mathematics prospective teachers were able to describe correct equation defined in R^3 vector structure according to the change of the t parameter; while 26.6 % of them gave acceptable and 36.6 % of them gave wrong answers to this question, 16.6 % of them did not answer this question. Also, while none of the science faculty fourth year prospective teachers defined plane concept correctly, 16.6 % of them gave acceptable answers; 70 % of them gave wrong answers and 13.3 % of them did not answer this question. Similarly, while 36.6 % of the science faculty fourth year prospective teachers were able to define space concept correctly, 20 % of them gave acceptable and 16.6 % of them gave wrong answers. 26.6 % of them did not answer this question by leaving empty to this question. Besides, while 13.3 % of the science faculty fourth year prospective teachers were able to define vector concept correctly, 73.3 % of them gave acceptable and 13.3 % of them did not answer this question. None of the science faculty fourth year prospective teachers gave wrong answer to this question. According to these results, the concepts that science faculty fourth year prospective teachers gave most of the correct answers were first of 'space' and 'line'

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concepts; the least number of correct numbers were given for the concepts of 'plane' and 'vector'. When acceptable answers are considered, although prospective teachers did not fully construct the concept of vector, it can be said that they still have information about this concept. The most outstanding result here is that none of the senior students did not provide correct answers to plane concept. When wrong answers are evaluated, it can be stated that senior prospective teachers like the other prospective teachers have difficulties in describing the concept of plane. When all the wrong and empty answers for all the concepts are considered in general, it can be stated that science faculty fourth year prospective teachers have weak concept images regarding the concepts within the scope of this study.

CONCLUSİON, DİSCUSSİON AND IMPLİCATİONS

It can be said according to the results of this study which was conducted to search the concept images regarding the basic geometrical concepts of prospective teachers who are in their third year in an educational faculty and in their first and fourth year in a science faculty that prospective teachers generally define the concepts and have difficulties in understanding the symbolic structure of the mathematics. Considering both wrong and empty answers altogether, primary mathematics department first year prospective teachers could not sense line concept according to t parameter; a few of them were able to give correct answers to plane concept. Considering the space concept one fourth of the prospective teachers were not able to give an answer and approximately one fifth of them were not able to give an answer to vector concept. If we discuss these results together with the acceptable answers of the prospective teachers to questions, in fact it can be said that they have weak concept images. Because, most of the prospective teachers were not able to give correct answers to line question; that is they had difficulties in understanding line equation given in a symbolic form. This result is thought as an indicator that mathematical language that was constructed by the participants did not turn into a defining ability for the other concepts. Besides, while almost half of the third year educational faculty prospective teachers were able to define space concept, most of them were able to define vector concept in acceptable level. The fact that participants did not acquire geometrical concepts conceptually may have prevented them to make correct definitions (Linchevsky and others., 1992). Therefore, it can be accepted as an indicator that the third year prospective teachers did not internalize Analytic Geometry and Geometry courses given in the educational faculty so they were not able to acquire conceptual learning dimension. This finding of the study is parallel with the results of the following studies (Duatepe Paksu and others. 2012; Koç and Bozkurt, 2011; Tunç and Durmuş, 2012).

On the other hand, discussing the wrong answers together with the empty answers of the science faculty mathematics department first year prospective teachers, one fourth of the prospective teachers were not able to understand line concept given in vector form according to t parameter; more than half of the prospective teachers were not able to give correct answers to plane concept. Discussing the space concept, while half of the prospective teachers were not able to give an answer to the question, for the vector concept one of fourth of the teachers were not able to answer to the question. Similarly, if we discuss these results together with the acceptable answers of the prospective teachers to questions, it can be said that science faculty first year mathematics prospective teachers' concept images are highly different than their concept definitions. This situation is an important result that should be underlined for the prospective teachers who came to mathematics department by answering the majority of the mathematics and geometry questions in university entrance examination.

Evaluating science faculty fourth grade mathematics prospective teachers both who did not answer to the 'line' question and who gave wrong answers together, it can be said that more than half of the prospective teachers were not able to specify a line equation given in a vector form according to t parameter. This situation emerges as a quite thought provoking issue when it is evaluated in terms of the fact that the education received in universities improves prospective teachers' ability to use mathematical language. On the other hand, since the participants are science faculty fourth year students, this result is important both in terms of pedagogic content knowledge about how future teachers will transfer the concepts that they were not able to construct in their own minds to students and questioning why the university education could not construct permanent knowledge level Besides the fact that none of the teachers were able to answer the plane question and only one fifth of the prospective teachers were able to give acceptable answers make us to think that in fact it is a result of the attempt to teach geometrical concepts generally by using examples instead of definitions. In de Villiers' study (1998) the dominant idea is stated as the road followed for improving the understanding of students in geometry concepts through giving concepts by using examples without engaging students with the complex structures present in the nature of the process of defining geometric concepts will create more understandable structures. The results of this study are also parallel with the idea stated above. Also, as Villers stated, constructing mathematical definitions in mathematics education was not considered as important as the mathematical activities such as problem solving, making hypothesis, generalizing and proof. This finding of the study is also supporting de

Villers. On the other hand, although the participants gave more correct answers to space concept than the others, it was only 36.6% of the prospective teachers. However, only 13.3% of the participants gave correct answers to vector concept. We can say from this result that prospective teachers use concepts completely in operational level without questioning them and they are not able to define even the very basic concepts. This result of this study fits with the finding of Çetin and Dane (2004) together with Duatepe Paksu, Musan, İymen and Pakmak (2012) that prospective teachers had lack of knowledge about the geometric concepts, they were not able to recognize concepts and they were not able to use them. In the light of the findings of this study, the necessity to emphasize conceptual learning is once again occurred. Even though only the concept images about the basic geometrical concepts of prospective teachers who are studying in educational and science faculties were analyzed in this study, similar studied should be carried for the other course contents. Besides, the importance of concepts and constructing accurate concept images should be evoked to prospective teachers. According to Schneider and Stern (2005) conceptual knowledge is the knowledge which involves basic concepts and principles in the subject and the relations among them for this reason, definitions of the concepts play an important role in constructing conceptual knowledge. From this perspective the researcher who asks the question why thinks that it will be useful to discuss the necessity of how learning environments and the presentation style of the course contents can be enriched in universities for training prospective teachers.

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CONGRUENCE IN PHRASING BETWEEN MUSIC AND RHYTHMIC GYMNASTICS ROUTINE AS PERCEIVED BY MUSICIANS AND DANCERS

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ABSTRACT
Phrasing is an important aspect in both music and choreography, not only for dancing but also in many sports routines such as rhythmic gymnastics, martial arts, synchronized swimming and figure skating. The understanding of phrasing between music and movement provides a clear and meaningful structure to the entire routine. This study aims to look into whether perception of the congruence of phrasing varies if respondents are trained in different disciplines. Fifty-one musicians and fifty-one dancers participated in this experiment and were asked to choose between two videos. One video was taken from an original rhythmic gymnastics routine and the other was modified to enhance the musical phrasing to synchronize with the movement of the gymnast. The result shows that the enhanced video was chosen by the majority of both musicians and dancers regardless of their training. This indicates that the congruence of phrasing between music and movement was identified by both groups of respondents.

INTRODUCTION
Phrasing is one of the important elements in contributing to the structure and direction in music, dance, or movement-related activities such as sports routines. Parallels between music and dance have been explained (Hodgins 1992) in which phrasing in both subjects contributes to the structural content as categorized in one of the intrinsic relationships defined by Hodgins, along with the rhythmic, dynamic, textural, qualitative and mimetic. Structure in dance relates to the corresponding motives or figures and phrasing. It was stated that 'structural correspondences are created when musical structures, motives and phrasing match the morphodynamic architecture of the choreography' (Mason 2012). Without appropriate interpretations between music and dance or movement-related routines, the perceptions of phrasing between these two subjects could contradict or contribute to a different meaning when the two subjects are combined. This study reports a preliminary study on the perception of phrasing in a rhythmic gymnastics routine, using ribbon as the apparatus, by two groups of respondents who were trained in different disciplines - music and dance. The research aimed to investigate if a more congruent phrasing between music and movement could be similarly identified by both groups of respondents. The result was taken from a project analyzing congruence between music and sports routines from a range of different aspects.

PERCEPTION OF PHRASING IN MUSIC AND MOVEMENT
Before looking into dance or any choreographed routine, analysis of phrasing of the movement amongst instrumentalists was conducted long ago to look at how musical phrasing affects the movement in musicians. It was found that increased movement by an instrumentalist is synchronized with increased rates of phrasing, dynamics and rubato (Juchniewicz, 2008:424). It was also revealed that the movement of the performer relates to the rhythmical structure of the phrases in a piece of music (Wanderly et al., 2005). In the same research, it was found that performers' movements were noticeable at the beginning and ends of phrases.

In the context of choreomusical analysis, Hodgins (1992:39) parallels music and movement under the structural category in intrinsic relationship. Intrinsic relationship was defined as 'emanate[ing] from the realms of musical and kinesthetic gesture […] their interpretation largely unprejudiced by context' (Hodgins, 1992:39). Phrase/period was listed as part of the structural content in Hodgins's choreomusical theory along with 'motive/figure' and 'larger structures'. Synchronizations between dance/movement and music were investigated in many researches and these proved that the congruence between music and movement can be perceived in different conditions (Krumhansl and Schenck, 1997; Mitchel and Gallaher, 2001). Similarly to dance, sports routines such as taichi, figure skating and rhythmic gymnastics equally involve music and choreography. Phrasing between the two was examined qualitatively (Loo and Loo, 2013a), analyzing the perception of musical phrasing employed in a tai chi routine from a musical and dance perspective. The relationship between musical details and the philosophy of tai chi movements was also examined (Loo and Loo, 2012; Loo and Loo, 2013b;

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Loo and Loo 2013c). In a more quantitative approach, the perception of phrasing was also analyzed in order to examine whether an intended congruence of phrasing could be identified by respondents (Loo et al., 2013d). It reveals that the video of a routine with enhance synchronization between music and movement was rated significantly to have a better phrasing. However, these perceptions were based very much on a musical perspective since all respondents came from a musical background. A preliminary study on respondents with a background in dance was also investigated through a rhythmic gymnastics routine (Loo and Loo, 2014). Although the majority of the respondents generally rated the video with an intended congruence between music and movement contributed more to the overall performance of the routine, the results were not compared to other respondents with different backgrounds.

METHODS

Video for comparison

A rhythmic gymnastics routine (using ribbon) performed by a trained gymnast was recorded for this study. Using the same video recording, the music was changed with a new composition which was intended to provide a better congruence in terms of phrasing, accents, tempo, rhythm and so forth. The same routine in the video was then edited; one with the original musical track used by the gymnast and the second with the new music composition. This was to make sure that the sonic environments in both videos were of the same quality.

Participants and procedure

Fifty-one musicians and fifty-one dancers participated in this experiment. All respondents were between the ages of eighteen and twenty-two. The musicians were undergraduates in one of the tertiary education colleges who have a musical background of at least eight years; the dancers were either students or performers who had been trained in ballet for at least eight years. As this reports on one of the preliminary surveys, respondents were asked to choose which of the video provides a better match in phrasing between music and movement. To avoid an irrational primacy effect, twenty-six respondents from each of the musician and dancer group watched the original video followed by the second video with new accompaniment; the rest of the respondents from both groups watched the video with new accompaniment followed by the original. After watching both videos, they were required to rate and choose either video 1, video 2 or 'both the same' based on the given questions. A chi-square test was used to analyze whether there are any significant differences in the ratings between musicians and dancers.

FINDINGS AND DISCUSSION

All respondents (n=102) evaluated which videos has the better phrasing quality between music and movement; some chose 'both the same' when they felt there was no difference between the two. Table 1 and Figure 1 show the percentage and frequency of the selection by the two groups of respondents. Most of the musicians (66.7%) chose video 2, which was edited with the new accompaniment, to have a better congruence in phrasing between the music and movements by the gymnast. The same applies to the dancer group, although the percentage was not as high in comparison to musicians. 35.3% of the dancers felt that both the videos present the same quality in terms of phrasing.

Table 1: The frequency distribution between musicians and dancers.

Groups	Video 1	Video 2	'Both the same'	Total
Musicians	6 (11.8%)	33 (64.7%)	12 (23.5%)	51
Dancers	5 (9.8%)	28 (54.9%)	18 (35.3%)	51

From the chi-square analysis ($p < 0.05$), it is revealed that there is no significant difference in the perception of phrasing between musicians and dancers based on the result $X^2 = 1.701$ and $p = 0.427$ (Table 2). The Cramer V table further confirms that there is no significant relationship between specialization and perception of phrasing. This means that the phrasing in this experiment was perceived similarly by two groups regardless of the respondents' backgrounds. Although the video was enhanced based on a musical perspective towards the

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choreography and movement, dancers, who acquire more experience in using music accompaniment in various movements, similarly noticed the increase of congruence in phrasing between music and movement.

Figure 1: Selections of videos by musicians and dancers

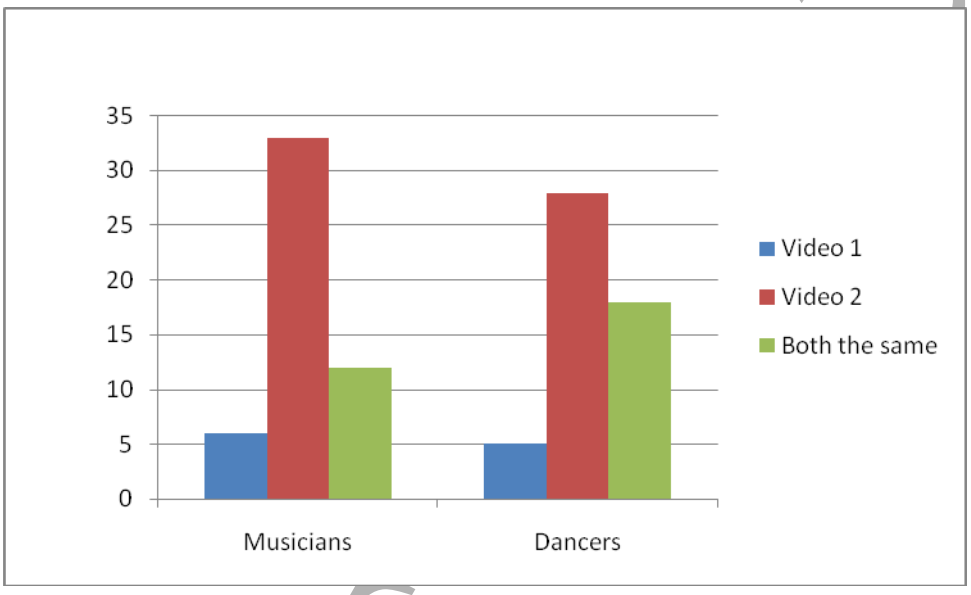


Table 2. Results of Chi-Square Analysis

Groups	Perception on Phrasing			X^2	sig-X^2
	Video 1	Video 2	'Both the same'		
Musician	6	33	12	1.701	0.427
Dancers	5	28	18		

Although focusing on a sports routine, this result further supports that the level of congruence between can be identified and perceived by viewers, as in much research in both dance (Krumhansl and Shenck, 1997; Mitchell & Gallaher, 2001) and film (Marshall and Cohen, 1988; Bolivar et al 1994; Camurri & Mouslend, 2010). This experiment also parallels other results in the same project that we are analyzing and investigating in relation to music and movement in different sports routines such as tai chi (Loo and Loo, 2015). As addressed in this paper, another concern to be considered is to look into the different perceptions of audiences with various backgrounds and levels of experience, the reason being that although music is used, many of these subjects such as sports routines and dance have been performed to and evaluated by experts who may have little or no musical background. Despite being competitive events, many of these dances or sports routines are performed to public audiences who may or may not have a dance or musical understanding but may be trained in other disciplines. As in Brownslow et al.'s (1997) study on the perception of dancers' movements and characteristics, it is found that general traits and characteristics were recognized by both professional and novice dancers but details were

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only noticed by the professional dancers. In terms of phrasing, it was also found that regardless of a structured or unstructured movement, experts in dance were better at recalling a phrase than novices (Starkes et al., 1990 taken from Henley 2014). The merging of two subjects also creates many subjective and extreme opinions since all subjects were looking closely from their own perspectives. Therefore, both qualitative and quantitative studies are useful to support the aim of these studies.

CONCLUSIONS

This paper investigates the perceptions of phrasing between music and movement by respondents who have a background in music and dance. Since phrasing is one of the aspects shared between the two subjects, the research aimed to look into whether perceptions are vary due to the different background and expertise. Using one of the routines as a model for experiment, it was found that there is no significant difference between the perceptions of phrasing by musicians and dancers. The current research not only aimed to look into the importance of congruence between the two subjects, to investigate the different perceptions of viewers, but also to analyze the ability of music to change different perceptions or the quality of a movement. These experiments are in progress and will be reported in future articles.

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CONSCİOUS CONSUMERİSM IN PRİMARY EDUCATİON 4TH GRADE CURRİCULUMS

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Today it is being experienced huge man-made ecological devastation. Additionally, consumer behavior is evolving negatively with people's changing habits. Internalization of consumer consciousness has great importance to save the humankind. With regard to this internalization, consumer education is important to gain consumption consciousness. Therefore, elementary school period is too critical for consumer education to gain consumer awareness. The aim of this study is to examine Primary School 4th Grade Curriculum in terms of consumer consciousness. The study was designed with documentary analysis which was one of the qualitative research methods. Data were analyzed with inductive analysis. In the current primary school education program there is no separate course on consumer consciousness or related issues. In addition, the components of consumer consciousness does not take place within the main goals, basic approaches, skills and values of the curriculums. However, it is taken place in some subjects, themes and units of courses with some activities to increase student's level of conscious consumerism. Most of the content about conscious consumption is provided through Social Studies courses. In conclusion, 4th grade primary education curriculum shows inadequate content in terms of raising consumer consciousness among students.

Keywords: conscious consumerism, primary education curriculums, document analysis

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CONSCRIPTION, CRISIS, CONTINUANCE AND CONTINUITY

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ABSTRACT
Concern for, analysis of, and speculation about higher education have intensified during the first fifteen years of the new millennium. Broad access to digitized information, including online courses and social media has demystified the creation and conveyance of knowledge. As expectations for economic and social stability associated with earning baccalaureate degrees falls short of desired outcomes for many graduates, there has been a call for increased transparency and accountability throughout higher education. Public scrutiny, whether from individuals, legislative bodies or academic evaluators confirm inconsistent and incompatible preparation of undergraduates for projected realities and demands of the future. Knowledge and skills required for entry-level professional positions are neither efficiently delivered nor effective preparation for many graduates. The collective history, evolution and purposes of higher education around the world, may be summarized by four common approaches. *Firstly*, education is designed to enhance communication through a common vocabulary of shared meaning that enables individuals, families and societies to work, play and live together with minimal conflicts, disturbances and disruptions. *Secondly*, education provides incentives and support for those who can solve important problems through deliberation, collaboration and research. A *third* function of education has been to nurture creativity; with a *fourth* and final purpose, to encourage thought and contemplation. As higher education expands in the *global* context it appears irrefutable that formal post-secondary study is now so absolutely necessary for survival, that it is to be openly disseminated and cost- free to everyone; in essence, a *de facto* human right. This premise is supported by a proliferation of open source scholarship, online courses and multi-national campuses. The purpose of this paper is to examine four ways of analyzing the state of higher education as *conscription, crisis*, *continuance* or *continuity*, since each approach may lead to unique conclusions about, and strategies for the future of higher education. Recent challenges about quality, meaning and integrity of academic programs examine critical issues of access to, equity and excellence of academic programs, since financing education is often an implied or explicit responsibility of political authority and governing bodies. These perspectives, many of which are captured in major motion pictures, will be investigated through the lens of higher education in the United States, a nation known for juggling multiple systems of post-secondary education that anticipates emerging industry needs, personal career goals and supports socio-political cohesion.

Key Words: Access, equity, global learning, higher education, human right, quality, social justice, transparency

INTRODUCTION

The undergraduate degree is often, and increasingly, viewed as a minimum credential leading to full time professional employment. While employers, as well as current employees may describe the diploma as an expensive and time-consuming *Harry Potter*-style port-key to a full-time entry-level position, still others believe an academic degree confirms both ability *to learn* and ability *to do*. Of interest, is the decline in belief that a primary role of education is fulfilling societal goals; perhaps understandable in light of the increasingly global context knowledge acquisition and application.

The United States is known for its historically democratic approach to providing access to education, and in recent decades devising mechanisms to fund higher education so as not to encumber graduates with debt that undermines economic viability. Higher education has come under increased scrutiny in the new millennium, and the U.S. system is frequently at the heart of both criticism and speculation as nations seek successful models for educating their masses. Informing and influencing directions for higher education in coming decades are demographic trends, technological advances, economic challenges at the domestic and international levels and socio-cultural changes (Keller, 2008). The purpose of this paper is to examine issues challenging higher education and to identify common themes that will shape either future of higher education.

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The four historic purposes of higher education, introduced above, may be described as 1) preparation for work, 2) providing a foundation for well-rounded and deeply grounded learning, and 3) for advancing research and scholarship; more recent emphasis on attention to the environment, social justice , international understanding and increased awareness of and sensitivity to religion, culture, gender, and sexuality (Keller, 2008). Establishing a coherent, if not common mission, as well as devising a structure for delivering ample education to the population ready to achieve desired outcomes, is a formidable task. This is further complicated by the philosophy driving the required minimum level of education and the motivation of those participating. Four guiding questions are posed, as a result of a preliminary examination of literature. Informed by integrative theoretical frameworks such as critical pedagogy since power differentials inevitably result from differences in educational background (Freire, 2005), Experiential Learning Theory (Kolb & Kolb, 2008; Kolb, 1984) that captures the integrative and reflective components of holistic learning, as well as common core competencies - writing, math, critical reasoning, information literacy, and the ability to appropriately use technology in the access and production of knowledge.

GUIDING QUESTIONS

1. Is higher education an individual right and voluntary experience, or is an investment in compulsory education necessary to attaining the greater, common good?
2. What is the highest level of formal education that should be supported through public funding?
3. Are there common outcomes, metrics and analytics helpful in determining educational effectiveness for all learners?
4. Can (should/ will) higher education successfully disconnect learning from lifestyle to enhance value of learning and knowledge?

Four descriptive approaches to higher education emerged; conscription, crisis, continuance, and continuity, and are discussed in the following sub-sections of this paper.

Conscription (everyone has to go to college like serving in the Israeli army
As noted above, higher education is increasingly viewed by both policy makers and the general public as primarily a private benefit, rather than a broader social good. Over 90 percent of U.S. adults believe that every high school student who wants a four-year college education should have the opportunity to gain one, according to a 2003 survey, and two-thirds believe state and federal governments should invest more money in higher education – but nearly two-thirds believe that students and their families should pay the largest share of the cost of a college education. Given ongoing access barriers, these perceptions may make it more difficult than in the past for historically underserved groups to enroll in college, at a time when they are becoming a larger proportion of the college-age pool. Ironically, these changed perceptions come at a time when high school students of all ethnic backgrounds are completing substantially more college preparatory and advanced coursework in science and mathematics than previous generations, as a result of higher state graduation and college admission requirements. Having achieved higher levels of academic preparation, however, students may find themselves shut out of four-year colleges if these institutions reduce enrollments or raise admission standards further, Zusman, p.13".

Crisis A second approach to higher education has been as if managing a current or anticipated crisis. Numerous examples abound throughout US history; early founding of US colleges and universities in response to European elite academies; responses to war-time challenges for intelligence or weapons, response to declining competitiveness in aerospace, manufacturing, automotive industry and organizational/managerial productivity. For the most part it has been presumed that post-secondary education is essential for many full time positions, thus fueling an increased demand for, and expectation of competing higher education thus creating a crisis level demand for higher education. In addition, beliefs that over subscription would then result in access affordability issues, led to lowered expectations of success for students coming out of high school. Other factors must be examined, since presumed obstacles to higher education are not insurmountable.

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Poverty, however, is the biggest barrier to college attendance. Students from poor families of all ethnic backgrounds and those whose parents did not have a college education are even less likely than underrepresented minorities as a whole to enroll in college or even to complete high school, as a result of what some critics argue is "an elaborate, self-perpetuating system of social and economic class that systematically grants advantages to those of privilege." Among those who do enter college, perhaps a third or less enroll in four-year colleges, and very few enroll in the nation's elite institutions. Young adults from families in the bottom income bracket are eight times less likely than others in their age group to complete a bachelor's degree. Financial burden, lower levels of academic preparation, and lower expectations – all of which correlate with poverty and parental education – contribute to these negative outcomes, Zusman, p.11". Those not succeeding may become part of another growing U.S. alternative to post-secondary education –prison- an extremely costly default, also borne by taxpayers.

Continuance or Continuity? While the distinction between these two terms may seem moot, emphasizing their difference is important to the discussion of current issues in higher education. Three Merriam dictionary definitions of *continuance* are described as (1) continuation, (2) the extent of continuing (duration) and (3) the quality of enduring (permanence). Continuance suggests just doing what has always been done in order to keep doing what you are doing. In the present discussion, then higher education in its more or less present form, would presumably just keep going in order to increase its duration and permanence as a system.

Continuity, however, refers to (1) uninterrupted connection, succession, or union or (2) uninterrupted duration or continuation especially without essential change (Source: http://www.merriam-webster.com/dictionary/continuity . In the present discussion the first definition captures the essence of the distinction being made between educational philosophies, wherein the uninterrupted connection, succession and union of systems and practices overshadows the maintenance of processes, policies and structures through which individuals gain entrance into planned systems.
Critics of higher education often focus on the United States system because of its longevity and alleged ability to meet diverse societal needs. Carey (2015) characterizes the history of U.S. higher education as a series of big ideas: firstly, to fuel the agricultural, industrial and commercial growth of the nation's economy; secondly, to create research communities to anticipate future, as well as to address current problems or issues, and thirdly, to offer opportunities to produce well-rounded scholars through liberal arts education. In response, undergraduate institutions often reflect a combination of these approaches, and as a result, may do none well. For example, Arum & Roska (2014) followed up their 2011 study and found that one response to an uncertain global economy, lack of confidence in career preparation, and extended adolescence, as captured in movies like *failure to Launch*. Jake New (2014) selected the following enlightening excerpt in his review of their work:

"Both students and the schools they attend exist in larger structural and cultural contexts that have created the conditions under which the observed learning outcomes occur," the authors write. "Widespread cultural commitment to consumer choice and individual rights, self-fulfillment and sociability, and well-being and a broader therapeutic ethic leave little room for students or schools to embrace programs that promote academic rigor…The result: Colleges are producing graduates with happy memories of their time in college but little sense of purpose or any "clear way forward, p. 2". The following table captures some of the competing values and goals inherent in crafting higher education systems that must meet such diverse, disparate, and often divergent goals, whether for individuals, the marketplace of for higher education.

Table 1. Educational Phases, Motivations and Value

Educational Phase	***Description***	***Primary Motivator***	***Quality, Integrity & Meaning***
Conscription	Mandatory-Survival	Extrinsic- Required	Low- Unknown/Delayed
Crisis	Foot-in-Door (Entry-level Career)	Intrinsic and Extrinsic-Security	Low- Unknown

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Continuance	Step-up (Promotional Career)	Extrinsic - Recognition	High- Taught by professionals in field
Continuity	Feather-in-Cap (Lifelong Learning)	Intrinsic- Achievement	High

Table 1 incorporates motivations and meaning into the four phases of higher education as conscription, as a response to crisis, as the continuance of a process in progress, or as continuity of self- evolution. Each approach may be seen as driven by a specific motivators (intrinsic, extrinsic or a combination of the two), and is characterized by certain levels of meaning and integrity.

At the *Conscription* level, learners perceive educational experiences as required and basic. The motivation is primarily extrinsic since participation is driven by law and viewed as essential to ability to sustain independence. As a result, the perceived integrity and meaning of earning a diploma is somewhat unknown or delayed.

The *Crisis* level usually occurs at the nexus of dependence and independence, regardless of age. Here, education is viewed as a critical step to gaining personal security in the workplace or obtaining that essential foot-in-the door leading to initial employment leading ultimately to job security/employability. Motivation is both intrinsic and extrinsic since drivers are both personal accomplishment and earning a paycheck. Ironically, the meaning, relevance and integrity of the degree are as yet unknown or un proven; a condition that is exacerbated by organizational prioritization of on the-job training over degree preparation. Individuals often just persevere through learning experiences to earn a credential that may or may not be connected to specific career goals.

When individuals arrive at the *Continuance* level, emphasis shift toward obtaining recognition and reward, often associated with attaining professional rank, prestige, certification and promotion. Individuals generally associate success with career-related accomplishments, economic stability and positive social recognition. Education has some degree of meaning, often because continuing education is delivered by professionals in one's chosen field and thus presumed to be relevant and respected.

Life-long learning may be another way to describe the *continuity* phase. Here primary motivation shifts to intrinsic with high levels of personal satisfaction and achievement associated with learning. The individual identifies new challenges associated with education that may or may not be connected to professional or social advancement. This is the old-fashioned *learning for learning's sake* phase that was once presumed as an integral and necessary feature at all of the phases of education discussed in this section.

Simply put, it is evident that individuals as well as sub-groups within society may describe their approach to education as one or more of the summative educational phases presented in Table 1, above. Societal outcomes associated with education, however, are rarely linked with continuity, but tend to focus on the functional ability to produce individuals who can take care of themselves, operating as independent "adults" and self-sustaining members of the social order. The relative meaning and integrity of their education tends to be secondary, peripheral, but nonetheless associated with academic status and competition among institutions for prestige.

As a result, the primary purpose and function of education in the current era has little to do with an innate quest for lifelong learning, but rather the ability to produce workers who contribute to the health and holistic wellbeing of themselves, minimally, and others, ideally. It is no wonder that conversations about the purpose and status of education persist, are increasingly contentious, and are complicated in both definition and delivery by predicted controversies surrounding social equity, rights to education and excellence.

Equity and Excellence

There are many issues indicating that the relationships among educational access, social equity and academic excellence are non-linear. Simply stated, the notion that individuals who achieve equal access to educational programs

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will also achieve social equity and academic excellence have no direct correlation. Financial access is only one aspect of an extremely complex set of factors shapig individual and institutional decisions.

Arum & Roska (2011) identified Collegiate Learning Assessment (CLA) dimensions of critical reasoning and writing as indicators of successful undergraduate education. They found that " a national survey of approximately three hundred thousand college freshmen and seniors in 587 four-year colleges and universities found that while 83 percent of freshmen reported that they had *not* written a paper during the current academic year that was twenty or more pages long, 51 percent of college seniors had not done so either. Even at the top 10 percent of schools in this study, 33 percent of college seniors reported that they had not written a paper of this length during their last year in college, p.88".

Debates separating *access* to education from *quality* of education have been going on for decades. As students examine their educational options, affordability is definitely a concern. A majority of students seek to graduate with the least debt possible since the burden of repaying student loans could decrease their individual and collective ability to live independently or to pursue post-graduate education associated with specific careers or training programs, and ultimately to achieve the quality-of-life to which they aspire. As Astin (2004) discovered, "most academics and many college-bound students and their parents are well aware of the fact that there are only a handful of baccalaureate-granting colleges and universities—perhaps one in 10—that are regarded as excellent or the best, p.323". Regardless, students choose undergraduate institutions and degree programs for a variety of reasons; location, cost, friends, response to parents, interesting academic programs, internships, career goals, athletics and so forth. This is not a new phenomenon, however, but what is new is the long term effects of poor choices that extend beyond individual choice. Moreover, the impact extends beyond national borders. In a 2008 *Policy Brief* by the Organization for Economic Cooperation and Development (OECD) factors limiting global equity in education include increased migration, educational policies that successfully integrate immigrants and minorities into existing systems, and lack of options that allows students to pursue vocational tracks that provide an option back to more traditional undergraduate or graduate programs. As noted by international comparative data presented in the report "across OECD countries nearly one in three adults have only primary or lower secondary education – a real disadvantage in terms of employment and life chances, p.1".

A recent movie entitled *The Riot Club* (2014), depicted the indiscretions of a 10 member secret society at an elite, private university. While one individual was selected to shoulder the burden of the group's debauchery, assault and battery and threatened dismissal from school, a meeting with an alumnus and member of the club, assured that membership was a lifelong commitment, that the scapegoat's career would be guaranteed, and most of all, was reassured that members of the Club were not the type who made mistakes. This type of loyalty to *alma mater* is not limited to private schools, to secret societies or to members of Greek organizations. These bi-products of education are often part and parcel of the academic experience, if that is a desirable outcome for the student or influential others.

It may be reasonable to hypothesize that not all students seek the rigor, status or assumed homogeneity of students associated with elite institutions, whether they can afford it or not. What is essential is hat every student has an opportunity to know that this type of education exists, and to have access to secondary education that leads to eligibility to apply. Small liberal arts institutions are actively recruiting students from diverse ethnic and geographic backgrounds to infuse diversity into their profile, as suggested by Whitesides (2004). This is the type of structural change that shifts theory to practice. In June 2015, Fernando Rojas, son of immigrant parents from Mexico decided to accept an offer to attend Yale University, after having making headlines for being accepted by 8 Ivy League universities (Rocha, 2015).
While this is a great achievement, it seems somewhat shameful that in 2015, this is still an exception, and not more common for children of immigrants or from underrepresented groups.

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The question persists as to whether every high school graduate meeting entrance requirements actually has an equitable opportunity to pursue the degree of choice at their preferred institution of higher learning? As noted, equitable access does not equate to program quality- these are different discussions for both students and institutions. If some institutions are cost-prohibitive, then how is a qualified student to obtain access if they cannot pay for it? While the past response has been to provide tax-supported access through federal and state grants, and increasingly less desirable, student loans; the belief that there is no product quality guarantee that accompanies awarded baccalaureate degrees, policy makers are less and less willing to underwrite undergraduate education. The ability to succeed without a degree is reinforced through television shows like *Shark Tank* (US), *Dragon's Den* (UK, New Zealand, Canada, Australia), *Tigers of Money* (Japan), and blockbuster movies like *Slum Dog Millionaire.*

Why invest in an uncertain product in a volatile or unpredictable marketplace? Just like the purchase of lottery tickets, those most marginalized are often those willing to make an investment in luck, rather than protracted education. To make higher education more seductive an option, numerous approaches have been taken. According to Zusman (2011), "as powerful as the anti-affirmative action backlash has been in altering past consensus on access and equity, reduced public funding and changing public expectations pose even more serious threats to higher education participation. If policy makers and higher education leaders in effect 'change the rules' just when a new generation of students—less white, less middle class—is prepared to enter college, questions are raised about equity in a democratic society, as well as risks to social stability. Reducing access to higher education also raises concerns about meeting society's economic and civic needs at a time of increasing technological, economic, social, and political complexity and interdependence. Slowing or even reversing the country's historic movement toward universal access to higher education is especially problematic because it is being driven largely by governmental and institutional decisions made on financial grounds, rather than by explicit policy decisions on higher education access and participation (p.14)". Unfortunately, the impact of fewer, as well as less prepared graduates is not limited to a single sub-group of the population, but impact career choice, pay rates, employee benefits and training as well as long term commitments to on-the-job training and education programs that must be absorbed by employers to remain competitive. A different type of backlash has occurred, namely popular demand for a response to claims that higher education has failed everyone. The next section examines some of the ways these allegations have been addressed in the United States.

Repercussions, Reactions, Responses and Remedies

To briefly summarize the preceding sections of this paper, there have been numerous theories and strategies to address issues and concerns with mass education. Some of the more obvious have been standardized testing, assessment of student learning outcomes, online educational programs, remediation and external accreditation. These have evolved in response to allegations that high quality education has not been accessible-whether geographically or financially- to a majority of citizens. This leads to inevitable divisions across society; with fewer able to achieve and sustain the middle-class lifestyle that creates stable families, communities and societies. Reich (2013) summarizes 30 years of watching the labor market and overall standard of living in the United States. One conclusion for his analysis identifies the middle class as perhaps the biggest losers in the unresolved issues of higher education, since flattened earnings for male-headed households, have been replaced by two earners with no net gain in economic status. Beginning in the 1970s, women gained access to education and career preparation beyond gender-typical professions, and now outnumber males as awardees of baccalaureate degrees. For many Americans having a dual-income household has not resulted in overall quality of life gains one might anticipate. Competition associated with variations on global capitalism increase competition, and therefore the desire to be personally and professionally prepared to succeed in that reality. Evidence of on-going tensions among racial and ethnic subgroups, on-going mistrust of labor unions, academic tenure and seniority are all intertwined with faith and belief in educational efficacy. Several responses are described; preparation for the global marketplace, civic engagement, legislation, privatization and metrics.

Firstly, higher education in the United States has increased its preparation of its students for work, leisure and learning in an increasingly *global context*. Approaches vary from courses in the undergraduate core survey requirements, marketplace relevant language courses (e.g. Chinese, Farsi, Tagalog as opposed to French, Greek and Latin), to study

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abroad, to international internship experiences, as well as institutional policy changes to attract more international students to earn degrees in the US. Jordan (2015) identified homes of international students as primarily from China and gulf nations with "1.13 million foreign students in the U.S., the vast majority in college degree programs… [representing] a 14% increase over last year, nearly 50% more than in 2010, and 85% more than 20015, p.2". This trend benefits many U. S. American students who would otherwise be unable or unwilling to travel abroad to gain exposure to other countries and cultures. Ironically, the emphasis on the diversification of educational institutions has made some students and their families to embrace a philosophy that if international students come to the U.S., why do they need to travel outside the U.S. – after all, it is expensive and could be dangerous.

A *second* strategy responds to pragmatists who describe education as driven by needs to connect face-to-face with others, whether globally of locally, by using models that have stood the test of time; for instance as exemplified by the long-standing commitment of Jesuit colleges and universities to require students to participate in campus-driven, and course-relevant outreach projects focused on the needs of local communities that combine religious principles of social justice with direct action. Others institutions have followed suit and *civic engagement* has expanded beyond faith-based institutions, however. over time to many levels of public education in the US. Flanagan (2006) has identified the community college level of post-secondary education as a particularly appropriate level since they are the largest and fastest growing sector of higher education, are the most affordable option, and are most egalitarian, serving more than half of all minority and first-generation college students (p. 54). Fried (2012) has suggested that when both curricular and co-curricular domains of higher education work together, the results can be truly transformative for both the learners (including faculty and staff) and for the institution.

A *third* approach may be summarized as *legislative or political initiatives* undertaken by governments to increase youth participation in both paid and unpaid work experiences connected to the philosophy, image and aims of the government. In the US for example, the Peace Corps (founded March 1, 1961 under President John F. Kennedy), Americorps ("We are the Corporation for National and Community Service, a federal agency that helps more than 5 million Americans improve the lives of their fellow citizens through service. Working hand in hand with local partners, we tap the ingenuity and can-do spirit of the American people to tackle some of the most pressing challenges facing our nation") and more recently, The Edward M. Kennedy Serve America Act Summary Public Law 111-13, enacted April 21, 2009. These strategies extend beyond the classroom, however, as more companies commit to corporate social responsibility programs, *encouraging* if not outright *requiring*, employees to give back to surrounding communities with projects often supportive of educational or environmental goals. Even students from other nations who are enrolled in courses requiring community service or research assignments fulfill the requirement, and are challenged to critique the process both from personal learning and comparative cultural traditions perspectives. These organizations remain relevant and highlight the commitment to social justice as instrumental to career choice and success. Levine (2011) recommends critical analysis of civic engagement, including the conduct of rigorous research on benefits to participants, those served and academic programs, but acknowledged that some initiatives are simply the right thing to do, even though value-driven research is often discredited as biased.

Fourthly, the explosion of education provided through for-profit sources has generated expensive, but tailored options for learners, frequently focused on career preparation. While not traditionally vocational, these programs have as a primary outcome employability, which may compromise broad liberal education-those core knowledge and experiences presumed to be the foundations of common society that inform economic, political and social endeavors. Privatization, in this context, may be viewed as an entrepreneurial response to the demands of the educational marketplace that fills gaps for many learners. As noted by Hentschke (2006/2007), "privatization in education is difficult to isolate not just because there are different types of privatization, but also because those types themselves get comingled in the real world, p 19". Public higher education systems often provide a for-profit option for students and employees seeking to enhance work-related skill sets and for life-long learners who may not desire grades or academic units for the information, experiences and knowledge they acquire. Certainly offering courses online or in hybrid (partially online and partially "in-person" on campus) is another form of tailoring course delivery to deal with

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both differences in learning styles and limited classroom and laboratory capacity on high-demand campuses. Naturally, the question arises as to whether or not the for-profit alternative provides parallel content, making it easy for a student to go back and forth between systems, depending upon interest, instructional method, and convenience as well as financial resources. How is comparability assessed and evaluated? In the end, will it make a difference to overall quality of life or to ability to succeed in a chosen career area? The proliferation of charter schools, private schools As Belfield & Levin (2002) predicted, privatization, was then an emerging trend has now evolved into opportunities to supplement gaps in public education. The authors note that "the different needs present in developed and developing countries means that motive for privatization vary and that the form of privatization adopted is also specific to the country and its economic and demographic situation…privatization programmes are diverse and can be designed to meet several objectives…private education may promote equity, while not all public funding is equitable, p. 7".

The *fifth* and final response to criticism which seems consistent across levels of education from pre-school through undergraduate is the lack of effective measures. The response to this has primarily been additive; more and different approaches to assessment of learning, more early warning systems to serve as safety nets for students who may fail, reviews by external accrediting bodies to help ensure alignment between education and industry, more standardized measures and tangible evidence of learning in the form of portfolios

But little of this has to do with instilling a love for learning at the individual level - that intrinsic and unquenchable thirst for knowledge and intellectual stimulation. Rather motivation has been prodded by extrinsic motivation-scholarships, job security, professional advancement, pensions, health care and so forth. In The US these are viewed as increasing the scrutiny of higher education by tackling quality from a minimum-standards perspective. Movies like *The Theory of Everything* and *The Imitation Game* offer the opposite end of the spectrum, highlighting the uniquely brilliant mind and what it can accomplish; both as a personal challenge and achievement , as well as contributing to advancing viable solutions for troubling problems; whether national or global in scope. The following conclusions, like graduation, lead to consideration of recommended next steps, and where to begin-commence-once again.

CONCLUSION

In the end, the dilemma seems to be more about making decisions in response to change; something that every generation of educators, at all levels, have faced. The notion that there is information beyond academic institutions is reinforced by the belief that life experience also enriches and complements book-learning. Recognition and acceptance of commitment to life-long learning and continuing education is not new among most professionals; especially those attaining licenses, certification or other credentials associated with fields that continue to evolve to meet the needs of a changing world.

Human beings continue to have choices, but increasingly see higher education as the most legitimate way to attain validation and recognition of what they have learned. Entrepreneurs, artists and techies often bypass this formal affirmation by meeting a need, or creating a demand for or appreciation of something new that can circumvent traditional pathways to success.

The ultimate irony of higher education is how many individuals, including a lot of university faculty members would love to take significant (but calculated) detours from the policies and procedures often misguidedly associated with "academic rigor" in order to support individual learning style and pace. The inefficiency of individualized learning plans that could be designed and delivered in an efficient manner are, in essence, the underlying reason behind the development of mass, public education. However, the end result is the same if there is no common core, philosophy or social purpose underlying education al design, practice and funding, as identified the 2008 OECD Policy Brief, Ten Steps to Equity in Education.

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It is not a new idea that individuals expand their knowledge on their own, whether due to desire to improve job performance, prepare for future opportunities, or just to satisfy innate curiosity by being informed. Daily quests for information from a variety of online sources suggest that interest and ability to capitalize on available resources allow individuals to find out what they believe they want and need to know.

All of this said, however, memorizing *Grey's Anatomy* cover-to-cover, watching every surgery posted on WebMD , dissecting lab dummies in the garage and taking weekend intensive seminars may not lead to a licensed physician even when every certifying exam is passed with flying colors? But why not? Michelson & Mandell (2004) recommend the formalization of prior learning as a way to validate individuals' desire for knowledge and hands-on experience that can be translated into academic course credit equivalencies, yet relatively few systems have policies and procedures to achieve this aim, which might both encourage and expedite degree attainment for some individuals. For those with a clearly focused career path this option could improve opportunities for employment placement. Since employers often ask : "Can you do what I want you to do at the level that I wish you to perform it? If you can, do I care why or how you can do it?". And isn't that the real question being asked and debated throughout higher education today? One can only hope that this current "crisis" in higher education is about more than maintaining a status quo that no longer really exists.

Systems tend to be much more fluid and dynamic than many believe or want to admit. The popularity of Veronica Roth's *Divergent Trilogy* suggests fascination with societies where individuals are born into a sect, or "faction" and allowed to "test out" at a pivotal stage of human development. The movie depicts the conscious imposition of societal roles as similar to the structure of bee colonies. Those who challenged the system eventually learned that their lives were simply part of a social experiment in post-apocalyptic Chicago. Once they freed themselves from the externally-imposed structure, citizens were able to determine who they were and the roles they wished to play, but this came with an added commitment to gain the skills and knowledge necessary to perform. In more open societies, however, where individuals are given choices, some are destined to make the wrong choice and fail in society's eyes. As noted above, the consequences are often borne by others in the society.

The forgoing analysis was undertaken in order to provide support for answering the four study questions posed in the introduction:

Is higher education an individual right and voluntary experience, or is an investment in compulsory education necessary to attaining the greater, common good? (Conscription)

Clearly, the right to education is increasingly seen as a *human right* and one that is designed to fuel individual and societal development. Compulsory, public supported education is provided with conditions and caveats, however. Governments, systems and institutions design outcomes (sometimes with dead-ends) that may be exceeded or not met by individuals. Time and unit limitations or failure determine end of access to tax-supported education.

What is the highest level of formal education that should be supported through public funding? (Crisis)

Increasingly, the baccalaureate or professional vocational degrees are now considered the basis of survival and independence for many nations. Due to an expanded reality of a global community, careers may span and intersect with communities with varied levels of educational attainment. Pressures to retain students once admitted and increase graduation rates often seem to discourage a belief in consistent quality, meaning and integrity of academic credentials. The term "degree mills" is commonly associated with institutions awarding diplomas with limited evidence that students have attained agreed upon level of knowledge and ability to transfer that knowledge to practical settings through competent performance. As Berdik (2008) found, "these days statistics are showing that company CEOs want people who can communicate with others, who have the ability to work as a team and who can speak well. These are skills, p.2). Education must determine at which level students achieve that level deemed acceptable by society-at-large. It seems likely that undergraduate education may6 be the most appropriate level for most, regardless of chronological age.

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Are there common outcomes, metrics and analytics helpful in determining educational effectiveness for all learners? (Continuance)

The underlying assumption for all of the testing, assessment, accreditation and standardized comparisons are often touted as ways to improve learning outcomes, as well as to deliver a known product to employers, communities and societies. Changes associated with implementing findings range from individual change models (tutoring, study habits, remediation, meditation, counseling) to redesign of learning outcomes for professions, educational systems, institutions, academic programs and classroom instruction. Since change is generally slow and incremental, these approaches rarely result in radical transformation of either educational systems or those educated.

Can (should/ will) higher education successfully disconnect learning from lifestyle in order to enhance value of learning and knowledge? (Continuity)

Personal ownership of educational goals and outcomes have been abandoned by any institutions fearing lawsuits, loss of alumni loyalty, inability to place graduates in jobs and general dissatisfaction that can destroy campus morale, while increasing faculty uncertainty about the standards that they should reinforce. If there are no consequences associated with academic endeavor than why bother? In 2004, Whitesides addressed many of the concerns with which we continue to grapple more than a decade later. He challenges higher education to increase content, not just add more as well as to: (1) help students focus on long-term and strategic issues, (2) redefine liberal arts rigor and breadth, including science and technology; (3) take diversity seriously by not dodging or debating issues that are perceived as politically incorrect, (4) rethink the place of information in the university, including effective use of the web, (5) export local educational opportunities into the global marketplace (multi-campus concept) and (6) encourage more focus on the quality and impact on undergraduate education (pp.7-8). Implicit is the understanding that faculty, whether full-time, part-time, tenure track or lecturers, must really *want* to teach undergraduates and be trained and rewarded for doing so. All institutions can learn form and adapt models from the prestigious universities since all of our graduates are competing for employment and quality of life in the same world. As Chan, Brown and Ludlow (2013) conclude, "notwithstanding the apparent consensus across institutions concerning the purposes and goals of a bachelor's degree, it may be that colleges and universities do little, if anything to foreground their objectives and, thus, view college students as customers or products for their degree programs. However, if undergraduates were to actively encounter these ambitions in every course and see the connection between their current study and the institution's lofty ideals, then perhaps misalignments between institutions and students would diminish, p.12".

Overall, social benefits accrue from a high quality educational system, whether this is the stated outcome or not. Critically examining the social contract of education helps all parties to understand strengths and weaknesses of existing systems, while identifying possibilities for the future. It is clear that for many, the purpose and effort associated with attaining post-secondary degrees has fallen far short of their desired target, but in other places in the world, education is changing lives for the better every day. Whiles some individuals may have lost faith with tax-supported education, as tax-supported education continues along an ambivalent path, the destination of which seems uncertain. This paper has provided evidence of privatized options, which may represent timely, affordable and equitable alternatives. In the end, predominant social values are no longer associated with a single culture, society, or method of delivering education; rather they are aligned with, and emerge from, basic principles of fairness, social justice and life long learning.

RECOMMENDATIONS

Recommendations from the forgoing examination of higher education may be summarized as *critique*, *consultation*, *collaboration*, and *coordination*, all common components of an integrated planning process that combines summative and formative approaches; that is intentional, nimble, transparent and holistic.

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- Adoption of international curricula standards and universal competencies; both general knowledge and work-related competencies and active engagement in solving complex problems so that graduates will encounter fewer barriers when seeking entry into diverse labor markets and settings (See Van Damme, 2002).
- Creation of parallel and complementary curricula that allow students (of any age, career stage) to pass seamlessly between traditional higher education programs, professional education and corporate training; transferable, articulated and transportable; Create value, meaning and reward for diverse forms of learning and design systems that translate them into a variety of academic-progress options
- Mandatory educational travel designed "to help us navigate this complex and contradictory world while challenging the limits of our intellectual abilities…casting a vision of global learning that is small enough, immersed enough, ecologically 'soft' enough, connected enough, structured enough, cheap enough and hope filled enough to support deep changes in our lives and in the lives of others, Slimbach, p.8"
- Assist students and faculty with celebrating and personalizing commitment to learning, not just t receiving a diploma learning; combine with value, meaning and reward for commitment to undergraduate teaching
- Use metrics, statistics, assessments and comparative data to transform, *not shame*. It is highly debated if creating additional "ranking systems" across higher education will benefit institutions, students and society any more than attempting to match students with the best institution for them from the beginning.

The following table depicts possible approaches to higher education that integrates approaches and recommended strategies for future which demonstrate ways in which higher education will continue to be critiqued, a model of consultation at a variety of levels, collaborative and coordinated from both internal and external level.

Table 2 Matrix of Approaches Based on Integration of Educational Phases and Strategies

	Conscription	***Crisis***	***Continuance***	***Continuity***
Higher Education Big Five Competencies	Basic requirement but many forms, inconsistent standard	More review, revision, monitoring	Additive but not necessarily Integrated	Expectations of inclusion in all coursework and learning experiences
Universal Curriculum and Competencies	Broad liberal arts choices; rigor varies	Marketplace driven; vulnerable to "political" pressures	Value-driven, exported, universality considered impossible or impractical due to ideological differences	Comparative examples across the curricular and co-curricular environment
Parallel, Complementary, Transferable, Transportable Paths	Articulation or institution-based decisions (limited)	Limited due to uncertain comparability; questions about content and quality	Structural barriers limit flexibility	Seamless transitions from professional to vocational to traditional education settings and focus
Educational Travel	Not Required by Most Institutions	Recommended	Desirable; discipline specific	Required, sponsored as necessary; may be discipline or career focused
Valuing, Personalizing and	Individual Choice	Philosophically desirable	Historic philosophy, indirectly expressed, nurtured	Special selection criteria, training and rewards for

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Rewarding Commitment to Learning and Teaching			on an individual level	undergraduate teaching; research focused on teaching and learning
Transformative Metrics	Testing, Institutional Assessment, Program Review External Accreditation (discipline-specific)	Centralized assessment; closing the loop	Often standardized measures and approaches to facilitate comparisons, rankings, etc. often externally-driven	Metrics, analytics used to inform and focus learning and teaching strategies; Internally driven

Ironically, most of these recommendations can be implemented within existing higher educational structures, in some systems or institution may be in place in some form. Constraints to moving from one phase (or stage) of educational efficacy may be influenced by a number of socio-political factors at the highest decision-making levels. In most cases, as is the case with mandatory educational travel, solutions can be found. Business, industry and non-profit organizations, for example, can direct a portion of their funding to support students in one or more of the targeted areas, particularly in the area of educational travel for those who cannot afford it. Funding opportunities for alumni and professional organizations might fit well with corporate social responsibility initiatives, and so forth. Importantly, these recommendations do not compete with existing educational goals, mission statements, or initiative, but should in fact intensify and focus opportunities for educational excellence. As Mettler (2014) reminds, " from the Northwest Ordinance up through the enactment of Pell grants, the United States found innovative ways to promote higher education so that it would serve crucial and ambitious public purposes. It is now up to us to find ways to do so again, for our own time, p. 200". And finally, there may be some comfort among students, their families, communities and prospective employees to be able to identify and build upon common educational foundations found all over the world.

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CONSUMER RIGHTS AND CONSUMER EDUCATION RELATIONSHIP WITH HUMAN RIGHTS

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When the community development is aimed education is one of the most important activities that can be referred. If a community want to get themselves a place in the modern world, they must give an important role to education. Education must be given to the society in all areas.

Consumer education is also a part of one of the human rights and consumer rights that progress in society. Consumer education is an ongoing process of lifelong learning. Consumer education is related to the person's role in society as a consumer. If protection of the economic interests of the individuals that make up the society carried out through education in the area of consumer protection will also be subject has been an important way.

Implementation report on the United Nations Guidelines on Consumer Protection in Article 31; " Governments should, where appropriate, consider: (a) Adopting or maintaining policies to ensure the efficient distribution of goods and services to consumers;…Such policies could include assistance for the creation of adequate storage…incentives for consumer self-help and better control of the conditions…"is located in the expression.

Raising awareness in areas such as search and organization of consumer rights will contribute to basic consumer side of the economy to take place between law and in a wider sense the change of society and development.

Finally, as long as each consumer the purpose to their needs, consumer education and social position it exhibits the behavior according to means are effective.

Keywords: consumer, consumer education, consumer rights, human rights.

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CONTINGENCY BETWEEN LEARNING STYLE TEACHER AND STUDENT AND ITS IMPACT STUDENT´S LEARNING OUTCOMES

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ABSTRACT
In connection with efforts to highlight the need to study learning processes, we present results that clearly show the relation between the learning processes pupils and their teachers. The research sample consists of 85 pupils. It was divided into two groups (N1=37, N2=45) on the base of the Mathematics testing results and the teachers of Mathematics. We focused on the sensory preferences measured by the questionnaire "Learning Style Profile Assessment" developed by American authors M. Willis, V. K. Hodson (1999). We found that the relation between sensory preferences – visualization of a student and teacher significantly contribute to success in Mathematics results. It is possible to assume that the contingency between the student's and teacher's learning style is a good predictor of the student's learning outcomes. We consider the mentioned results valuable because this fact is proved even after removing (by partial correlations) the effects of intelligence that has an impact on the success of pupils in Mathematics.

Key words: learning styles, sensory preferences, school success/learning outcomes, intelligence

INTRODUCTION

The educational process is explained not only in terms of content, but also processional one. Whereas, in recent decades psychologists have introduced several new insights into understanding of learning, this knowledge of learning is necessary to apply into teaching, it means into particular processes which teachers can identify with. One way is psycho-didactic approach to the learning and teaching. Psychodidactics does not mean the substitution of pedagogical psychology or didactics, but joint research effort, interaction of psychological and didactic (general and specialized) orientations in establishing and solving problems entering a deeper level of relations between learning and teaching. Psychodidactics explains the educational processes in terms of teaching, that takes into account not only the didactic activities, but also psychological determinants that operate in these activities (Verešová, 2011).

Learning style. Style in learning. Teaching style

Definitions and ways of looking at styles in learning are many, but there is no publication that would submit the issue comprehensively. Styles in learning are the determinants which enter the teaching process by both a teacher and pupil. It is necessary to realize that as we are different in other characteristics, so we can vary in ways how we receive new information, or we learn. We choose those practices that meet us in person. The way of learning is in learning process mostly up to students themselves, whereas we assume that students choose the suitable one themselves or we suggest those ones we use in learning process ourselves because we consider them appropriate and effective ones. We allude to the fact that each student learns in his/her own way and gradually establishes his or her style in learning, therefore he or she is different not only in skills, speed of learning, but also in the preferred method of learning.

Interpretation of the term learning style is presented in literature very unevenly. It is associated with different terms, or substituted by a completely different term. It is often replaced by the term cognitive style. I.Turek (2000, p.85) introduces a definition of both ones. In his opinion, the cognitive style is the way which a person prefers while receiving and processing information. It is mostly gifted, it is difficult to change it and it is only occasionally connected with the context. "Learning style is a complex of procedures that individual prefers in learning in a certain period of his/her life." According to J. Mareš (1998, p. 48) a style ""is understood as individually distinct and internally consistent way of selecting and combining of sub-elements and procedures. It offers specific character and for outside observer identifiable and definable characters to the result.

V. Švec´s opinion (2002, p. 30) on styles issue is that learning and teaching styles are interconnected and dependent on each other, therefore he describes them together. Style (of learning and teaching) he explains as an integrated, individual characteristic of an activity of the subject (student, teacher). According to V. Švec (2002, p. 30) a learning style is a preferable style of a student which he uses, it is his way of thinking, the way he copes with curriculum, it occurs in learning activities. On the other hand, learning style is a way of seeing the student by

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teachers, teaching methods, learning, communication, which is reflected in his teaching, reflected in school activities.
He defines learning and teaching styles by some general features:

- they are preferred methods of different processes (learning, teaching) by the subject,
- they belong to the separate category in their motivation, focus, objectives, structure, depth and flexibility to adapt to the teaching situation,
- they have gifted basis but they are being developed during the life of an individual and they can vary to some degree,
- they are typical for a particular student, teacher,
- they partly depend on the content of the activity, the nature of the curriculum, the teaching syllabus.

These general characteristics are, in our opinion sufficient argument that it is not necessary to define and distinguish between the styles in learning, learning styles, teaching styles and styles for the purposes of acceptance of the presented research results. There are currently several hundred questionnaires measuring learning styles and strategies and new ones are still appearing. However, not all of them meet the requirements and they are of different quality, from the renowned to the self-diagnostic on the Internet without giving the author´s name.

THE STUDY

Research methods, sample, hypotheses

Research was done among the 85 pupils in ninth grade of primary schools in Slovak republic. For the process of evaluating we have chosen the research sample according to the method Monitor 9/2005. It was the only available method which relevantly measures the school success with the nationwide coverage. For this test it is about the success in Mathematics. National Pedagogical Institute in Slovakia has provided us results related to success of anonymous schools, and we have chosen the schools situated in different "poles of this success chart". Testing tools in Monitor 9 / 2005 had a distinctive character and were aimed at testing student as an individual. For the purposes of selection, we have taken into account the average class score.
Research effort is based on the view that learning in the mathematics are involved:

- level and type of intelligence (constant);
- style of cognition and learning of a student (which reflects the cognitive and affective determinants of learning);
- style of cognition, learning and teaching of a teacher (which also reflects his/her psycho-didactic competences);

The objective of the research problem was to determine correlation between particular thus formulated variables and their determination of results in learning of pupils.
Necessary precondition for achieving this objective were:

1. to verify whether the often declared opinion that there is a strong relationship between achieved results in mathematics education and intelligence of pupils, is based on reality, or rather it reflects the excuse of failures both the teachers and pupils;
2. to find out whether there is a relationship between a teaching style of a teacher and learning style of a student in relation to the success demonstrated by an independent survey (Monitor); (In spite of the fact, we could not examine the teaching style in its complex form, we have reduced the research on its one item, the teaching style of a teacher, reflecting his/her own experiences with teaching Mathematics and we believed that pupils will learn it the same way).

From the Mathematics specifications point of view, the appropriate possibility to determine the teaching style is based on sensory preferences. When receiving information, cognition, a person engages different senses while some of them he/she may prefer more than the others. There is well-known typology which is marked by an acronym VARK, while each letter defines one learning style: visual, aural, read/write, kinaesthetic (N. Fleming, 2001). If student prefers any of the listed learning styles, he/she prefers it not only while receiving information, its presentation, but also during his/her acting, he/she will prefer methods that belong to a particular learning style.
There are currently several hundred questionnaires measuring learning styles and strategies and new ones are still appearing. However, not all of them meet the requirements and they are of different quality, from the renowned to the self-diagnostic on the Internet without giving the author´s name. Content is focused on general learning style, where particular items detect preferences of certain procedures without specification of the curriculum. We have applied a questionnaire "Learning Style Profile Assessment" prepared by American authors M. Willis and V. K. Hodson (1999). We have used its Slovak version. We present only those results relating to the aural and visual preferences, because we believe they are the top in learning Mathematics.
To measure intelligence, we have used the method of test - Test of intellectual potential (TIP), written by P. Říčan. It is a nonverbal method which can be used from the age of 12. It evaluates the ability to derive relations among

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symbols with the minimal impact of the spatial factor. The result consists on detection of a rule, according to which are ordered three consecutive images, while the pupils were given the task to select the missing fourth variant out of six offered. Test is time limited.

FINDINGS

We found that intelligence is a factor that contributes very significantly to success in school mathematics (see Table 1). When comparing the two files, ie. file "better" and "weaker" we have found out using t-test a statistically significant difference (t = 4.324, p <, 000). Thus marked significant difference (at 0.1% significance level) between both sets was proved right at variable of intelligence.

Table 1 Basic parameters of a variable outcome in the test TIP and significance of differences its averages in schools with better and worse results in Monitor from the Maths

	Better	Weaker	t	p
N	37	48	4,324	<0,001
AM	7,84	5,85		
SD	2,17	2,04		
SE	0,36	0,29		

Legend: N = count; M = mean; SD = standard deviation; t = t-value; p = significance

Since the process and the outcome of the learning process significantly affect the interaction of both teacher and pupil, from an analysis of the following two tables we get the answer to the question whether there is the significant interaction of sensory preferences in relation to success. The results presented in Table 2 are statistically significant confirm, the greater the harmony between the need of the teacher and student, the more successful the pupils are. We may assume that the teacher chooses more appropriate methods which he/she uses on the base of his/her experiences in teaching Mathematics. With the auditory preference (Table 3), this fact was not confirmed. This result can be seen as very significant in terms of the specifics in mathematics, where imagination, associated with the illustration plays a major role.

Table 2 Basic parameters of the variable contrast preferences of visualization among pupils and teachers and the significance of differences its averages in a set of schools with better and weaker results in the Monitor from Mathematics

	Better	Weaker	t	p
N	37	48	4,506	<0,001
AM	-6,22	-23,13		
SD	19,05	15,32		
SE	3,13	2,21		

Legend: N = count; M = mean; SD = standard deviation; t = t-value; p = significance

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Table 3 Basic parameters of the variable contrast aural preferences among pupils and teachers and the significance of differences its averages in a set of schools with better and weaker results in the Monitor from Mathematics

	Better	Weaker	t	p
N	37	48	-1.583	0,059
AM	4,59	10,21		
SD	17,26	15,37		
SE	2,84	2,22		

Legend: N = count; M = mean; SD = standard deviation; t = t-value; p = significance

Analysis of the absolute values (Table 4, Table 5.) above mentioned variables answers the question, of the "direction" in relationship. Statistically significant difference is proved again within preferences of visualization and concerning the results (t=-2,669; p<,00) we can state that if the visual preference is higher at pupils than the teacher´s one, the pupils achieve better results in Mathematics. In other words, if the pupils s have lower visual preferences than their teacher, the result of their interaction is not as positive as when it is the other way round. To conclude this part, interaction between teacher and pupils is confirmed as highly significant factor affecting success.

Table 4 Basic parameters of the variable absolute value of the difference in the aural preferences among pupils and teacher and the significance of differences its averages in a set of schools with better and weaker results in the Monitor from Mathematics

	Better	Weaker	t	p
N	37	48	-0,069	0,473
AM	13,78	23,96		
SD	11,14	13,95		
SE	1,8	2,014		

Legend: N = count; M = mean; SD = standard deviation; t = t-value; p = significance

Table 5 Basic parameters of the variable absolute value of the difference in the visual preferences among pupils and teacher and the significance of differences its averages in a set of schools with better and weaker results in the Monitor from Mathematics

	Better	Weaker	t	p
N	37	48	-2,669	p<0,01
AM	16,49	-23,13		
SD	11,11	15,32		
SE	1,83	2,21		

Legend: N = count; M = mean; SD = standard deviation; t = t-value; p = significance

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Concerning the high impact of intelligence, we have decided to eliminate its influence using partial correlation. Table 6 summarizes the relation among particular variables to the success in the Monitor after eliminating the impact of intelligence through partial correlations.

Table 6 Partial correlations between results in the Monitor and obtained data from variables after excluding the intelligence effect

	Success in Monitor
Aural preference	r = -0,078
Visual preference	r = 0,172
Rate of the difference in aural preferences among pupils and a teacher	r = 0,073
Rate of the difference in visual preferences among pupils and a teacher	r = 0,423**

Legend: ** p<0.01

The analysis table shows that none of the variables correlate after excluding the intelligence effect with success, besides the rate of the difference in visual preferences among pupils and a teacher. After elimination of the intelligence effect, as a significant factor influencing success in Mathematics, visual preference among pupils is higher that the teacher´s one and pupils achieve better results in Mathematics. This fact can be interpreted as a fact that interaction of sensory preferences of pupils and a teacher has a positive impact on their results in Mathematics. Mentioned interaction is possible only in case that teacher is competent to diagnose the sensory preferences and at the same time the teaching styles.

CONCLUSIONS

We consider as very important results, which clearly confirm the suitability of the interaction of teaching styles of the teacher and student, as well. The above findings demonstrate the need to review the didactic approach to take in account the psychological determinants, too. With reference to mentioned fact we would like to point to the possibility of a new approach to the teacher preparation (Mathematics), leading to the development of teaching skills to develop pupils' interactive activities, experiential learning, and activating methods. Use of interactive activities substantially alters the role of teachers. In this sense, the teacher is not seen as the one who transmits ready knowledge and shows the only right solutions and processes. We think these are issues and opportunities that only in a very limited extent are used in pre-gradual teacher training in the context of direct link to special didactics.

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THE CORRELATION BETWEEN LEARNING OBJECTIVES AND STUDENT SELF-REPORTED MOTIVATION IN AN ENGLISH FOR SPECIFIC PURPOSES PROJECT (DEGREE IN TOURISM)

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ABSTRACT
This study has been conducted during English for Specific purposes project work on gastronomy (Degree in Tourism at Florida Universitaria, affiliated to the University of Valencia). It approaches the issue of motivation in second language acquisition from an innovative perspective, the advisability to establish a correlation between the project learning objectives and students' self-reported degree of motivation about them. This paper presents a task-based study focused on two instruments: a *questionnaire* to identify students' initial motivation and an *observation form* to monitor progress. Empirical data have enabled the lecturer to adapt the methodology and improve project performance and results.

Keywords: ESP; motivation; learning objectives; tourism.

INTRODUCTION

The study presented in this paper has been conducted at Florida Universitaria (Affiliated to the University of Valencia, Spain). Starting from the premise that universities are responsible for training future professionals to succeed in their careers, this institution has based its methodological innovation on interdisciplinary projects. There are two main features of these projects; on the one hand, they are focused on professional competence acquisition and on the other, they are performed following the problem-solving approach. The empirical research presented here has been carried out in an English for Specific Purposes course, which is one of the subjects in the interdisciplinary project conducted in the first year of the Degree in Tourism Management.

Many are the variables that contribute to low or high task-achievement but certainly, as Gardner (2007) states, they will be mediated by motivation. The present study raises a major question of concern to educators that is motivation in second language acquisition. Since extensive research has been conducted on motivation and its influence on achievement in the past decades, we are going to focus this study on class-task performance and add a new component to the relationship established between motivation and achievement, that is the suitability of establishing a correlation between the learning objectives set by the lecturer and the motivation levels reported by the students. This could improve processes and results.

Learning objectives are the cornerstone of any class activity because teachers base the methodology on achieving them in an effective and motivating way. Frequently teachers are so convinced of the suitability of the task-specific goals that they assume that students will enthusiastically engage in that particular class assignment. However, occasionally, students' attitudes are not as positive as expected and this makes the achievement of the desired outcome difficult; this situation is particularly relevant when we ask students to participate in projects that last several weeks or even longer, as in the case of the project we are presenting. Longer class projects require more motivation.

Since there is evidence to suggest that students and teachers perceive things differently (Bernaus & Gardner, 2008), it seems essential to know the degree of motivation students have about the learning objectives set by the teacher for a particular project. Experience enables some lecturers to sense students' interest from the moment they explain the class assignment, but our proposal aims to obtain students' self-reported information about their motivation for each learning objective (do learners see the benefits of achieving those objectives? do they feel motivated? do they want to get engaged?).

Two major benefits can derive from getting this information directly from students; on the one hand, the teacher will no longer work on impressions but from empirical evidence, he/she will be able to adapt objectives and methodology to obtain the final desired outcome. On the other hand, students' opinions will be taken into consideration, and this will result in students feeling that teachers have a special interest in them which can encourage them to engage and participate actively (Williams & Williams, 2011).

Since motivation is a dynamic concept, the purpose of this study is to identify the students' initial motivation and monitor its evolution throughout the project implementation; losing motivation during the project development can make the whole teaching-learning process fail. Two instruments have been designed to gather the

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information needed: a questionnaire about the learning objectives and an observation form based on motivational behaviour.

This study has been carried out with a group of 20 first-year students, during a project based on Valencian gastronomy. This is a task-based analysis, which means that it is very specific for a particular subject and therefore has a small-scale scope. Results will show if there is a possibility to apply this method to the other subjects in Florida's interdisciplinary projects.

In the following sections a brief review of the literature that has directly influenced the study will be presented. Then, the scenario in which research has been done will be described. After that, the method applied to obtain feedback about students' motivation, findings and conclusions will be detailed.

MOTIVATIONAL FACTORS

Extensive research has been conducted in motivation and there is consensus on the importance and complexity of the topic but, although each scholar has made a valuable contribution to understand student motivation, no theory seems to be complete yet. However, from Dörney's point of view (2001) the most important question is not what motivation is but how it can be increased. Not even a classification of motivation is that important since it does not help explain the role motivation plays in second language learning. It is the intensity of motivation incorporating the behavioural, cognitive and effective components that is important (Gardner, 2007). In this sense Guilloteaux & Dörney (2008:56) add that "without sufficient motivation individuals with the most remarkable abilities cannot accomplish long-term goals".

There is common agreement on the importance of motivation because it contributes to achievement, although it does not guarantee it, furthermore, for Schmidt et al. (1996), it is unclear from many studies whether motivation is the cause or the result of successful learning, but a reciprocal relationship can be established as Keblawi (2006:48) puts it, "Motivation can affect achievement and be affected by it".

If we narrow the scope of this literature review about motivation to second language acquisition only, research shows a clear difference between motivation for the language and motivation connected to the class (Gardner, 2007; Bernard, 2010). Class motivation focuses on the individual's perception of the task but it can be influenced by an array of factors related to the language class. As Dörney (2001) explains, if the components of task motivation were identified, teachers could select and administer tasks in a motivating manner increasing learner engagement. Task motivation being the core of the study presented here, we are going to follow Dörney's suggestion and summarize some of the scholars' contributions to the motivational factors that have closely influenced our research.

Williams & Williams (2011) detailed five key ingredients with an impact on student motivation in the classroom: student, teacher, content, method/process, and environment. Within each ingredient they outlined several factors that can enhance student motivation. From their list of factors we have chosen 4 that are directly related to our study: mutual goals, making the content relevant to real life, teamwork and ICT. We have also added interest and autonomy for their relevance to the analysis presented here.

As regards, *mutual goals*, lecturers need to know students' goals or reasons for learning, often learners are motivated, but they are not motivated to do what we want them to do (Ames, 1990). Certainly, as Williams & Williams (2011) highlight, students need to know the goals and what they are going to get out of the process to get motivated.

Making the content relevant to real life is particularly important to students' careers. In this sense, we are linking "motivation" with "transfer", following the terminology of Ngeow (1998). According to this researcher, students understand that the learning process is relevant and transferable to other situations, which makes them feel motivated when acquiring new knowledge.

Teamwork is another motivational factor that has been widely supported. It is accepted that it can contribute to learning (Williams & Williams, 2011). But we should be aware of the influence among team members, which is not always positive. As Dörney (2001) indicates, the motivation of the task participants is not independent of each other, when a student works with highly motivated or unmotivated partners, this affects the learner's own attitude towards the task. Despite the many operational issues that can have a negative impact on collaborative work, researchers show that there are more advantages than drawbacks. As examples we can take studies carried out by Bianchetti et al. (2000), or Alberola & Gil (2009) based on on-line collaborative activities; they found that students' motivation and participation increased when working in teams.

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These two examples bring us to the next motivational factor to be highlighted, the use of *technology and information from the internet*. Both have been considered highly motivating since the late nineties; things are different now and some of the novelty value of ICT has been lost, but we still find they can create a meaningful and motivating context to frame the collaborative project-based approach, As Warschauer (2000) stated the key to successful technology in language teaching lies in the capacity teachers have to plan, design and implement such activities.

Another motivational factor closely related to our project is *interest*. Evidence shows that higher levels of personal and situational interest are associated with students' greater learning commitment and higher levels of achievement. Interest is also one of the essential characteristics of intrinsic motivation in the self-determination theory (Deci & Ryan, 1985). Students who are intrinsically motivated not only feel autonomous, and self determined, but also experience high levels of interest. But as Pintrich (2003) remarks, the key is not demonstrating that interest matters but trying to understand how and why interest has its effect on learning and achievement.

Some scholars highlight that interest is a key motivational factor, but it can be replaced by *value* to get students to engage in education. Sometimes students want to do an activity because of its personal value, meaning or relevance regardless of motivation or interest (Deci et al., 1991; Vansteenkiste et al., 2006). This idea is applied to the business context by Stone et al. (2009), they claim that what they call "integrated regulation", occurs when employees fully endorse the importance of the work even though they may not find it interesting.

Autonomy is a key element of self-determination theory and the last motivational factor of special relevance in our study. Teachers who are autonomy supportive will have more positive effects on students' motivation, learning, and achievement, than teachers who encourage intrinsic goals in a controlling way. But, it is not easy, teachers will need to use creativity in formulating the goals and the way they are introduced (Vansteenkiste et al. 2006).

All the above mentioned factors contribute to student motivation, but the dynamicity of motivation is a fact, particularly for class assignments that are performed throughout various class sessions. As well as Dörney & Ottó (1998), Pintrich (2003) or Keblawi (2006), many other scholars emphasize the dynamic character of motivation in education. Motivation changes over time and over the development of a particular task depending on many factors; as McCombs (1995) sees it, students are naturally motivated but this motivation is positively or negatively influenced during the learning process by internal or external factors. Certainly, there is a need to better understand the development of motivation and expertise in a particular assignment.

PROJECT DESCRIPTION: PROMOTING VALENCIAN CUISINE.

First-year students enrolled on the Tourism Degree programme, have been participating in an interdisciplinary project that aims to analyse the tourism resources of the Valencian region. As a contribution to this project, students in the English for Tourism module, were tasked to research the local gastronomy as a major tourism resource. Participants had to analyse the data obtained, choose the attributes they wanted to promote and, with all the information gathered about Valencian cuisine, prepared an article in English to be published in a specialized magazine and a promotional video to be uploaded onto a tourism website. These were meant to be used as promotional tools on the international market.

The project was carried out with 20 first-year students working in groups (four people per group). The assignment had an estimated workload of 15 hours (10 in class, 5 outside class) scheduled in different sessions from February to April. Since work sessions took place in class and outside the class, the teacher was accessible online when students worked autonomously.

The general goal targeted with the gastronomy project was to improve students' level of English in professional settings by enhancing their command of the following competences: written communication in English, autonomy, creativity, the use of ICT and teamwork. As shown in the previous section, the competences encouraged coincide with some basic motivational factors outlined by scholars.

The specific objectives addressed with this project can be divided into four areas: language and content, knowledge of the tourism industry, ICT, and teamwork. With regard to language and content, our purpose was to make students improve their writing and reading skills, learn vocabulary about cooking and practice translation techniques. As far as the tourism industry is concerned, our goal was to collect information about Valencian gastronomy and traditional festivities related to it, as well as to analyse how gastronomic magazines and

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promotional videos are produced. The third area aims to improve students' use of ICT, basically searching on the internet, using online dictionaries together with using video recording and image editing software. The last section was related to teamwork, with this project we seek to help students improve their organization skills, ability to negotiate and solve problems.

DESCRIBING THE STUDY

With this study we intend to present a method to obtain students' self-reported information about the motivational impact of the task learning objectives set. To be useful, a survey has to be easy to administer and not time consuming in terms of preparation, administration and analysis. From this standpoint the system proposed is based on two instruments: a questionnaire and an observation form.

The motivation questionnaire was devised by the class teacher and asked students to assess the degree to which they agreed or disagreed with 19 statements using a five-point scale.

The first three items were about motivation for the project in general, and whether students found the video or the article more interesting. An additional question was asked, to determine how motivating for them was the fact that their project was going to be presented at an international conference (INTE 2015).

To know the motivational impact of each specific learning objective, the rest of the questionnaire (16 items) was divided into the four areas in which those goals had been distributed (language and content, knowledge of the tourism industry, ICT, and teamwork) with one item per objective.

The questionnaire was administered in the first work session after the presentation of the project. With the analysis of the information obtained from the answers, we were able to know the degree of initial motivation for the project reported by the participants.

In order to follow the evolution of that motivation throughout the project performance, a structured classroom observation form was specifically designed for this study. With this instrument we gathered data as manifested in the students' classroom behavior, following the premise that motivation can be measured by observing behavior. The form was divided into 3 parts adapting the variables that Guilloteaux & Dörney (2008) used in their study to measure learners' motivated behavior: *Attention*, *participation* (including regular class attendance,), but given the characteristics of our project, we added *meeting deadlines* instead of *volunteering for teacher-fronted activity* which was not applicable.

FINDINGS

Percentages have been calculated taking into consideration the responses of the 20 students participating in the project on gastronomy.

As regards the questionnaire, students graded each item from 1 to 5. In the present analysis we are going to consider *3* the motivation break-even point, meaning that *4* indicates a satisfactory degree of motivation and *5* the desired degree of motivation. For the purposes of this study the comments on percentages will be mostly based on ratings of between 4 and 5.

From an overall perspective, it can be stated that the degree of participants' initial motivation was satisfactory; figures show that more that 50% of respondents gave a 4 or a 5 to each statement.

If we analyse individual item responses, results show that 78.5% found the English part of the interdisciplinary project to be motivating. The video was more motivating (85,7% with 4 or 5points) than the article (78%). Students also liked the fact that their project was being presented at an international conference, which was the only item on external motivation (85,7% of the participants rated it 4 or 5).

To interpret the findings related to the specific learning aims, we grouped results following the four sections of this part of the questionnaire. In the section about language and content, the most motivating issue was the fact that their reading skills would improve (93% selected 4 or 5), followed by their feeling of having autonomy to create the outcomes (86%) and the improvement of their writing skills (85%). Only 65% of the respondents rated 4 or 5 the two items about learning gastronomic vocabulary and practicing translation techniques. From these results, it can be inferred that for first-year students, although still motivating, the issues related to the tourism industry in which they will develop their career are less appealing.

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This is confirmed by results obtained in the second section which is about gastronomic tourism. Only 50% of respondents rated 4 or above the objective of learning about Valencian cuisine and the festivities related to it. However; although participants did not find gathering information about the local culinary resources interesting, percentages increased when students were asked about their interest in learning about gastronomic magazines and promotional videos (71,3% and 92% respectively of students surveyed rated them 4 or 5).

As suggested by results in the two sections of the questionnaire analysed so far, anything related to videos is highly motivating; nevertheless, in the third part of the questionnaire, about other aspects of ICT, when respondents were asked about the objective of improving their internet search skills and learning about video recording software, percentages fell to 71,4% of participants rating 4 or 5. Another aspect of ICT in this project is the use of tools such as online dictionaries which was only highly motivating for 50% of the participants.

The last section of the questionnaire is related to teamwork. The highest rating about motivation was reached for the acquiring organizational skills objective (85.7% allocated more than 3 points), followed by learning from other group members or learning negotiation skills (71.3% in both cases). Finally, as expected, one of the items about managerial skills, which focuses on the opportunity to face problems with other group members, got the lowest score about motivational impact (57% rated it 4 or 5).

These results were obtained the week before starting work on the project. Although there was time, the learning goals were not modified since all the responses represented an acceptable degree of motivation to participate in the project. But we had the opportunity to work on those aspects that scored lower, explaining them better and reformulating some instructions. For example, we placed more emphasis on making students aware of the relationship between the subject and their career in the tourism industry.

As regards the information gathered by structured observation, results were less positive than those obtained in the questionnaire. During the five in-class sessions (10 hours), the lecturer kept a record of the student behavior related to the following aspects: attention, participation and meeting deadlines.

The most satisfactory aspects to highlight are related to the *attention* paid to the teacher's input, suggestions, etc. A high degree of interest was registered. With regard to participation, people who attended classes participated enthusiastically but one of the problems to overcome is absenteeism. Most students came regularly, but groups do not work as expected even when only one person is missing.

While filling in the form some handicaps appeared, more related to student skills than to motivation. A lack of organizational skills to work autonomously was observed, teams did not have an effective work method and they were unable to deal efficiently with tourism related information. As a consequence, the third aspect to deal with - *deadlines* - was affected. Deadlines were met for the article, but the submission of the video had to be postponed.

CONCLUSIONS AND RECOMMENDATIONS

Establishing a correlation between the project learning objectives set by the teacher and students' perceptions of those objectives in terms of motivation has proved effective. There are two reasons for this assertion; first, during the project preparation the teacher had to clearly outline her learning goals and write them in terms of motivational factors when preparing the questionnaire. This forced the teacher to make a deeper analysis of the learning aims that needed to be met.

Second, from results obtained in the questionnaire, although findings were satisfactory in terms of motivation, the teacher had the opportunity to improve the weaker aspects.

From an operational perspective, the questionnaire designed was easy to administer and analyse. However, it cannot be forgotten that, since it is task-based, it has to be modified from assignment to assignment, because it has to be adapted to the specific learning goals.

The observation form has proved useful to systematize the data gathering, and has helped visualize how issues other than motivation, can strongly influence the outcome. In the present project, we have been able to see how some skills that we assumed students had already acquired in secondary education (teamwork, information seeking, etc.) needed to be reinforced.

On the whole, we are satisfied with the usefulness of the method presented here, but its suitability to be transferred to other subjects participating in the Florida interdisciplinary projects still remains to be seen.

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CREATING A POWERFUL, ACHIEVEMENT ORIENTED AND MOTIVATIONALLY SELF-SUSTAINING CLASSROOM CULTURE AND ITS EFFECT ON ACADEMIC ACHIEVEMENT

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ABSTRACT
In this research paper, lies the report displaying the findings of the study conducted in one prominent tertiary institution in Turkey to identify the significance and necessity of creating a sustainable achievement oriented classroom fueled by a motivationally self-sustaining culture. And how this could be achieved. It will also put to the fore front the effect of such a culture on the overall academic achievement or success of language learners. Research has shown that acclaimed instructors consciously or sometimes unconsciously reflect their high expectation for their students as it concerns academic achievement. Results of this particular research has also shown that when a culture of achievement is cultivated in any learning environment and a clear understanding of the academic expectations of both parties (the instructor and the learner) are clearly construed, the academic performance of learners tends to be positively influenced. This paper is intent on showing how to go about creating and sustaining an achievement culture in a classroom and also its positive impact on both academic and non academic(extra curricular activities) on the learners.

INTRODUCTION
As teachers of a foreign language, we all aspire to create a learning environment that goes very much beyond students' proper behavior in the classroom. To facilitate a learning environment which is deemed to be "efficient" not only because of learners' level-headedness but also because students are intrinsically motivated to attain higher grounds academically, we must strive hard and indulge ourselves to creating classrooms with a powerful, achievement oriented culture where students are intrinsically motivated to work hard and collaboratively work with their peers to attain their collective goal for a sustainable better academic achievement. Research with language learners at different levels of tertiary education has indicated a conceptual coherent association between establishing a clear-cut culture of achievement in classrooms and the academic success of individual students. This particular study is intent on further supporting the notion that forming and allowing a climate of academic achievement to permeate, and setting pristine achievement goals in ELT classrooms, play significant role(s) in instilling zeal and facilitating the psychological well-being of learners. Particularly, I will be building on **goal orientation** analysis of adaptive behavior in carefully observing the relationship between assigned academic tasks and the learner's ego goals. This study also aims to shed more light on the "end product" or consequences of school's perceptions of the importance of emphasizing on and encouraging culture of achievement. In the process of conducting this study, it was observed that task goals and perception of the school as per emphasizing task goals were related to positive psychological well-being of learners. On the other hand, should a teacher be redundant at creating culture of achievement in a language learning environment, the related negative psychological well-being and overall low academic performance of language learners are inevitable. This research provides additional data for teachers and school leaders in helping them understand the immense importance and need for teachers to belief in creating a classroom forged on by a tangible culture of achievement and in its priceless influence in imparting and fostering students academic achievement. The second half of the paper will be elaborating on ways and implementable methodologies towards cultivating and fostering a climate of academic achievement.

BODY
Goal analysis is an important component of the learning process. In a particular learning environment, learners conjugate from different regions and backgrounds. These learners also have different expectations or goals. This being the case, it is of crucial importance that instructors are able to establish, clarify as much as possible, academic goals and achievement goals. **Academic goal orientation** is based on contemporary "goal-as-motives" theory where it is posited that "all actions are given meaning, direction, and purpose by the goals that individuals seek out, and that the quality and intensity of behavior will change as these goals change" (Covington, 2000, p. 174). **Achievement goal theory** is particularly important in education as it is believed that by differentially reinforcing some goals, teachers can

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influence or totally change the reasons why students learn—that is, change their motivation (Covington, 2000). In other words, the student's intrinsic motivation to strive hard towards achieving academic excellence can be triggered if clearly stated achievement goals are jointly decided upon by teachers and learners.

A variety of groups of researchers have conjugated on strikingly similar findings relating to the importance of academic goal orientation for academic success. The resultant of such findings; *achievement goal theory* has been under significant study and scrutiny during the past decade. **Goal theory** (performance and learning goals theories) focuses on the role that "purpose" plays in motivation attitudes and behavior. Goal theory basically proposes two common goal orientations which can be classified as either *ego-* or *task- involved*. Dweck and colleagues (see Dweck, 1999) distinguish between *performance* (such as ego-involved goals) and *learning* goals (such as task-involved goals). A ***performance goal orientation*** is characterized by self-questions such as "Will I look smart?" and/or "Can I outperform others?" which reflect a concern for personal ability, a normative social comparison with others, preoccupation with the perception of others, a desire for public recognition for performance, a need to avoid looking incompetent, and "outperforming others as a means to aggrandize one's ability status at the expense of peers"(Covington, 2000, p. 174). In contrast, a student with a ***learning goal orientation*** would more likely ask the questions "How can I do this task?" and "What will I learn?" The learning goal orientation reflects a focus on task completion and understanding, learning, mastery, solving problems, developing new skills, and an appreciation for what one learns (Covington, 2000; Eccles & Wigfield, 2002; Linnenbrink & Pintrich, 2002b; Skaalvik & Skaalvik, 2002). With no intention to alienate or overlook the importance of performance goals objective, setting clear cut achievable learning goals objective goes a long way towards helping learners to visualize and provides perspective for learning. Research have shown that instructors who are in the know of the importance of setting a learning environment where every student is intrinsically motivated and enthused by the clarity of learning goals, are bound to have academically buoyant learners. Furthermore, instructors who have been blessed with the know-how(natural flair) to create and foster the "flourishment" of learning oriented classroom will have successful students and this is mostly evident in the grades of the students.

Research has also shown that teachers adapt an important role in the academic trajectory of students all through the schooling experience. They (instructors) have the unique opportunity to support students' academic and social development at all levels of schooling (Baker et al., 2008; Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998; McCormick, Cappella, O'Connor, & McClowry, in press). Aligned with attachment theory (Ainsworth, 1982; Bowlby, 1969), positive teacher-student relationships allows students to feel safe and secure in their learning environments. Such an environment further provides scaffolding for important social and academic skills. Teachers who support students in the learning environment can positively impact their social and academic outcomes. When teachers form positive bonds with students, classrooms become supportive spaces in which students can engage in academically and socially productive ways (Hamre & Pianta, 2001). Positive teacher-student relationships are classified as having the presence of closeness, warmth, and positivity (Hamre & Pianta, 2001). Students who have positive relationships with their teachers use them as a secure base from which they can explore the classroom and school setting both academically and socially, to take on academic challenges and work on social-emotional development (Hamre & Pianta, 2001). Research has proven that teachers who allow themselves to be seen as or are approachable by students have the tendency to motivate and inspire their learners. Approachable teachers are bound to establish a very positive teacher-student relationships. In line with the attachment theory, students who have a close relationship with their teacher(s) feel emotionally and psychology attached to the teacher, hence, over time, a sense of trust and self-esteem is formed. And, with such feelings in action, students have been proven to strive even harder at achieving higher academic performance for the purpose of not disappointing their teachers. Establishing and fostering a strong positive teacher-student relationship ensures a learning environment where all the learners concerned feel responsible for their academic performance and strive to maintain or reach a recommendable level.

THE METHOD

The type of research that was used in this study is qualitative and quantitative research. In this study, a total of 20 ELT teachers were observed in the classroom based on the criteria as indicated on the "staff in-class evaluation sheet". Each teacher had the title of an "advisor teacher". As an advisor teachers, instructor had more that 18 contact hour per week with the students all through one academic year spanning 8 months. The teacher observation period spanned 4 months. The total number of students that were in this research was 285 students. The number of students per class for each teacher varied and fell between 25 students and 28 students. After an observation period that spanned 4 months, 10 of the 20 teachers were marked as very active, possessing and displaying enthusiasm, had established strong bonds (close teacher-student relationship) with their students and finally, had created an environment where students were well aware of the expectation of their teacher. The other 10 teachers were noticed to appear not motivated in class, had little

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or no bond with their students and was far from coming to agreement with the students as regards their academic expectations for the students.

DIAGRAM 1

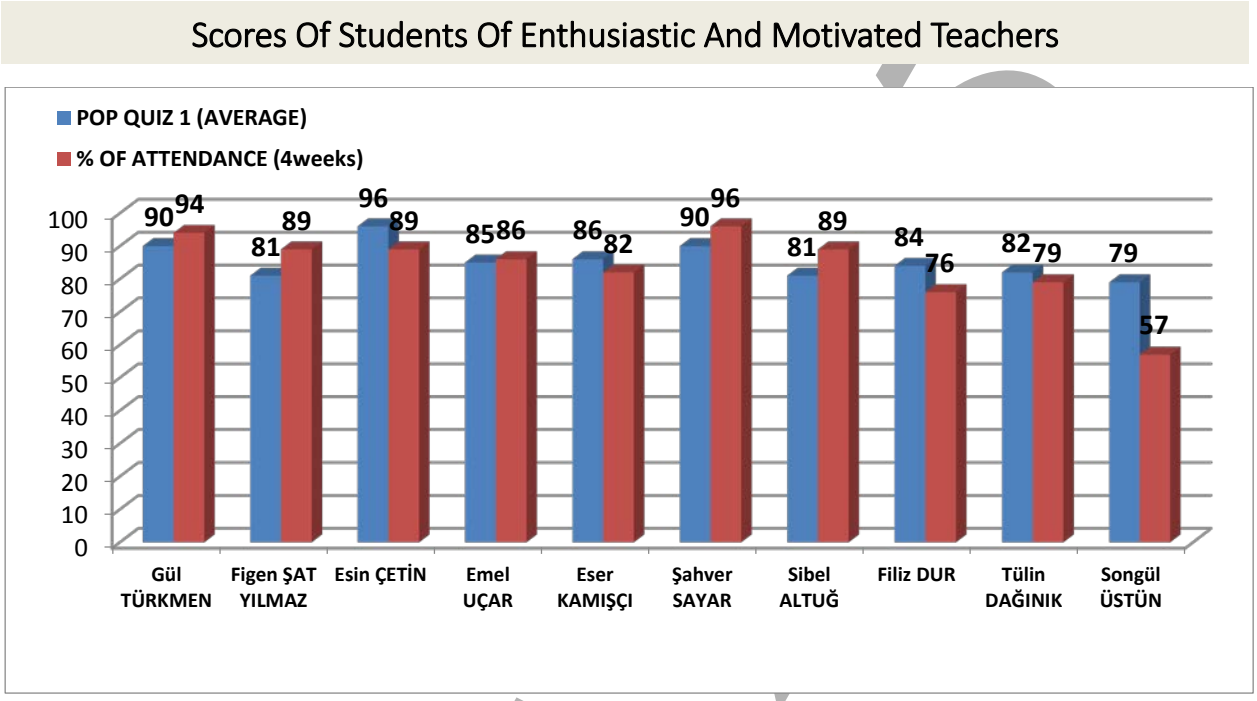
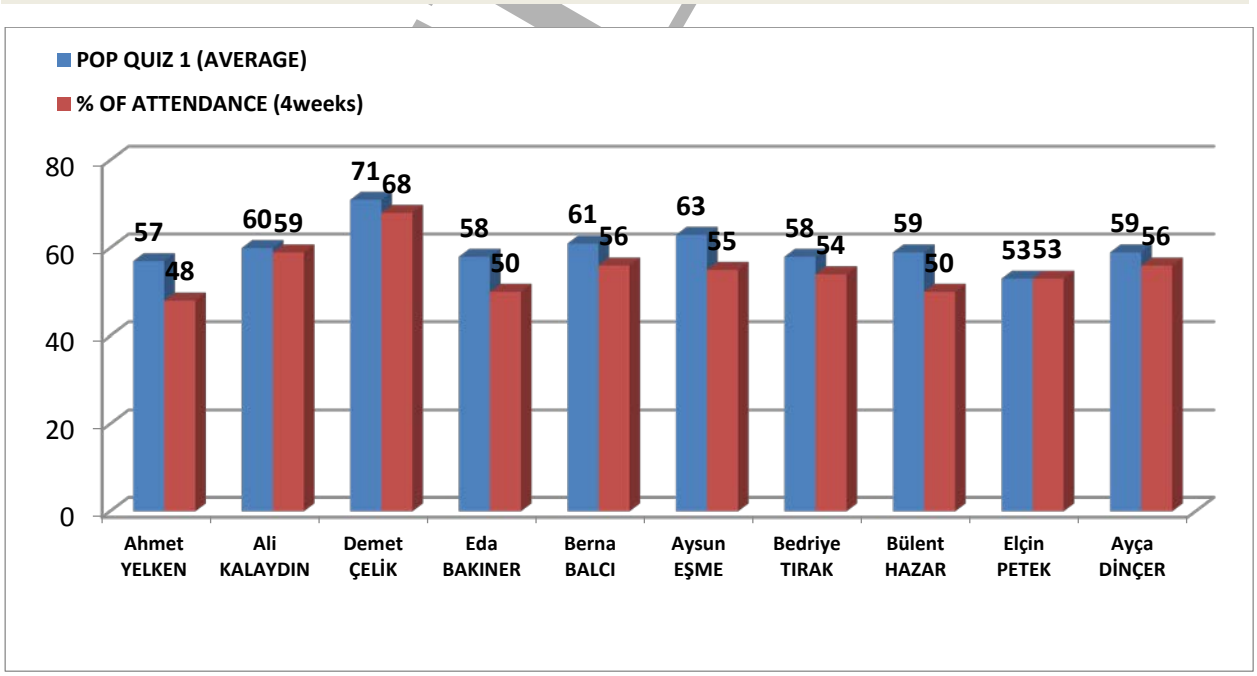


DIAGRAM 2



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FINDINGS

Following diagram 1, the table show the academic success level of students of teachers who possessed and/or established a close bond with their student, communicated clear cut expectations to the students and taught with enthusiasm. It can clearly be seen that the percentage averages of the students in these 10 classes is quite high, roaming in the 85% range. The over-all attendance of the students can be seen to have been considerable high.

Following diagram 2, the table show the academic success level of students of teachers who failed to possessed and/or established a close bond with their student, neither communicated clear cut expectations to the students nor taught with enthusiasm. It can clearly be seen that the percentage averages of the students in these 10 classes is lower, roaming in the 50% range. The over-all attendance of the students can be seen to have been considerable low as well.

CONCLUSION

It can be concluded from the result of this research that in other to create a powerful, achievement oriented and motivationally self-sustaining classroom culture, instructors need to possess or establish the three core ingredients which are possessing and displaying enthusiasm, setting achievable expectation for learners and creating a close teacher-student relationship with learners.

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CREATING THREE-DIMENSIONAL PARAMETRIC ARCHITECTURE POPUP BOOKS FOR ARCHITECTURE EDUCATION

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ABSTRACT
In the Introduction to Architectural Studio project lecture in Yildiz Technical University, during the winter semester of the education year 2014-15, a new approach on the design studio process has been practiced on a group of 15 students creating 3D pop-up books as the first step to create parametric architecture examples. In the Turkish university system, the new departments of the students are determined according to the grades of the students. Therefore, almost none of the new Turkish university students can be placed in the architectural faculties according to their skills. Thus, this new approach not only captures the attention of new students in the department, but it also introduces the new breakthrough movements in the architectural field such as parametric touches on the contemporary architecture. Thus, the paper will discuss the creation process of these wonderful 3D pop-up books as the first step on creating parametric architecture examples.

Keywords:history, past, historicity, historicism, architecture

INTRODUCTION

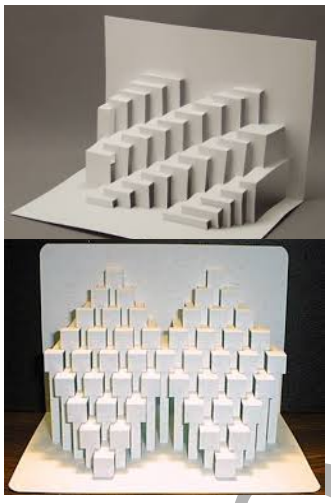
On contemporary architecture it is known that architects are searching for new horizons to make their new and unseen unique creations. Without any doubt, it can be said that almost all of them are searching to work on the title of making avant-garde concept projects. Thus, it seems that parametrical architecture can be the answer of this search. It can be said that parametrical architecture can be defined as a process based on algorithmic thinking that enables the expression of parameters and rules together. It also can be defined as a paradigm, which encodes and clarifies the relationship between design intent and design response. Thus, the relationship between elements is used to manipulate and inform the design of complex geometries and structures. To make 1st years 15 architecture students to meet these paradigms based design as soon as early possible, creation of a 3 dimensional parametric based pop-up books was asked as the very early step of designing parametric structures on architectural education of the Design Studio Project 1, during the 1st semester 2014-2015 education year. Thus, the paper will have the design process and the best 3 d pop-up book examples of the semester.

WHAT IS A PARAMETRIC DESIGN?

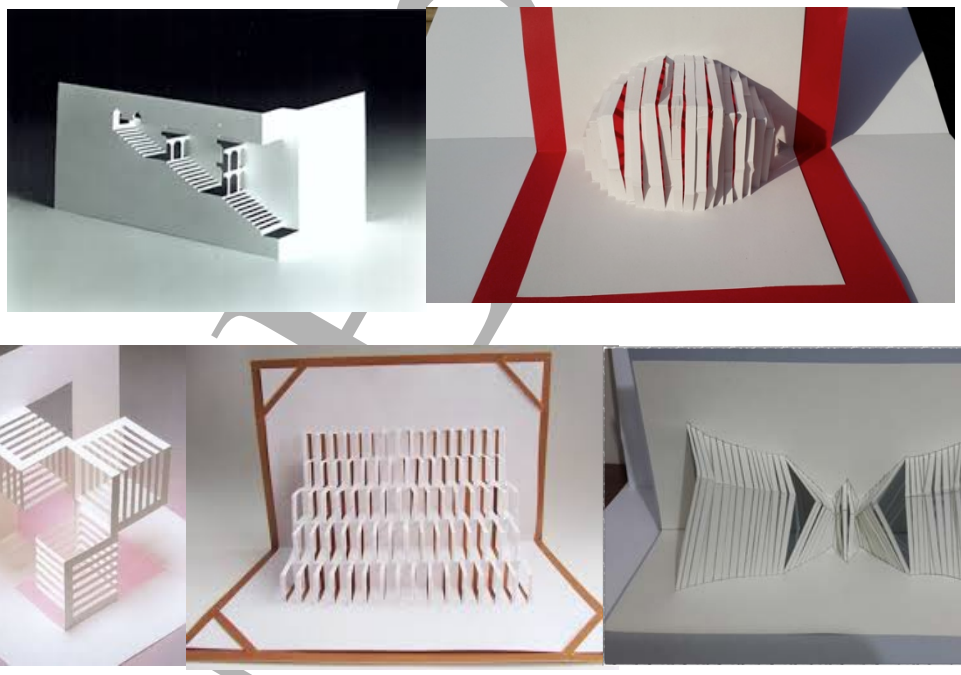
Parametric design is a process based on algorithmic thinking that enables the expression of parameters and rules that, together, define, encode and clarify the relationship between design intent and design response. Parametric design is a paradigm in design where the relationship between elements is used to manipulate and inform the design of complex geometries and structures.
The term 'Parametric' originates from mathematics (parametric equation) and refers to the use of certain parameters or variables that can be edited to manipulate or alter the end result of an equation or system.
Parametric design is not a new concept and has always formed a part of architecture and design. The consideration of changing forces such as climate, setting, culture, and use has always formed part of the design process.
During the design process of introduction to architectural studio, one main question was asked to students, to create 3 d pop up books. This step could be the first step to understand what the parametric way of thinking can be on the architectural design.

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1. 3 D pop-up book examples



Figures1-2. 3 D pop-up book examples.



Figures3-7. 3 D pop-up book examples.

Most of the students selected to work with white parametric structure based 3 D pop-up books. Only some of them selected to add second pale colours to their parametric structure for having the colourful backgrounds. Fine art papers are used to create these 3 dimensional pop-up books.

CONCLUSION

During the last 10 years the search of parametric geometry has been an interesting subject for Contemporary Architecture. As the 21st century brought a new era for architectural design, CAD programs have evolved together with the idea of Parametric Form Finding. The possibilities offered make the collaboration of the architect with the computer now possible in terms of searching the appropriate form for given cases. As the analysis of contemporary architectural pieces has indicated, the procedure of architectural design can be semi-automated. Parametric Form Finding, meaning the procedure followed offering solutions to spatial problems by

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using changeable variables, is transferring generative approaches into the architectural design workflow by introducing a set of rules to describe the constraints of the form and for the first year architecture students 3 dimensional pop-up books can be the preliminary step to understand the base of the Parametrical Form Finding on the design studio.

Thus, for the 1st year architecture education on the preliminary step of the studio project not only to take the attention of students but also to show and tell the parametric structural system to the students creating 3 dimensional pop-up books has been done during the winter semester of the education year 2014-15. It was seen that at the end of the 3 dimensional pop-up books exercises all of the group of the students had grades and became ready to come face to face with the complicated structural systems especially parametrical based.

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CRITICAL THINKING DEVELOPMENT IN COURSE OF TEACHING RUSSIAN IN KAZAKHSTAN

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ABSTRACT
The paper dwells upon the main peculiarities of critical thinking improvement while teaching Russian on the basis of specific characteristics of its functioning in Kazakhstan. Being widely spread on the territory of the former Soviet Union countries and considering as a pluri-centric language by some scholars (Shaibakova 2014), Russian is used in Kazakhstan its Standard form. Besides, there are some functions requiring specific approach for teaching Russian in poly-lingual environment as well as an instrument of critical thinking development. Thus, Russian language in Kazakhstan is treated now (1) as a language of Russian-speaking media; (2) as a language used for official communication; (3) as a language of higher education; (4) as a mediator in the process of translation. All aforementioned functions of the Russian language in Kazakhstan give different opportunities for critical thinking improvement in the process of Russian language teaching. Moreover, all of them cover different spheres of study and various skills. Thus, highly-developed critical thinking can prevent a lot of mistakes both in the process of official text composing and textual analysis as well as in teaching official communication.

Key words: Critical thinking, Russian Language Teaching, Pluri-centric Language, Standard Form of Language

1 INTRODUCTION

In Kazakhstan, Russian language is still used as a multifaceted means of communication. Being widely spread on the territory of the former Soviet Union countries and considering as a pluri-centric language by some scholars (Shaibakova 2014), Russian is used in Kazakhstan its Standard form be the representatives of different ethnic groups. It is necessary to underline there are some functions requiring specific approach for teaching Russian in poly-lingual environment as well as an instrument of critical thinking development. Thus, Russian language in Kazakhstan is treated now (1) as a language of Russian-speaking media; (2) as a language used for official communication (which is the key point of our research); (3) as a language of higher education; (4) as a mediator in the process of translation. All aforementioned functions of the Russian language in Kazakhstan give different opportunities for critical thinking improvement in the process of Russian language teaching. Moreover, all of them cover different spheres of study and various skills, related both to theoretical and practical approaches. So, investigation of studying Russian as a means of critical thinking development in multi-lingual community can provide scholars with the information about some general peculiarities of that process. In our paper, we focus on Russian as a language of official communication, because this function has not been studied in details as a means of critical thinking development.

2 LITERATURE REVIEW

In many scientific works (including sources in different spheres, such as Philosophy, Psychology and Linguistics) critical thinking is defined as the process of thinking through questions. It is one of productive ways of verification of all kinds of information either in everyday life or in a process of scientific research. This method of scientific research and teaching is very old and very young at the same time. Let us remind the Socratic method of Ancient Greece, scholastic discussion of the Middle Ages, critical traditions of the European and Russian philosophy, etc. And nowadays critical thinking is considered to be “an important component of most professions”. It is also qualified as a part of the educational process.

As it was stated by the National Council for Excellence in Critical Thinking, 1987 (a statement by Michael Scriven & Richard Paul presented at the 8th Annual International Conference on Critical Thinking and Education Reform, Summer 1987, see also Scriven (1996) “critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness” (Scriven 1996). At the same time, D. Kurland underlined such characteristics of critical thinking as rationality and proactive attitude to the subject:…”we are thinking critically when we rely on reason rather than emotion, require evidence, ignore no known evidence, and follow evidence where it leads, and are concerned more with finding the best explanation than being

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right analyzing apparent confusion and asking questions. (…) Critical thinkers are **active**, not passive. They ask questions and analyze. They consciously apply tactics and strategies to uncover meaning or assure their understanding" (Kurland 2011); similar position is also expressed by Carroll (2005) , Engle. (2000). Thinking through question as the most important characteristic of the given phenomenon is also mentioned by Browne and Stuart (2006). On the other hand, G. Fleming argued that "critical thinking involves suspending your beliefs to explore and question topics from a "blank page" point of view. It also involves the ability to know fact from opinion when exploring a topic" (Fleming 2014). Kahane (2005) focused on the rhetoric aspects of critical thinking – as a process and principle of thinking. As we can see here, scholars pay attention to defining critical thinking as a multifaceted phenomenon, to giving detailed description of critical thinking process etc. But the process of critical thinking formation via teaching official language can not be considered as a topical sphere of research.

3 TEACHING RUSSIAN AS A LANGUAGE OF OFFICIAL COMMUNICATION AND CRITICAL THINKING IMPROVEMENT

How to teach critical thinking in the process of study Russian as a language of official communication? First of all it is necessary to take into account that the status of Russian in Kazakhstan is very specific:
- it is treated traditionally as a language of international communication; that is why Russian performed the function of official information dubbing
(in accordance with the Constitution of the Republic of Kazakhstan, the only official language is Kazakh, but many people still need Russian version of official documents). The multi-national character of Kazakhstan community presupposes the necessity of official communication on the basis of both languages. Thus, Russian language is used in legal procedures (if the trial is hold in Kazakh, and one of the parts needs a translation, an interpreter becomes the participant of the process). Also, all official documents should have Kazakh and Russian versions;
- Kazakhstan keeps strong international relations with the neighboring countries of UIS; so that Russian is used successfully as a mediator of official communication. Besides, we should also point out, that Kazakh students need such skills in the field of Russian as an official language as writing CV and bio, filling official forms in Russian etc.
The stereotype concerning official style is that it is characterized by a high degree of lexical restriction (a certain amount of lexical units and types of word-building); strictness of narration: words are mainly used in their primary meanings; impersonality (official speech avoids personal and concrete). Besides, the process of official document composing requires highly developed critical thinking. Thus, even filling the ready-made form of a document, students improve their skills thinking through questions. On the other side, composing of Bio and CV requires highly-developed critical thinking skills both in the field of text composing and following certain style requirement. The list of some "critical-thinking questions" related to procedure of CV composing is given below:
- Which pieces of information concerning my personality should be included in my CV?
-Why should I choose them?
-How to structure CV in the best way?
-How to represent my strong points in the best way in order to catch the employer's/recruiter's eye?
-Which characteristic features of official style should I primarily take into account?

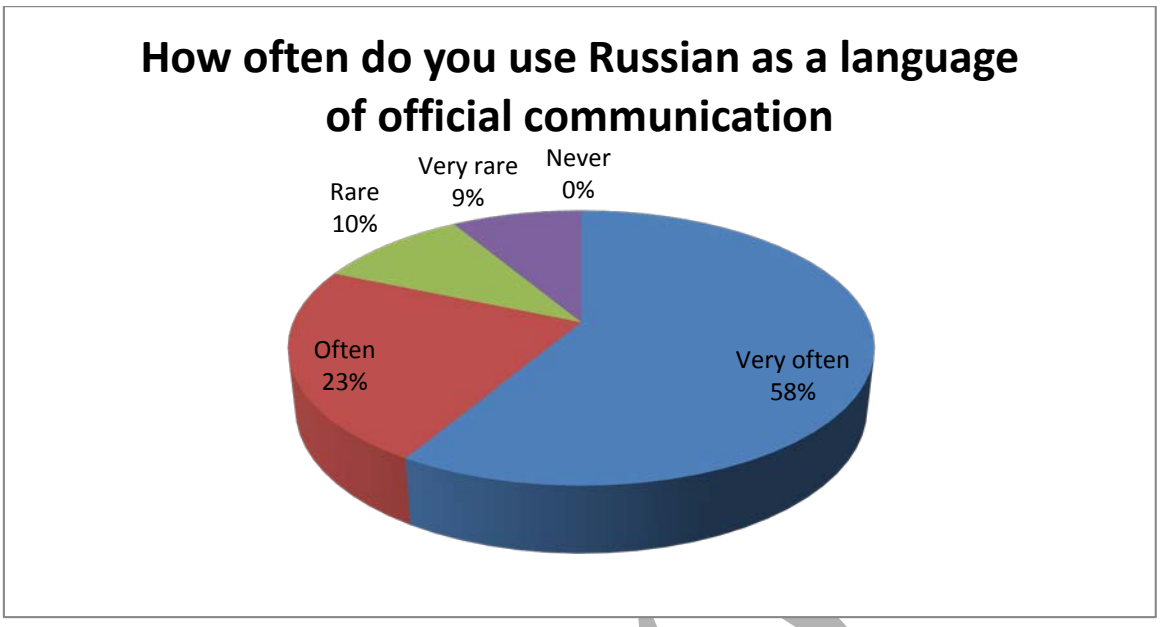
So, highly-developed critical thinking can prevent a lot of mistakes both in the process of official text composing and textual analysis as well as in teaching official communication.
All aforementioned questions were included in the lesson procedure while teaching Russian as a language of official communication. The results of survey demonstrated that students appreciated the productivity of the proposed approach to teaching official Russian.

4 RESEARCH PROCEDURE

100 students, who choose Kazakh as a language of education (they study such subjects as Kazakh language and Literature, Journalism, Law and History) were involved in our research procedure. We asked them about use of Russian in the aforementioned field. The results are represented below in a diagram:

Figure 1. Use of Russian language as a means of official communication by Kazakh-speaking students

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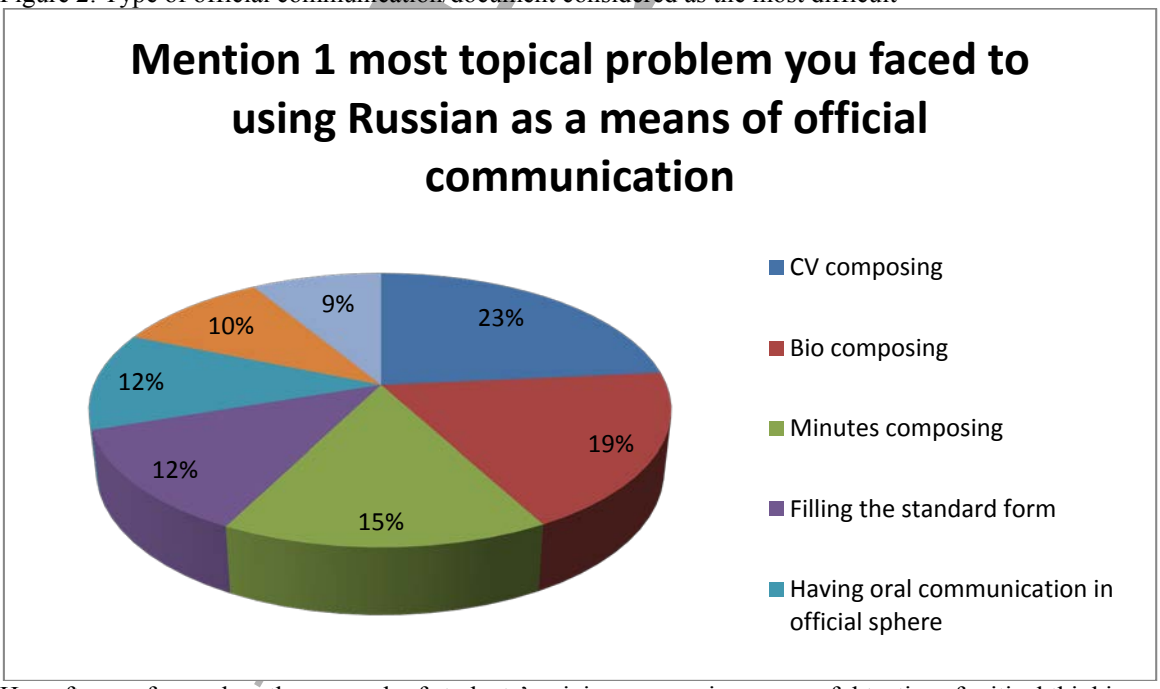


Teaching Kazakh people whose native language is also Kazakh (we should point it out that after 20 years of independence many Kazakh people still use Russian as their native language, and choose Russian as a language of their study at school and at the university), we faced to such problems as

- they are really good at everyday Russian, but as a language of science and as a language of official communication, it is not so highly-developed as Russian used for general purposes (similar problem also takes place for the Russian speaking students, but it was not under consideration in our paper; it should rather be treated as an object of special comparative research);
- they rather can successfully hold oral communication in the aforementioned sphere than write an official text (including such different types as CV, Bio, minutes, and even filling the standard form of official document).

So, the next question of our survey was: Which type of official communication/which type of official documents is the most difficult for Kazakh-speaking students learning Russian for official purposes? The results are represented in the diagram below.

Figure 2. Type of official communication/document considered as the most difficult



Hereafter we focused on the research of students' opinion concerning successful tactics of critical thinking use in the process of learning official Russian language. They prioritize different techniques which we used in course of teaching Russian as a means of official communication on the basis of their applicability in the process of official document writing. As the results show, "thinking through questions" is considered to be the most effective and helpful tactics for official texts composing in comparison to work with strong/weak samples, analyzing typical mistakes etc. The results of students' opinion survey are the following:

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Figure 3. Students' opinion concerning the most effective tactics.



5 FINDINGS

Analysis of the answers given by the students indicated that 42% of the students found "thinking through questions" technique in the process of document composing more practical and effective compared to traditional analysis of typical mistakes (28%), work with samples (18%) and use of ready-made forms (12%) (Figure 3). This kind of activity was characterized as "creative", "practical", "co-operative", "enhancing communication among the students". However, minority of the learners still favoured analysis of good/bad samples and use of ready-made documents (or structured samples).

6 CONCLUSION

On the basis of our research it is possible to state that official communication in Russian is still up-to-date in multi-lingual community of Kazakhstan, and Kazakh speaking students consider skills in that field as important one. On the other hand, the favoring position of such technique as "thinking through questions" shows

- tendency of prevailing of techniques based on critical thinking principles;
- students' willingness for language study based on such kinds of activities.

The present study suggested a model for using "thinking through questions" technique to foster creative writing skills even in such formalized and stereotypic field as official communication. It is also an attempt to bridge the lacuna in field of teaching Russian as a means of official communication in such multi-lingual community as the Republic of Kazakhstan.

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CROATIAN SCHOOL TEACHERS' FAMILIARITY WITH THE EUROPEAN DIMENSION IN EDUCATION

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ABSTRACT
This paper presents the results of a qualitative research that examined school teachers' familiarity with the concept of the European dimension in education. The research examined how teachers assess the need for changes in the national educational system in relation to the standards of the European union, the level of their familiarity with educational policies, initiatives and activities of the European Union in the field of education, and how they assess national educational policies in relation to the policies of the European Union. The results show that the teachers are only vaguely familiar with the European frameworks for cooperation in the field of education, and even less familiar with national educational policies. The question raised in this paper is whether the changes in education are able to occur when the teachers, who are beyond doubt the most important stakeholders in a school and therefore influence the outcomes of students' learning, are not familiar with the objectives of the European and national educational policies.

INTRODUCTION
The discussions on the concept of European dimension in education have been present in European education policy and professional and scientific discourse for more decades. Developmental course of European dimension in education was moving parallel to the development of European education policies. From an idea that in the beginning had mostly economic and political characteristics of the development of the European Union transformed into the field of education, through the deepening of the European integration processes (Zidarić, 1995) to the concept that eventually became one of the main directions of development of European education policies and school practices (Turk and Ledić, 2013). In this context, European dimension in education can be seen as an educational project of the European Union or as a process of growth and maturation of educational ideas in the wider European area.

Because of its complexity and multidimensionality, it is very difficult to clearly define the concept of European dimension in education. Most authors who, from research perspective, deal with the broader context of European education (Ilišin and Mendeš, 2005; Lukšič and Bahor, 2007; Domović et al., 2011; Tišma, Samardžija and Jurlin, 2012) as well as those who specifically explore the concept of European dimension in education (Shennan 1991; Tulasiewicz and Brock, 1994; Zidarić, 1996; Angeles, 2003; Phillippou, 2005; Savvides, 2006, 2008; Ledić and Turk, 2012; Turk and Ledić, 2013; Turk et al., 2015) define and determine it differently. However, they all agree about several basic guidelines and indicators of European dimension in education, which they emphasize in their discussions or research results. Thus, the authors point out (European) values, European citizenship, European identity, multilingualism and mobility as well as the knowledge, skills and attitudes on Europe, in Europe and for Europe as five basic groups of indicators of European dimension in education. **European values** are contextually determined through the topics of interculturalism and multiculturalism, advocating for human rights, freedom, tolerance and democracy and the promotion of pacifism, the prevention of war and the fight against crime (Ledić and Turk, 2012). Then, **European citizenship**, which implies the sense of belonging to the European Union and the rights of each person as a citizen of the community while being aware of supranational identity and common European consciousness (Tišma, Samardžija and Jurlin, 2012). In addition to that, there is the need to raise the awareness of **European identity** through raising the awareness of local, national and European identity and their correlation, respect for different cultural and ethnic identities and the development of political, social and cultural sense of belonging to Europe (Angeles, 2003). Also, Angeles (2003) emphasizes learning (European) languages in the context of the development of linguistic and intercultural competences, the development of the ability to learn and work in a multinational environment, encouraging mobility of students and teachers and providing opportunities for international interaction, which are recognized as an indicator of **multilingualism and mobility**. The **knowledge, skills and attitudes on Europe, in Europe and for Europe** is the fifth group of the indicators of European dimension in education, which opens a new and broad range of teaching to be implemented interdisciplinary within all school subjects (Ledić and Turk, 2012).

The knowledge, skills and attitudes are material, functional and educational aspect of educational work, which

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points to its integrity. Therefore, they represent one of the key indicators of European dimension in education and an essential element in analyzing and researching this concept. Tulasiewicz and Brock (1994) point out that, in the context of the knowledge, students should be better informed on the European continent, they should have language, communication, social and negotiation skills while their attitudes would imply commitment to Europe as a common homeland of all nations and the European Union as a supranational community within which a common European identity and awareness will be developed.

Besides the presented indicators of European dimension in education, the conducted researches on European dimension in education in their results highlight a number of challenges faced by those who advocate for the implementation of this concept in educational organizations and contents. In this context, international research and debates are, of course, more numerous (Shennan 1991; Tulasiewicz and Brock, 1994; Field, 1997; Angeles, 2003; Phillippou, 2005; Convery and Kerr, 2005-6; Savvides, 2006 2008; Rebensteiner and Ropo, 2013) and bring different range of challenges and recommendations that should be taken into account when implementing European dimension in education in (daily) educational situations.

Thus, for example, Convery and Kerr (2006) studied the understanding of students - future teachers and employed teachers, about notions such as European identity, European cooperation and European integration in the context of a wider concept of European dimension in education. The study results indicate that the students - future teachers are more inclined to articulate their thoughts on European dimension in education from a broader, general context or taking into account their own experience. Although the results of the study indicate that students perceive Europe as something that directs them to "something higher" (Convery and Kerr, 2006) such as developing a global identity, they also express concern about the possible exclusion of this concept and the inability of developing a global perspective if all teaching contents are adjusted only to European dimension in education. Other than emphasizing the potentially dual interpretation of this concept, such results point to the necessity of its critical thinking when implementing it into educational contents and everyday educational practice. In the context of the debate on multilingualism and mobility as one of the basic groups of indicators of European dimension in education, research has shown that students - as future teachers who speak several foreign languages, and who had the opportunity to travel through Europe or participate in exchange programs, perceive more positively the importance of European cooperation. Students have said that their visiting, living and studying in another country especially helped in the understanding of other cultures and developing intercultural and multicultural competence. Also, they particularly pointed out the importance of the "practical" level of European dimension in education. Within the aforementioned term - "practical" European dimension in education, the students think of mobility, international cooperation and information connections, which they consider to be significant predictors of the development of this concept in everyday (school) practice. Although they mostly have affirmative attitudes towards European dimension in education, future teachers point out that it is difficult to identify and understand how, for example, international cooperation and mobility can help students develop their European identity. This result is particularly indicative in the context of the debate on the definition of European identity and identity issues in general, and it points to the need of its meaningful empowerment and defining in order to avoid possible confusions and ambiguities.

In addition to students - future teachers, Convery and Kerr (2006) conducted the same study on employed teachers as well. They connected their thoughts on European dimension in education with the circumstances in which students learn and practical everyday situations. The concept of Europe and European dimension in education is perceived by the teachers as exclusive and incomprehensible, and they point out that it lacks the ability of everyday practical application in a variety of school situations. Thus, for example, they analyzed the issues of identity through the ways and possibilities in which their students can develop it while noting, similarly to the responses of students, that the students have a lot of difficulties in understanding it and consequently behaving as European citizens, since the students do not develop nor understand their own local identities in an appropriate manner.

In a study *Becoming European*, which dealt with the position of European dimension in education in educational curricula, Hinderliter Ortloff (2006) analyzed a number of different educational curricula of different European countries, starting with the following research questions - *Is the image of European citizen separated from the identity of national citizenship or are they intertwined?* and *Is the curricular aim primarily to acquire knowledge, i.e. to know about Europe, or is the goal to be a European?*. The study was conducted on a selected sample of educational curricula of Austria, Denmark and Germany, given their conceptual similarities and the possibility of comparison. In this study, it was assumed that the education on civil rights and European dimension in education can reveal important differences in how countries maintain balance between European identity and national identity through education.

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The Austrian curriculum, declaratively, is the ideal if we are talking about ways to implement European context favored by the theorists involved in education. However, empirical evidence was not determined proving that this model is the one that really contributes to the creation of an integrated European identity. The study found that there is no unified approach to European citizenship education nor are the assumptions of curriculum development comparable. The study thus concludes that each national policy continues to set different priorities in terms of building national, European and global identities and, given the selected priorities, the success of these approaches is assumed. Of course, one should not thus forget the necessity of contextualization of lower levels of identity (local or national) inside broader, supranational community such as the European Union or Europe or the global world as a whole.

Adaškevičiene and Janiunaite (2004) investigate the problem of European identity in the context of a broader concept of European dimension in education. The authors perceive European identity as an integral part of the concept of European dimension in education and an important research problem. Adaškevičiene and Janiunaite (2004) point out that in studying European identity the problem is in insufficiently developed methodology and the absence of indicators of implementation of European identity and European dimension in education in school contents. The research contribution of their work is particularly evident in the part of the proposals for the implementation of European identity in educational organizations and contents. Thus the authors point out that there are two possible ways of implementation - direct and indirect. Direct implementation of the concept of European identity is linked to the students and teachers and their involvement in programs of mobility, exchange and various project activities on international level. On the other hand, indirect implementation is achieved through the inclusion of this concept in educational content (student books) of compulsory and optional subjects. The proposals for implementation of European identity and European dimension in education resulting from this research open the possibility of creating new research, especially in the part of direct implementation - related to the teachers, their attitudes and thoughts on this concept, as well as indirect implementation related to the contents of school textbooks.

It is clear that the international research touched various segments of educational environment associated with the concept of European dimension in education and involved different research patterns - students, teachers and educational curricula. Based on the results of presented research, the recommendations for future research were given as well as the suggestions for the implementation of this concept into educational content and everyday practice. In this context, from scientific research and practical point of view, the concept of European dimension in education is significantly strengthened and improved, and the foundation for its further development and continuous implementation have been set.

On the other hand, in Croatian educational environment the beginnings of debates on European dimension in education can be found in the mid nineties (e.g., Zidarić, 1995) followed by a period when this concept remained almost ignored and unexplored. Its more intensive study, particularly from the perspective of scientific research, started in the last few years (Ledić and Turk, 2012; Ledić, Staničić and Turk, 2013, Turk and Ledić, 2013, Turk et al., 2015). Studies of European dimension in education were mostly carried out in the framework of broader research on the attitudes of educational experts-practitioners and students - future pedagogues and future teachers. For example, Ledić, Staničić and Turk (2013) in their study of the competencies of school pedagogues introduce a new group of competences of the European dimension in education, among which they point out - *Knowledge of the application process to the European Union programs, Knowledge of the structure and functioning of key bodies of the European Union (the Council of Europe, the Council of Ministers, the European Parliament...), Knowledge of European trends in education, Knowledge of at least one foreign language, Knowledge of the area of democratic citizenship and human rights, Ability to work in intercultural and multicultural environment, Ability to give guidance to students and teachers towards social responsibility.* The results of this study showed that the pedagogues think that the competences related to European dimension in education are the least important competences for their successful and daily work. Also, the same respondents estimate that higher education (study program of Pedagogy) and professional training programs in Croatia do not contribute to the development of competences of school pedagogues (Ledić, Staničić and Turk, 2013). Similarly, the students of Pedagogy - future (school) pedagogues think that the listed competences are least important for their future professional engagement while in estimating the contribution of higher education they consider that it partially contributes to the development of competences of European dimension in education for future pedagogues (Turk and Ledić, 2013). Also, the students of teachers' studies being educated for teaching profession and the future work in schools, show insufficient knowledge of the basic concepts of the European Union as well as a low level of (European) political literacy (Turk et al., 2015). In addition to suggesting a low level of awareness of (future) educational experts in Croatia on current issues and problems of European education policies, these results may be indicative in the context of necessary changes in national education system in relation to the EU standards. In this context, from a national perspective, one may problematize the

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effectiveness and feasibility of the implementation of European educational objectives set and defined in some of the main European educational policy documents (such as Europe 2020 or the *Education and Training 2020*), which are referred to by the recent national education policy (for example, in the Strategy of Education, Science and Technology of the Republic of Croatia from 2013).

Although the conducted researches in Croatia included a part of educational practitioners, as well as those who are to become ones, in the context of changes in European education policies and the implementation and application of European dimension in education, there were no researches on the population of teachers working in primary and secondary schools, who are indisputably the most important factor in school which affects the learning outcomes of students - future independent European citizens.

RESEARCH METHODOLOGY

Seeing the importance of the role of teachers in promoting the active implementation of European education policies and objectives, as well as their knowledge of the concept of the European dimension in education, a research was carried out in which the starting point were the three main research questions - *How do teachers evaluate the needs for changes in their education system in relation to the standards of the European Union?, To what extent are teachers familiar with educational policies, initiatives and activities of the European Union in the field of education?* and *To what extent are teachers familiar with and how do they evaluate the national education policies in relation to the policies of the European Union?*.

The research was approached from a qualitative research paradigm and the research data was collected through interviews and the application of interview protocol. The interviews were recorded and then transcribed. The study included 51 teachers employed in primary and secondary schools in the Republic of Croatia. The collected data was analyzed using constant comparison method, which includes data search with the aim of defining and categorizing responses and topics related to the defined research questions (Merriam, 1998). In the part of qualitative research analysis, after the citation from the collected empirical material, the number of the research participant from the database, sex, age, years of work experience and the type of school in which they are employed (primary or secondary school) will be shown in parenthesis.

The analysis of the research results was carried out on the basis of the set research questions and the responses of the research participants and the corresponding conclusions will be accordingly presented.

Through the analysis of the responses to the question - *Do you think that Croatia, as a member of the European Union, needs to change teaching content and approach or do you think that it is not necessary, i.e. that the membership should not have any repercussions on the national education system?*, the research participants can be grouped into three categories. The first group consists of those who believe that the **changes are necessary regardless of the membership in the European Union**. Second group are the research participants who believe that the **changes should be connected with the membership in the European Union**, while the third group consists of those research participants who give vague answers that cannot be connected with either of the previous two categories of responses.

The research participants who believe that changes are needed, regardless of the membership in the European Union point out - *"I think we should not change anything according to European standards. Our education system needs some modifications and changes, but nothing what is being promoted at European level. Well, Bologna system failed long ago, why are they then still forcing such a system in Croatia?"* (22, M, 28, 1 year of work experience, secondary school); *"Well, I can certainly say that the contents should be changed by all means, whether we go to Europe or not. I think that one of the biggest problems is that since 2009 we have not had subject curricula. Maybe it is even more urgent for high schools. And, as far as the approaches to teaching goes, ...um ...well, we went through so many trainings and it seems to me that we are very successful in the application of different types of teaching. I say this based on the experience in our school, we are quite... like… we are quite involved. And if I look at the wider perspective, at the national level, we have a lot of problems in the education system which need to be addressed, and this however does not depend too much on our joining the European Union."* (26, F, 44, 15 years of work experience, primary school). The second group of the participants - those who believe that changes need to be connected with the membership in the European Union, state this in their answers - *"It is necessary that the education system is changed when entering the EU and I believe that the entry into the EU is a great start and an incentive for the introduction of drastic changes."* (20, M, 31, 3 years of work experience, secondary school); *"We need to change the contents in the sense that we have to adapt, because when we are a part of the European Union, we will have to somehow enable the children who want to study abroad or to continue their education abroad, to actually continue in the same system and for it to be known to them, so we will definitely need to adjust things."* (35, F, 33, 5 years of work experience, secondary school); *"There should be some repercussions on the national education system. Same as with any entry into a*

membership, there is a voluntary departure from freedom and autonomy. You cannot be a member of a club and still say what you want. That is why I'm not in any political party. You cannot expect, as a part of a club, to act in accordance with your own freedom. You need to sacrifice a part of your freedom for the sake of joining a club or a membership. (40, M, 30, 4 years of work experience, primary school). The research participants who gave vague answers are placed in the third group, and one example stands out - *"I think that our national education system is relatively well conceived regardless of how classic it is in many respects. I have to consider that our educational system had been created over many years built in such a way it was built. All our reforms of that education system were unfortunately made ad hoc and unplanned. Probably if we had to do something about it... it would not lead anywhere. Whether to change the approach? Well, the approach depends on the subject teachers. Each of us can, within the existing national educational curriculum and looking at our own subject, change the approach on our own. It does not say anywhere what methods we should use and how our school period should look like. We can use modern methods, different approaches so that ultimately we come to the results and that the children know something. And… it does not need to be prescribed. It is difficult ... Even if prescribed, how is it going to be implemented by a person who is about to retire, or someone who wandered into this profession."* (09, M, 28, 3 years of work experience, primary school).

Based on the analysis of the responses of the research participants, it can be pointed out that the teachers believe that changes in the educational system are necessary, but that it is not necessary to connect them with Croatian accession to the European Union. In this context, it is possible to assume that Croatian teachers have relatively poor perception of the integration processes in education, which are unavoidable if we want to, not only in words, take our place in the educational map of the European Union. At the same time, connecting with the results of previously presented research (Ledić, Staničić and Turk, 2013), their stands do not differ from the attitudes of school pedagogues and their perceptions of the competences of European dimension in education. Likewise, these findings may also indicate the possibility of isolationism in the beliefs and perceptions of the teachers towards the European Union or the processes taking place in its educational policies, which inevitably have to do with national education policies as well. Such detected teachers' perceptions confirm already highlighted concern about the effectiveness and feasibility of the implementation of European education objectives in the context of national education policies.

Another question the research participants were asked was - *Do you think that the changes in the system are necessary independent of the Croatian accession to the European Union? Please, elaborate your stand. If you consider that changes are needed, what should they consist of?*. The analysis of the responses to this question expressed a very clear attitude of the research participants about the need for changes. The research participants can therefore be grouped into two categories - 1) those who **believe that the changes are necessary** and 2) those who believe that the changes are not necessary.

In the first group of the research participants' responses, of those who believe that the changes are necessary, it is possible to detect the stakeholders or contents in the context of the education system to which the proposed changes mostly refer to. Based on the analysis of the responses, it is possible to point out what, in the opinion of the research participants, needs to be changed, i.e. what the proposed changes refer to. As the thing that requires a change in the system, the participants mostly emphasized the curriculum and working conditions, and somewhat less the teachers and the students. In the context of the necessary changes in the curriculum, they also emphasize the need for the change in the plan and program in schools, the reduction and modernization of the content, the introduction of new approaches and work methods in education and the reduction of the students' load with the classes. Thus, for example, it is pointed out - *"Changes are necessary, from the way of teaching to the programs being realized. Some programs are terribly outdated, they certainly need to be changed and amended further in accordance with the present times."* (19, M, 47, 21 years of work experience, secondary school). Working conditions are the next element of the system which, in the opinion of the research participants, need to be changed. The research participants here specifically refer to the need to extract more money for education, the need to improve material working conditions in schools, enabling working in one shift, and reducing the number of students in each class. The third set of proposals for changes is directed towards the teachers, where it is interesting to highlight the opinions concerning the role and position of the teachers, with references to everyday situations that the teachers face in school and thoughts about their own position in society - *"Of course that changes are more than necessary. I think that we should reduce subject content and modernize it. And perhaps even to give more power to the teachers. We are no longer allowed to send students out from the classroom, regardless of the fact that they disturb other students while they work."* (34, F, 31, 6 years of work experience, primary school); *"But, it is not all the teachers' fault. Schools give too much liberalism, students have too many rights, hardly anyone asks about their obligations. The parents come to school whenever they want. They harass the teachers who are blamed for everything, and their poor little children for nothing. It made me sick when a mother came and told me that she didn't understand how her child got a bad grade when he*

knows everything because she had questioned him earlier. And the mother finished elementary school only! Parents should be prohibited to come to school, except when they are called. Repeating classes should be introduced in primary schools, teachers need to be appreciated and respected citizens of this society, and not as it is today that the students practically mock you to your face and you cannot do anything to them. But, who will appreciate you when the teachers are the worst paid category in the society, and the state does everything to make the teaching profession even more degraded." (48, M, 54, 30 years of work experience, primary school).
The fourth group of proposals refers to the students in particular (although, of course, in all the preceding groups there is a connection with the position of students). The least number of the teachers gave suggestions which can be classified in this group of proposals, whereby, in the context of the analyzed subject, the teachers' stands referring to the process of mobility of the population and the need for students from different countries to be given adequate attention should be pointed out.

Although to a lesser extent, there are also those research participants who believe that the changes in the system are not needed. Since this is a qualitative research in which numeric element does not indicate the importance of certain research findings, the responses of the research participants from this group will also be given. These research participants stand out - *"I believe that the current education system is good and that there shouldn't be any changes."* (13, M, 31, 5 years of work experience, primary school); *"As I have already stated, I believe that there shouldn't be any major changes, although any novelty, if positive, is welcome. Only recently did they introduce the state graduation, and this year the e-enrolling, so it takes time to see what is going to be achieved with what has already been done."* (07, F, 26, 1 year of work experience, primary school – junior school).
These findings suggest that the teachers in defining their responses expectedly primarily follow their experience and the challenges they face every day. When trying to define the direction and the width of the changes, there is partly the fact of insufficient information on the objectives of education policies and current trends in education. In this context, it can be concluded that the teachers perceive well the challenges of their practice, but they need help in articulating the directions and mechanisms for achieving the changes in their environment.

The next question was intended to determine the extent to which the research participants are familiar with the education policies in the European Union, whereby they were given sub-questions which directed them to use their responses to refer to the knowledge of the objectives and mechanisms for their achievement. The question was - *Do you have any knowledge of education policies in the European Union? What are the objectives of European education policies? What is the European Union trying to promote through its educational system? Are you familiar with the mechanisms through which the European Union is trying to implement its objectives?*.
"Desirable" answers to this question can be deduced from the document *Education and Training 2020*, which represents the strategic framework for European cooperation in education and training. The document also lists four strategic objectives that member states should achieve by 2020: to actualize lifelong learning and mobility, to improve the quality and efficiency of education and training, to promote equity, social cohesion and active citizenship, and to encourage creativity and innovation, including entrepreneurship at all levels of education and training. Based on the analysis of the responses to this question, the research participants can be grouped into two groups. The first group includes those participants who **are familiar with the objectives and mechanisms** of European education policy while the second group is comprised of those who **do not know the objectives and mechanisms,** i.e. they **give vague answers**.

The analysis of responses in which the research participants expressed their understanding of the objectives and mechanisms of educational policies in the EU shows that lifelong learning is most frequently noted as one of the major objectives. In addition, it emphasizes mobility, competence development, interconnection, tolerance and respect for the horizontal and vertical mobility. It should be noted that there are the examples of the research participants whose knowledge is greater than the knowledge of others and it suggests a higher level of awareness and knowledge of the objectives and mechanisms of European education policies.
For example, they point out - *"It all began with the Lisbon Declaration of the Council of Europe in 2000, where in fact the whole European economy is based on knowledge. So, from the Lisbon Declaration started the Bologna system and the whole European system is based on lifelong learning. This is a special educational strategy, which actually creates competitiveness. All these European member states believe that the man should be constantly upgraded and learn through the whole life. Everything should be based on key competences which Croatia also introduces little by little into the regular school system. The European Union actually wants to be competitive, I would say. It wants the flow of knowledge and human potential because Europe will need some staff from the southeastern part, so to speak, which does not appreciate sufficiently the staff of a trained man. Maybe the mechanisms of evaluation, it depends... There will probably be some difference, changing, and perhaps the language. Language competences are very important."* (43, F, 53, 26 years of work experience, primary school); *"Yes, some of these objectives are actually those programs for lifelong learning. Well, now I know some of these programs, what I heard or read - Leonardo Da Vinci, Erasmus, Commenius, Grundtvig,*

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which deal with vocational training, mobility of students... I think that European education policy mostly relates to lifelong learning, which is a key element of European space. I also read something about the Peace Education, which also contains programs for lifelong learning, then the Youth in Action, (professional training, acquisition of new knowledge, learning foreign languages, exchanges...)" (41, F, 35, 6 years of work experience, primary school).

The category of the (complete) lack of knowledge of the objectives and mechanisms of educational policies in the European Union includes the responses of those who mostly presented vague answers, since they cannot be used for concluding anything on the knowledge of the objectives and mechanisms of educational policy of the EU. It should be noted that the research participants did not explicitly point out their lack of knowledge of the objectives and mechanisms of educational policies of the EU. However, from their responses, it is possible to deduce such conclusions. For example – *"Well, I know that Finnish education system is very successful, i.e. I went through the PISA survey, according to which it is the most successful in Europe."* (47, M, 35, 7 years of work experience, primary school) or *"Oh yes, I have information related to Germany and Austria, and the communication with teachers even from Switzerland and certain people who work on the ecology. There are different projects."* (45, M, 53, 30 years of work experience, secondary school). It should be noted that the relatively poor understanding of the objectives of the framework for European cooperation in education and training can be seen as the failure of the national education policy. Other than lifelong learning and mobility, not even one research participant talks about improving the quality and efficiency of education and training, promoting equity, social cohesion and active citizenship, as well as encouraging creativity, innovation and entrepreneurship at all levels of education and training. This indicates a possible conclusion that Croatia could have serious challenges in the future in cooperation in the field of education and training.
In the next question the research participants were asked to demonstrate their knowledge of the national policy objectives and their compliance with European objectives. The research participants were asked - *"Do you know what objectives are proclaimed by the national policy? Do you think that the national education policy objectives are aligned with those of the European Union? Explain your answer."*.

Based on this question, the research participants can be grouped into three categories - 1) those who are **on the trail of recognizing the objectives** of national education policy, 2) those who **give vague answers** from which one cannot conclude about their (lack of) knowledge of the objectives, and 3) those who **do not know the objectives** of the national education policy.

Although rare, some research participants still partly recognize the objectives of national education policy. In their responses they stand out - *"I believe that they are harmonized to some extent because the national policy and the National Curriculum proclaim lifelong learning and the strengthening of language competence, which could be somewhat compared."* (07, F, 26, 1 year of work experience, primary school); *"I am familiar with the objectives defined in the National Curriculum. There are some kind of.... some interdisciplinary… some aspects of some personal development and some language competences and communicative competence and so. Now, how much this has to do with European dimension " (*08, F, 29, 4 years of work experience, primary and secondary school);
"Yes, but these are again very generalized objectives; to raise awareness about this and that, to educate for lifelong learning and so on. All of these are generally good objectives, but there is generally not enough emphasis on upbringing in relation to education, a growing problem in school system is upbringing not education; and in fact it seems to me that the European Union, and consequently Croatia as well, emphasizes education, which really, if we go to a lifelong learning, is something that you can always make up for in a manner of speaking. And you cannot raise a person the same if you are 50 or 20 years old and this is the key problem for me in school system in general, not only with us" (37, F, 51, 29 years of work experience, primary school). The second group of the research participants gives vague answers to the question, and it can be assumed that they also do not have a clear picture of the objectives of national education policy. Their answers are presented in the following way - *"Well, some knowledge learning, learning information by heart, cramming, without looking at the students as persons, only of less age and smaller than us, means they have some of their problems, i.e. they have problems in their age which should not be perceived as minor."* (15, M, 30, 2 years of work experience, primary school); *"For now, I am not familiar with any of that. One always looks for the tolerance and for the richness of diversity. I primarily believe that that is the foundation of everything."* (16, F, 28, 5 years of work experience, primary school); *"In any case, I think that our education is good. Every now and then we have some changes, some kind of compensation, we have something. You educate a child to be educated, to be good, to be polite, to learn the necessary contents, to respect all the things and something special"* (25, F, 55, 33 years of work experience, primary school); *"National education policy changes each year, so we cannot make progress if we do not do what is needed. We have school Framework Curriculum, the 'framework' means that it is not done yet, it has not been done for several years now. Until we do it, until the curricula are made*

that will be for the entire country, or for all the programs and all the schools, then the objectives of the national education policies will be harmonized with those of the European Union " (39, M, 34, 7 years of work experience, primary school). The third set of responses are those who show complete ignorance of the objectives of national education policy, and these are in this context particularly concerning. The research participants who indicate the lack of stated objectives thus point out - *"No, I'm not familiar with them. Since I do not know these, I do not know whether they are coordinated."* (02, F, 45, 22 years of work experience, primary school); *"Actually I do not know. No. I have to say no."* (11, F, 25, 1 year of work experience, primary school); *"No, I'm not familiar with it."* (21, F, 50, 28 years of work experience, primary school); *"I'm just not too familiar with it."* (13, M, 31, 5 years of work experience, primary school); *"I think it is not clear to me what the objective of our educational policy is, so I think that we are not coordinated. We do not have very defined objectives."* (30, F, 50, 25 years of work experience, secondary school).

Considering the results of the analysis of the previous question, which showed that the teachers are poorly acquainted with the objectives of European education policy, it was not expected for the coordination of European and national objectives to be analyzed. However, it was expected for their knowledge of national objectives in education to be more complete that the knowledge of European objectives. Unfortunately, this assumption was not realized. Judging by their statements, the teachers have very poor knowledge of the objectives of the national education policy, which is worrying. The teachers could have informed themselves about the objectives of national policy, for example, in the documents which were available for the professional public, which were discussed about and on the basis of which they should have, for example, defined the subject curricula. One of these documents is, for example, the National Education Curriculum for Pre-school Education and General Compulsory and Secondary Education (2010). It clearly states that the development of students' competences is one of the main directions of curriculum policy in European and other countries, whereby the key competences for lifelong learning are stated, and it points out that *"...the educational policy of Croatia adopted the same key competences."* (2010, 12). The document points out that for the Republic of Croatia, the accession into the European Union is one of the basic strategic objectives, and that - in addition to its own educational traditions and needs - an important determinant in the creation of educational policy and the development of the national curriculum are the European educational documents. Also, the Strategy of Science, Education and Technology of the Republic of Croatia from 2013, in its summary clearly states the introduction of lifelong learning as a principle underlying the entire education. Although the previous question, which analyzed the knowledge of the objectives of European education policy, concluded on their relatively poor knowledge, from the responses of the research participants on the knowledge of the national policy objectives, it is evident that the knowledge of European objectives is on a better level of knowledge than the knowledge of national objectives. This, unfortunately, is to be considered an even greater failure of the national education policy because it is clear that the knowledge of the general objectives to be operationalized in the daily work with students is *conditio sine qua non* of their realization. It is obvious that in this area one should take serious and concrete measures at all levels. These results indicate that Croatia has very serious challenges in the fields of upbringing, education and training, where there is obviously a lack not only of the knowledge of general principles but of their operationalization and implementation.

CONCLUSION

The presented results of the conducted research suggest several possible conclusions. From the analysis of the responses of the research participants, one can see that the teachers consider it necessary to change certain segments in the education system, but that it is not necessary to connect them with Croatian accession to the European Union. Also, in their detecting and defining of the necessary changes, the teachers primarily follow their practice and the challenges they face every day. From this one can conclude that the teachers perceive the challenges of their practice well. However, they need additional help in articulating the directions and mechanisms for achieving the changes in their environment. In the context of the debate on the objectives and mechanisms of European education policy, the teachers show relatively poor understanding of the objectives of the framework for European cooperation in the area of education and training, which can be considered the failure of the national education policy. Similarly, the responses of the research participants on the knowledge of national policy objectives show that the knowledge of European objectives is at a better level than the knowledge of the national objectives, which is particularly worrying for the national educational context.

It seems that the teachers are relatively successful in perceiving the challenges of their practice, but it is much more difficult to systematically, reasonably and argumentatively think about possible solutions. Is the lack of knowledge on the wider context in which they live and work, the fundamental objectives of education at European or national level one of the possible reasons for the teachers in Croatia being relatively hard to find ways to improve their practices?

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CUMHURİYET DÖNEMİ LİSE FELSEFE MÜFREDATLARINDA DİN ALGISI

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Bu çalışmada Cumhuriyet'in ilanından sonra hazırlanan lise müfredat programları felsefe dersi özelinde ele alınacak ve ders içeriklerinin dine bakışı incelenecektir. Bunun için cumhuriyetin ilanından sonra çıkarılan ilk lise müfredat programı olan 1924 programından başlanarak sırasıyla 1935, 1938, 1957, 1976, 1985, 1993 müfredat programları ile şu an yürürlükte olan 2009 müfredat programı ele alınacaktır. Felsefe dersi özelinde yapılacak olan bu çalışmada; 1924, 1957 ve 1976 yıllarında lise müfredat programların genelinde yapılan değişiklikler içerisinden felsefe dersinde yapılmış değişiklikler tespit edilecek, diğer yıllarda ise hazırlanmış olan felsefe dersi müfredat programları kullanılacaktır.

Müfredat programları incelendiğinde görülmektedir ki; yönetim erkini elinde bulunduranların fikri yapısı, hazırlanan müfredat programlarına yansımaktadır. Sadece müfredat programları ele alındığında bile; pozitivizmin etkisi, tek parti döneminin talepleri, demokrasinin ülkeye hangi tarihte geldiği, milliyetçi cephe hükümetlerinin varlığı, ülkede yaşanan darbelerin izleri, 1980 sonrası belirginleşen muhafazakârlaşma eğilimi hakkında bilgi sahibi olunabilmekte, bu dönemlerin izleri tespit edilebilmektedir.

Keywords: Felsefe Öğretimi, Felsefe Müfredatı, Din Algısı, Cumhuriyet Dönemi

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CURRICULUM DESIGN AND CURRICULUM UPGRADE OF NUTRITION AND DIETETICS BACHELOR PROGRAM FROM FACULTY OF PHARMACY CLUJ-NAPOCA

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The curriculum development is a priority for higher education, imposing a coherent, compatible and competitive higher education system. The Nutrition and Dietetics study program trains students and creates professionals able to provide specialized, rational, relevant and scientific informations about nutrition and food, preventing or treating through the diet. After six years since this Bachelor Program was authorized, for development and continuous alignment with European standards, the curriculum of Nutrition and Dietetics study program has beed revised and upgraded, also involving in this process the students and graduates of this program. To know the students feedback about curriculum before and after its amendment, a questionnaire was applied among them.

Keywords: Nutrition and Dietetics; dietitian; Bachelor Program; curriculum design; ECTS.

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DATA BETTER UNDERSTANDING BY USING OF INTERACTIVE VISUALIZATION TOOLS

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ABSTRACT
The objective of this study is to make a research of JavaScript libraries providing the most effective methods of data processing. We analysed eight web-based visualization tools for data rendering. There are amChart, D3, Flotr2, Google Chart Tools, Charts.js, NVD3, Vis.js and ZingChart. Few tests for the three datasets with different values were performed. Loading time and time of rendering were tested for each library. The tests were repeated several times and the average of results was calculated. Different web browsers were used to compare the distortion caused by them.

This paper is a first part of our research. We need a tool for better visualization our data which is taken from an algorithm for time estimation of software product development. Testing of these web-based tools should help us to choose the most appropriate library. Based on these tests a web application for data processing will be created. Additional possible usage of application can be in teaching of software engineering, statistics, mathematics, physics or economics. The interactive representation of data will be helpful for students to understanding and analysing of their collected data.

INTRODUCTION

Data visualization can help to understanding of meaning in a large volume of data. Visual interpretation is used for scientific analysis of complex data. Many problems have been solved with this approach. Visualization of data makes it possible for researchers, analysts, engineers, and students to understand these data in an efficient and effective way. Human visual system can detect patterns and other variations in very short time. Visualization was considered for improving the scientific process (Wijk, 2005).
This paper was created as an initial analysis of a project which is focused on creating of an online tool for data visualization as charts. There are a large number of the JavaScript libraries for a work with interactive charts. Eight libraries were chosen, all of them had fulfilled our requirements. Namely AmChart, D3, Flotr2, Google Chart Tools, Chart.js, NVD3, Vis.js and ZingChart were analyzed and tested. We focus mainly on testing of time of data rendering. Based on this research new web application will be created. The user will gain important information clearly and comprehensibly. Finally, the application may be helpful both in research and teaching process.
In section "Parameters for the charts" some of the most widely used web visualization tools were described. The parameters for choosing of libraries were also determined. Section "Comparative methods" explains our testing methods, data for testing and chart test environment. In section "Conclusion" our conclusion from performed testing and analysis were presented.

PARAMETERS FOR THE CHARTS

Eight libraries were tested. All of them had fulfilled following requirements: free license for non-commercial using, basic charts types, fast time for rendering and customization (see in Table1).
The libraries must meet also these requirements:

- Clear processing of results,
- Easy connection to custom data,
- Support of all modern browsers,
- Ability to interactively edit this chart.

There are two main formats of JavaScript solutions for rendering charts. First technology is based on HTML5 Canvas and second are VML and SVG technologies. Differences between these two technologies are a pixel drawing with SVG, and a vector drawing with Canvas (Kaipiainen, 2009), (*SVG vs canvas: How to choose* [online]). AmCharts, D3, NVD3 use SVG and VML technologies, while Flotr2 and Charts.js use HTML5 Canvas and Google Charts, Vis.js and ZingChart use HTML5/SVG technology to provide cross-browser compatibility.

There is a summary of these technologies:
Canvas

- Pixel based
- Single HTML element <canvas>

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- Modified through script only
- Performance is better with a larger number of objects (>10k) (*SVG Tutorial* [online])

SVG
- Shape based
- Multiple graphical elements, which become part of the DOM
- Modified through script and CSS
- Performance is better with smaller number of objects (<10k) (*HTML5 Canvas* [online])

Framework Name	AmCharts	D3	Flotr2	Google Chart	Charts.js	NVD3	Vis.js	ZingChart
License	Free or commercial	The BSD 3-Clause License	The MIT License (MIT)	Creative Commons Attribution 3.0 License and Apache 2.0 License	The MIT License (MIT)	Apache 2.0 License	Apache 2.0 and The MIT License (MIT)	Free or commercial
Rendering Technologies	SVG, VML	SVG	HTML5 Canvas	SVG, VML and HTML5 Canvas	HTML5 Canvas	SVG	HTML5 canvas and SVG	HTML5 canvas, SVG, VML

Table 1: There are description of the license and rendering techniques for selected libraries.

Selected libraries:
- AmCharts - It is based on SVG rendering technology. It contains many types of charts (column, bar, line, area, step line, smoothed line, candlestick, pie and donut, radar, polar, scatter, bubble charts) (*JavaScript Charts and Maps | amCharts* [online]).
- D3 - SVG was used for data visualization. D3 allows to full support for modern web browsers. Xcharts, NVD3, Rickshaw, Cubism.js and dc.js are based on D3 framework. There are extensive documentation and a lot of examples (*D3.js - Data-Driven Documents* [online]),
- Flotr2 - It allows create graphs and charts with HTML 5 Canvas. This is a successor of Flotr which includes many improvements. The main advantage of this library is speed of drawing because HTML5 canvas is using instead SVG (*Flotr2* [online]).
- Google Chart - These charts are based on pure HTML5/SVG technology (adopting VML for old IE versions). It has everything from simple line charts to complex hierarchical tree maps; the chart gallery provides a large number of well-designed chart types (*Charts | Google Developers* [online]).
- Charts.js - Chart.js uses the HTML5 <canvas> element for visualizing. On offer are six visualization methods (line, bar, radar, polar area, pie and donut chart) (*Chart.js* [online]).
- NVD3 - This is based on D3.js framework. It allows to build charts and chart components from D3.js *NVD3 Re-usable charts for d3.js* [online]).
- Vis.js - Vis.js is using HTML5 Canvas so as SVG for rendering. It is great tool for display networks visualization but there are other great modules with many options of other charts (*Vis.js* [online]).
- ZingChart - This library uses a combination of HTML5/SVG technology. There are a many types of charts (column, bar, line, area, step line, smoothed line, candlestick, pie and donut, waterfall, maps, mixed, bullet radar, polar, scatter, bubble chart and others) (*JavaScript Charts for Big Data - ZingChart* [online]).

COMPARATIVE METHODS

In the performance testing, various large volumes of data were needed. Random generated data has been used for tests in three different sizes. There are 1 000, 10 000, 100 000 values. The data were converted into a specific format for each tool such as JSON or Array. All the measurements were done in three most common used web browsers as Google Chrome, Mozilla Firefox and Internet Explorer. All tests were run on Fujitsu Esprimo P710 E85. All examples of libraries on test web page were uploaded. WebPageTest (*WebPageTest* [online]) was used for measuring of page loading time. This online application calculates Load Time and Fist Byte Time (*Quick Start Guide - WebPagetest Documentation* [online]). We were able to determine the fastest library by this information.

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- The Load Time - it is time from start loading page until the entire page was loaded (*Quick Start Guide - WebPagetest Documentation* [online]).
- First Byte Time - it is time when the age started loading the page until the first response of the server arrived (*Quick Start Guide - WebPagetest Documentation* [online]).

The test was performed 10 times and calculated an average because times were slightly different (see in Figure 2.). We have reviewed the connection speed that could affect the test results. Download speed was 38.6 MB/s and Upload speed was 4.9 MB/s. A simple interpretation of the data into a line chart from each library was chosen. Unnecessary things as legend, title, axis name and animation were removed. It could distort the final data.

	amCharts	D3	Flotr2	Google Charts	Charts.js	NVD3	Vis.js	Zing Charts
Dataset 1 000	1,9353	2,0155	1,1571	1,9081	0,7991	1,7273	1,4225	1,9345
Dataset 10 000	2,567	2,133	2,216	2,553	2,174	5,827	2,190	2,562
Dataset 100 000	2,171	3,952	32,876	2,499	1,807	50,907	7,131	2,237

Table 2: Results from testing

At first the dataset with 1 000 samples was used. When these low number of values were loaded the differences between rendering modes cannot be recognized. Times of rendering was almost the same for all libraries.
Dataset with 10 000 values was used as a second. In these values it is possible to recognize the differences in reaction of the libraries. Rendering time of most libraries are around 2.5s. NVD3 library had highest time of rendering (over 5s). It is still very good results for quick response .
Charts.js had the best processing time for the dataset with 100 000 values. The libraries amCharts, Google Chart and Zing Chart were very similar time around 2.5s. D3 and Vis.js had a little longer rendering time but it still is acceptable standard. NVD3 and Flotr2 had a longest rendering time (over 30s). It is not usable for large data volumes.

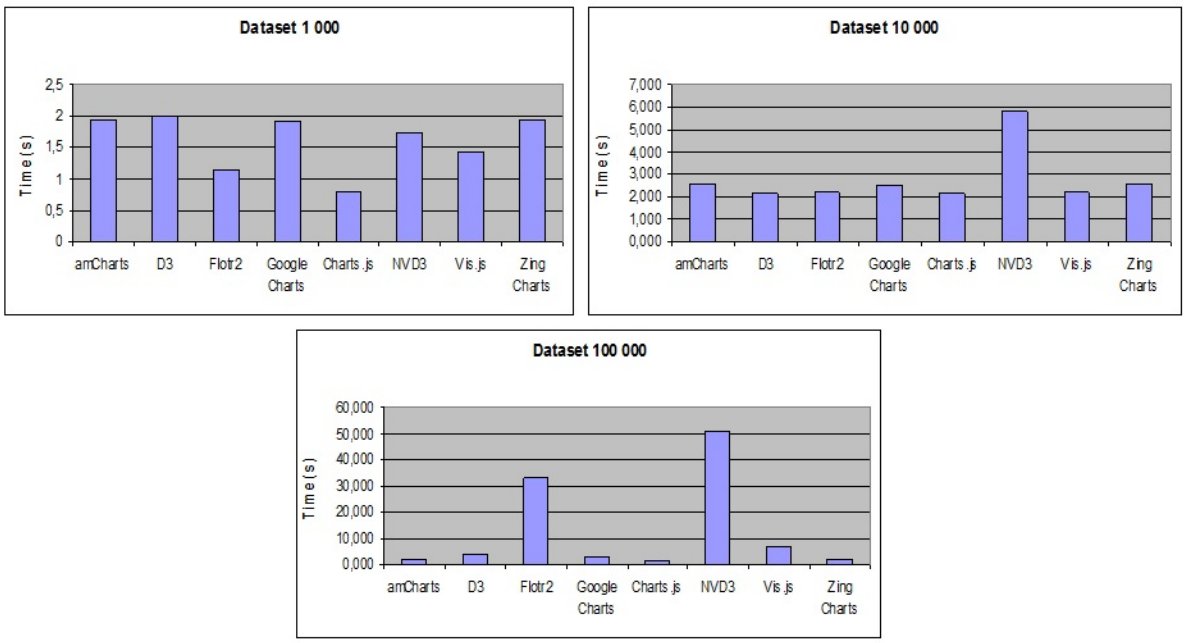


Figure 1: Compare rendering time of visualization tools

CONCLUSIONS

The goal of this survey was finding the best web-based tools for a large volume of data visualization. Selected library was able to rendering the necessary data in graphs in a short time. The results show that each visualization tool has other advantages and parameters. There were differences in the quality of supporting documentation, customization options and many types of charts. Well written and detailed documentation allows the user to work with the library more easily.

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Libraries AmCharts and Charts.js was chosen. They reached very good score in the term of tested parameters. This libraries have a large and helpful documentation. Libraries are based on two different rendering methods namely SVG and HTML5 Canvas. They will be implemented into our web application. Google Chart and ZingCharts also reached good score in the test but first two mentioned has easiest implementation.

The further research will be continued at developing of a web application. With this tool, users will be able to understand their data with interactive presentation. A web application will be allowed to users view results and improved estimations time of developed software. This application may be used in teaching of statistics, mathematics, physics or economics. The interactive display of data can be helpful for students to understand and analyze their collected data.

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DAY-TIME-BASED EVALUATION OF TELEVISION BROADCAST IN TURKISH CULTURE OVER ITS APPROACH TO PUBLIC EDUCATION: MEDIA ETHICS, CORPORATE SOCIAL RESPONSIBILITY AND SOME TV PROGRAMS

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ABSTRACT
According to 2012 report of RTÜK (Radio and Television Supreme Council), the following are the daily mean television-watching durations: house wifes watch TV for 4.2 hours a day, retired people watch TV for 4.3 hours a day and the unemployed watch TV for 3.9 hours a day. Television-watching rates are reduced at the weekends. (http://www.rtuk.org : 10)

Majority of day-time viewers comprise the house wifes in the community. Families with medium income and lower income turn on the TV as soon as they wake up in the morning as a general attitude and behavior so much so that except for natural disasters, the TV in the house is turned off if a sad event occurs or if someone passes away. The broadcast is naturally cut generally in case of a natural disaster; for example, in case of an earthquake mostly due to insufficiency of infrastructure. And in such case, you cannot get informed about the situation that you are experiencing or what is happening to other people.

One may not sit and watch TV throughout the day necessarily but the general behavior is that television is always on like a window that is opening up to the world outside as a one-way communication tool even when a person is doing house work. Sometimes this communication may turn into a conversation between two deaf people. A house woman may give an answer to the person talking on TV or to a conversation on TV; she may get emotional by an image on television and talk to herself about that. Majority of women in our society tend to 'talk to herself'. The communication that house wifes establish with television should be researched in a multi-directional way, statistical data should be collected and analyzed.

The purpose of this article is to analyze the responsibility that the sector of television broadcasting takes with regard to public education in the context of media ethics and corporate social responsibility, to make predictions within the diversity of entertainment medium which has developed and changed in the 21st century and to remind the television producers, broadcasters, presenters and announcers the fact that *they will strenghten their own future if they take on responsibility and that they will exist the if the society exists* and all of these should be considered keeping in mind that house wifes and especially mothers keep television on in their houses or in their neighbors when they go to them. It also aims to make people think that one can help society to develop by contributing to its education and that it might make people happier.

Key Word: Turkish Culture, Television, Broadcasting, Media Ethics, Radio and Television Supreme Council, European Broadcasting Union, Public Service, Corporate Social Responsibility, Public Education, Public Service, Individual Ethics, Ethical Intelligence

INTRODUCTION

Historians have defined centuries as the phases that divide the human history. As the borders of culture and civilization have expanded and communities and nations have gotten closer, the changes that used to occur in centuries started to occur in semi-centuries, quarter-centuries and then decades. Today, we see by experience that big changes occur within five or ten years (Ünlü, et. al., 2003;7). But how can these changes occur in political, socio-cultural structures of communities in such a fast and consecutive way? Maybe it is time to harvest the seeds of changes that 'some' have planted and again 'some' have desired to harvest. This is the subject of history and geography and world history and geography tells this to us. This article will be also partially related to change although it is restricted to its title.

Hüseyin Rahmi Gürpınar, who has a prominent place in Turkish literature and who lived between the years of 1864 and 1944, defined his purpose of producing literature-art by having said that: *"The purpose of literature and art is to provide benefit to the society. Authors should be benevolent people who think about and know the requirement that they should spread their scientific and artistic power to the farest corners of our towns and villages."* (Ünlü, et.al., 2003;25)

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The author who was born in Istanbul in 1844 and passed away in 1964 had seen the collapse of a huge empire and establishment of a new state. The intellectual man who was born in a community, the literacy rate of which was only 5%, had to take on responsibility for its society. As "human is a creature which has awareness of history" (Ortaylı, 2008: 9), the author had felt this responsibility and made such a definition. In Turkish Republic, the population was approximately fourteen million people in 1927 and the female population was higher than male population until 1945s. (Kongar, 1998: 523) This explains the reason why the ratio of literacy in women was lower. However; girls started to be able to go to middle school starting from 1862 .(Ünlü, 2003:19) It should also be kept in mind that reading was considered by the Catholic Church as a work of satan. (Briggs;Burke, 2011:69) Today education of girls is still promoted with campaigns such as 'Let's Help Kardelens Go to School'. The sociologist Emre Kongar says that "Ottoman Empire could not produce an ideology for independence based on its own dynamics and resources during its collapse. They out-sourced it (from French Revolution)" (Ünlü, vd., 2003;54) The reason why I have cited these sentences is that each society's historical processes are unique just like individuals and therefore their solutions to problems should be unique, heart-felt and a result of a serious consideration, reading and observations. If they do so, achievement seems inevitable.

CULTURAL FUNCTIONS OF MASS MEDIA

One of the most interesting discourses about the cultural life of modern people is the statement that was made by the Dutch culture historian Johan Huizinga about philosophy of culture as a result of his long-term studies in late 19th century and early 20th century (Oskay, 1993: 145).

According to Huizinga, banal exaggeration of economic interests has led to our conditioned worship to technological development. After it killed all the unknown and secrets, our worship to technological development occurred as the product of rationalism and pragmatism that forgives unclean and guilty human. However; the same rationalism and pragmatism forgot to save humanity from social imprudence and narrow-mindedness and shaped the world according to banality of such humanity (Oskay, 1993:149-150). This was evident in all areas. In other words; upon modernism; material interests, cynicism, pragmatism and rationalism stood out and commercialization, professionalism, organization and instrumentalization became more introvert; that is, it caused every new 'player community' that emerged disappear. Modern human stayed alone with rude sensationalism. The thinker did not make these criticisms only based on sociology and economy. He did as a culture historian and a humanist who is also affect by being a linguist (Oskay, 1993:149-150). He was able to define the opinions which encompass the 21st century, a century ago and formulated them as the most competent one.

'Escape' of Huizinga: He is such a humanist thinker that he was able to become aware of the fact that people who are desperate against life in modern society *never give up wanting the better.* People who cannot give up on such longing prefer escape which is the only way that the system has left open for them. The one that is escaped from determines the quality of the escape and says that the reason of such escape is the prevention of works that could be done in big social transformations (Oskay, 1993:156-157).

"Witnessing is a common but rarely examined term in both the Professional performance and academic analysis of media events. Media institutions have enthusiastically adopted its rhtoric, especially for nonfiction genres such as news, sports, and documentary. Media personae such as correspondents and newsreaders can be institutionalized as witnesses, cameras and microphones are often presented as substitute eyes and ears for audiences who can witness for themselves." (Peters, 2009:23)

CORPORATIVE SOCIAL RESPONSIBILTY

The world is for the first time has a system which is based on market economy in countries, the majority of which have democracy regime. Economical, technological and political developments led to an increase in interdependency of people on the world. Institutions have as important responsibilities as the individuals for development and maintenance of the level of well-being. (Argüden, 2002:9)

In broadcasting, each country has its own regulatory rules. It is RTYK (Radio and Television High Council and RTÜK (Radio and Television Supreme Council). RTYK emerged after Septemer 12 in 1983 as a regulatory council when private radio and television were not present. It occurred as a supervising council that protects the state's interests against partisan utilizations of broadcasting. In Turkey, private broadcasting started from satellite and took advantage of legal gap. (Mutlu, Erol vd.,2001:111) Upon execution of the Law about Establishment and Broadcasting of Radio and Television numbered 3984 based on the change in the Constitution in 1994, RTYK was abolished and RTÜK (Radio and Television Supreme Council) was founded. (Mutlu, Erol vd.,2001:112-113). "RTÜK is a powerful institution which is essentially authorized to perform

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regulations, grant permission and license and to implement penalties with regard to radio and television companies." (Mutlu, Erol vd.,2001:117)

The concept of corporate social responsibility (in West) was not available in literature yet but the importance that is given to this subject and interest in the subject is pretty new. As the *reason for its occurrence*, that is the consumers, had lost their confidence in organizations, leaders and economy with scandals such as Enron, WorldCom, Parmalat, Qwest, ImClone; the concepts such as 'business ethics', 'corporate management' stood out (Aktan, 2007:11).

A lot of social responsibility projects that were carried out by public institutions and organizations, private companies, a range of non-profit foundations and non-governmental organizations have been translated into life in Turkey so far (Aktan, 2007:147). It is a new concept for Turkey and it has not arisen from its own dynamics. European Broadcasting Union (EBU) defines the public service in the field of broadcasting as follows: "Public service is the act of meeting needs of all the layers of a community by the establishment which is obliged to do it without discriminating the different sections of the society." In other words, not being under the influence of groups that consider their own interest and politics; EBU defines the public service broadcasting organization which broadcasts in this regard as follows: "They are general or private legal independent institutions that are recognized by state per legal regulations." Despite all the problems that the concept has; equal access, balance and principle of objectivity are of priority. A broadcasting institution that has been organized as a public establishment must be equally accessible by everyone in the society, should offer a balanced range of program types according to functions of education and entertainment and should aim at objectivity of policy and balance (Avşar; Kaya, 2013:43-44). European Broadcasting Union (EBU) is an independent and a non-profit, non-governmental organization which has contributed to the development of international radio and television broadcasting. It offers a platform where the broadcasters all around the world can exchange their radio and television services and especially news and programs (Karadağ, 2006:219)

Corporate social enterprises are big-scale activities that are undertaken by an institution in order to support social purposes and to complete corporate social responsibility liabilities. (Kotler; Lee, 2006:3) Just like 'Kardelenler' campaign of Turkcell.

The speed and popularity of visual and audio communication tools that are called digital media have positive and negative effects on communities in economical, social, cultural, political and psychological senses. Legislation of communication should not also be excluded from technological developments. Moreover; Turkey's mass media legislation has to be complied with the mass media legislation of European Union (Çiftçi, 2008:214).

THE IRRESISTABLE APPEAL OF TELEVISION OVER THE 21ST CENTURY FROM KIA

Television reinforces its message with image and as it helps eliciting a certain thought and opinion by bringing image into the forefront, it is a stronger technique of public relations compared to other written communication techniques (newspaper, magazine, books and radio etc.) (Çağlar; Kılıç, 2006:173).

It can be used as a radio but except for some cases, while the topic that the person is interested in is broadcast on TV, that person does not do anything else and watches it so it creates a visual perception and therefore its power in creating a culture cannot be denied.

21st century will be a century when the perceptions will be guided over images: it will be a century when people will be endowed with computers, smart phones and tablet computer, in other words, with smart devices and images which stand out in this century is related to the increasing rise of violence because *'the critical, self-led human thought'* that we accept as the basis of humanity develops only if ***literacy*** is present. Human is a product of ***literacy***. Collapse of printed culture means rise in violence. (Sanders, 2010:10) 21st century will be also a century when the perceptions will be led over images and "an eye that sees is not only a physical organ'. Also, it is also a tool of perception which is conditioned by the tradition in which the person has grown up (Mlodinow,2013: 47). You can add all the senses to that because the eye will be the most important one.

DAY DREAMS FROM 'MS. APPEAL'…

The audience of the day-time television programs in Turkey primarily in national channels comprises the house wives. According to RTÜK, public opinion, Broadcasting Investigations and Measurement Office Directorate, Television Watching Trends Research 2012 report, those who watch programs that target women prefer mostly Kanal D by 48%, Show TV by 12.6% and ATV by 12%. Briefly, according to RTÜK, public opinion, Broadcasting Investigations and Measurement Office Directorate, Television Watching Trends Research 2012

report, the weekday and weekend daily average television-watching durations are as follows: housewives watch TV for 4.2 hours, the retired people watch TV for 4.3 hours and the unemployed watch TV for 3.9 hours. Television-watching rates are reduced at the weekends. (RTÜK: 10) When the weekday daily mean television-watching durations are analyzed according to income level, it can be seen that as the income level increases, the duration that is spared for watching TV decreases (RTÜK:10) "In the research that was made in 2009, when the daily average television-watching during the weekdays are analyzed, it can be seen that the retired and the unemployed watch TV approximately for 5 hours and housewives watch for approximately the same amount of time (RTÜK: 10). When the daily average television-watching during the weekdays are analyzed, it can be seen that those who are not well-educated watch TV for 3.8 hours, those with medium education watch for 3.5 hours and those who are well-educated watch TV for 3.5 hours (RTÜK:9). When the daily average television-watching during the weekends are analyzed, it can be seen that there is not much difference. Those with income 5.001 TL and more watches TV for less than 3.8 hours, those with income between 2.001-3.000 TL constitute the group that watches TV for the longest durations with 4.6 hours a day on average. In a study that was made in 2009, it can be seen that as the income level increases, the duration that is spared for watching TV decreases. Five income groups that are between 0 and 2000 TL watch TV for 4.5 hours on average." (RTÜK:13)

Television is still the one that is used the most but tablet use has been increasingly rising. The one that is sold the most among computer devices is tablet computers (www.teknolojioku.com)

When the connection between the frequency of watching TV and the amount of income are analyzed, it can be seen that, in all the income groups, *Turkish soap operas and news are preferred more* (RTÜK)

The confidence in media is gradually decreasing and media has some ethical problems and these problems cannot be solved with principles and/or rules. It is not possible to understand this without investigating the political, economical and organizational dynamics of the media. (Çaplı, 2002:7) The most predominant one among these dynamics probably can be understood if it can be seen that "Machiavelli's pragmatist and flexible understanding of ethics that foresees doing everything to achieve" (Çaplı, 2002:7) is prevalent in today's television. When it is considered that, especially in media sector, the main purpose of big companies, company groups and holdings is to make profit, there is a very small area left for ethical practices (Çaplı, 2002:10).

And this explains to us why the programs on TV are so similar or tend to be similar. For example; if there is a scene about committing suicide in the soap opera 'Kara Ekmek' which has high ratings and if it has attracted high rating, the viewers encounter a similar scene in another soap opera the following week. Tabloid popularity is a word that has been used by Bülent Çaplı and that describes the situation very well; however, this tabloid popularity is not static; it is kinetic or dynamic. It depends on 'rating metering device'. Today, there are similarities between the scenarios of two soap operas that are broadcast on ATV like the poisoning in Kara Ekmek was also covered in Bedel.

"Series or local TV dramas which are the most important and comman formats of TV carry the functions of a certain or dominant ideology in terms of their structures and contexts. Life styles and characters presented in TV series are effective enough to avoid the breakdowns or explosions that may ocur by providing support for the already working structure of social life in a sense with its function in process of creation of individuals in harmony with the society, integrated with the system." (Yıldırım, 2008:113)
Defense of conflicting values in TV series: Competition ethics: All the values other than ownership, inequality and 'Market' Institution are open to criticism. (Oskay, 1992: 71). For a person to be a good communicator, he needs to be interested in not only history, economics and sociology but also literature and other branches of art (Oskay, 1992: 71). However; the public/community is not even aware of the fact what it is used for and what it is turning into.

When it is considered in respect of corporate social responsibility, private channels stand out more with regard to considering only commercial interest. Although it is not that obvious for TRT channels, channels' competency to act as the corrector in respect of Turkish language usage has weakened. TRT Institution is independent per constitution but not by law. In area of radio and television broadcasting, independency means that program productions, management and economics are free from political power (Çiftçi: 215)

During the process of compliance with EU through RATEM (Radio and Television Broadcasters Professional Union), the master-apprentice relation was ended with MAYESER (Professional Proficiency Certificate Center) and an environment where those who are educated in this area can work was created. (http://www.ratemakademi.org) TRT okul (TRT School) is the most positive channel in respect of corporate social responsibility. TRT school: What do we say? What do we understand? program contains the talks of three

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thinkers on a topic that they determine and it is the only philosophy program in private/legal TV channels. It is possible to encounter the repetitions of the program that is broadcast late at night.

An example of corporate social responsibility from Kanaltürk is the 'Elden Ele' program on Wednesdays that is broadcast once a week. Corporate social responsibility has been becoming more important; it has become a fashion. The trailer of the program and the commercials include social responsibility messages so it can be considered an appropriate program.

The studies that are conducted by scientists show us that: The homogenous quality of television is thought over, produced and broadcast to reach the highest number of viewers that is possible for general programs. They find formulas that can be easily accepted by the highest number of viewers and they cover those programs (Öztuna, 1992:198-199) "The purpose is to just have the highest outcome." (Erdoğan, 2005:66). The quality of the formulas that are found for them to be easily accepted by the highest number of viewers is wrong. Formulas that are based on wrong assumptions will constitute the topic of another program.

On the program that is broadcast on TV 8, that is İşte Benim Stilim, the violence and the language of offense that was dominant on May 18 (2015) started to decrease and become normal as of May 18. As the ratings of the program were high, a similar program which included Chloe as she also speaks Turkish in a cute way due to her foreign origin just like İvana Sert and the wife of a famous signer whose only quality is being a former model, started to be broadcast under the name of 'Bu Tarz Benim'. Similar actions that are made for profit thinking that everything can be done for profit. When something receives high rating, a similar program is broadcast on another channel and/ or it is added and its miscoded as if it was a correct and normal behavior; this is a wrong formula. The way Nur Yerlitaş speaks Turkish is way more inappropriate than that of İvana Sert. And as a content, it is not nice either. The intonation is based on a format that is full of offense and she told Sima Şerafettinova who has stated to be 17 years old and therefore who has not taken legally responsibility yet that she is "unfortunately a sick premature baby". One of the definition words that she uses is 'spaghetti'. For day-time programs and 21st century people, eye is not only a physical organ anymore but it is a tool of perception and when children are subject to such words, they grow up and even if we look a lot, we cannot find a person who would say that I take responsibility for the society that I was born into instead of 'money' and I reject using this language. On the contrary, we encounter people with the 21st century mind-set who say that we would do anything to have higher rating (May 26, 2015 Beyaz TV, Söylemezsem Olmaz Program, Lerzan Mutlu) and unfortunately the viewers seem to be rather unprepared and like having been imprisoned for life.

CONCLUSION

It is obvious that we have been programmed to be ethical. The fact that ethical behavior is not peculiar to humans and we share it with other species may indicate that our ethics originates from the fact that we live as social groups. As a member of a social community, we need help from others to survive and grow up. (Lennick, Kiel, 2005:30) Hüseyin Rahmi Gürpınar was born between 1844 and 1864 in the 19th century and he could still consider doing good deed. We are in the 21st century and only a century ago, this was possible. The prototype of the 21st century: hedonist, as capitalist and ignorant as possible. In a research that was made among media workers, one of the participants had expressed his/her feelings by saying that "… This sector is based on relationships of interest and benefits so much so that people do not have any expectation from their family in material and spiritual sense, feeling the sincerity is an important feeling of confidence (Republic of Turkey Prime Ministry, 2010: 98).

Yalçın Doğan, while speaking about a real event that had happened in South America – this story is about a reporter who made a leader who had passed away as if he was still alive just for thesake of success of the revolution and its presentation through press, said that: "There is an important question that comes to our mind immediately with this example. Dows a community which holds such a power in its hand really acts according to that responsibility? Then what is the responsibility area of that community? What is the responsibility area of those who hold these tools in their hands? How and where should this be used? This is a philosophical question (Foundation of Financial Researches. 1994:15). What could happen if the Free Market order that is dominant today had been applied to media sector? It is seen as a good in the market order and its communication is defined according to rules of 'Market" (Atılgan, 2001: 233). This is what dominates the day-time women programs today. Corporate social responsibilities can only be a make-up. They can be seen as a rising value and they can be endured for high profit for a short period of time. Then they can be thrown into waste of capitalism.

The principles and rules in the media can become applicable. Let's get help from a philosopher and according to Confucius who thinks that knowing how to treat others is a virtue, the morals are based on *inner ethics* and this enables all the problems and discomforts in life to be removed. Confucius explains internalization of ethics by

'not doing to others that you would not want to be done to you'(Çaplı, 2002:14). Then the ethics of big holdings, companies and executive board chairman should change. Those people should stop considering the people in their community as bugs or objects and should remember frequently that they are the people of the same community. They should ask themselves frequently how they would feel if they were regarded as cows that are milked.

Business ethics and corporate social responsibility should not be used to increase the confidence of consumers that was lost due to scandals. Each society should structure its own corporate social responsibility itself, modernize its own core and should believe in that from the heart. What is said there is that each country should regularize its own corporate social responsibility considering its own inner dynamics and should do that feeling motivated inside; that would be better to improve the future of the community. What distinguishes communities between each other is their cultural structures. Each community can contribute to that. Its name does not have to be derived from corporate social responsibility. How much are these improvements that are made to enter the European Union (EU) compliant with us? However; a name that is based on the culture of the community can make people feel more motivated, help them understand more.

No one takes responsibility about the harms and effect of media. Studies that are conducted in this area are not even taken into consideration. They think in the *format* that "The dogs bark but the caravan goes on". The new trend is *Let's play some corporate social responsibility.* How can we get rid of this mindset? Maybe, we should not see the people with whom we were born in the same community as objects. How do we see the community? Who are these people? What do we look at them like this? Who are we? Could the 'Market of Ideas' in the enlightenment period be a solution? According to Meril, when personal requirements and preferences are in conflict with social or mostly corporate requirements and choices, a middle way should be found. (Çaplı, 2002:15) In multi-cultural countries like ours where the right and wrong get mixed up easily, this is a belief that says that the right will prevail. People can do it with their own will and intelligence (Çaplı, 2002:22-23). The right can be fixed with codes to the human. The 21st century does not give this opportunity to the viewer. Let me remind the fact that in communities like ours that has been introduced with printing recently and whose educational level is already low, people are already confused and therefore do not know where to stand and to develop an awareness over what they see. "All the moral concepts and systems are based on something and societies change. (Tekinalp; Uzun, 2004:61)" EBU says in this regard that "… while each country's media system is shaped according to itself, the public service and communication of this broadcasting institution with the government is established in line with its system. It is obvious that as the social and political structure changes depending on countries, each country's mass communication system and institutional policies for broadcasting should reflect its social and political structure. This inevitably causes as many broadcasting system as the number of countries to arise." (Avşar; Kaya, 2013:43-44)

What is left off of the right? In our communities which have disintegrated in a standard way, it can occur only as a result of conflict and struggle (Crouch, 2011:179, 196). Understanding of corporate social responsibility has been adopted as a trend (Almanak.2010:13).

"Media has actually been a subject of market and commerce. It is naturally so and it is inevitable. However; it should be such an institution within the community that can be used as a milestone that just like a university it can provide the communication and other communication tools of the society can be evaluated according to that milestone." (Soysal, 2010:132)

'Public service broadcasting model' is still being used in European Economic Community (Gül, 2013:46). World organizations are making effort to regulate visual-audio area. For example UNESCO pointed out that the researches that have been made about the discussions of 'New Information and Communication Order' has not been achieved because of the intervention of developed countries and mentioned two main results: discussions provided underdeveloped environment for saying what they think in international platforms and became a guidance for preparation of laws and legislations (Gül:183).

Visual media or radio and television are completed through broadcasting of sound and image and receipt of the broadcasting via receiver technology. Therefore; news, comment, criticism or declarations reach masses. Visual media is communicated through live broadcast or as recorded. Offense to personal values through value broadcasting cannot be prevented during broadcast and the offense becomes more effective through live broadcasting. Difference is obvious in respect of responsibility scales and detection of amount of damages (Köseoğlu, 2013:17).

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Corporate social responsibility or voluntary community improvement activities are similar to raising a baby in communities like us the educational level of which is low and this would mean for TV world to kill the goose that lays the golden egg. How long are we going to raise the baby? Who decides that? Who will decide that? Where is the media ethics? Where does it stand? And where will it stand? Who decides that? Who will or should decide that? To whom are they going to broadcast those commercials? And the money that flies away? Money? Are viewers a tool to gain money, a cow to milk? How much taking responsibility of public education can be exaggerated? Overdose would surely be dangerous. In such case, people who are enlightened, especially housewives may decide not to spend their lives before TV and get into life. They can get accustomed to culture and art activities and may explore more useful hobbies other than the TV just like attending NGOs, doing sports, gardening and walking, if not anything. Some of them may get into political arena and it has been recently experienced (AKP) and it has become effective but still the majority of them are still sitting at home before TV.
The ethics of 21st century people seems to need serious inquiry and re-structuring. Maybe the problems is originating from the way we interpret Darwin's 'Natural Selection' and 'Survival of the Fittest'. Become stronger than others, be supreme and you can do anything for that. Our country which is famous for adapting things to its own culture may adapt broadcasting to itself. In subjects which do not require individual ethics in developed countries which are protected by law, the things may get so overrated in my beautiful country that they may use the television and information medium in order to increase ratings, people may used to steal subject of new TV programs, movie subjects, word usages and unbeknown to people, their diaries and ideas may be stolen making them 'the victim of modern times'. Ideas which may bring trillions of money. It would be a complete Texas environment and there is nothing which would prevent that, other than the personal (!) ethics; and people do not have that.

But does it bother people? Nuray Sayari who is a very popular astrologist makes people in the studio, who might be coming from a cast agency, repeat the following positive suggestions: "I am, from this moment on, opening my energy area. I intend that everything that is good for me and the entire community continue in my life and I allow that." http://www.beyaztv.com.tr/program/isin-asli*/) It is obvious that it will be good for the person who makes people repeat those words and the program producer. ".. May that luck always be with those who are always with us"* İşin Aslı 23.03.2015 Nuray Sayari http://www.beyaztv.com.tr/program/isin-

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ESTABLISHING VALUE ORIENTED SOCIAL AND CULTURAL POLICIES

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ABSTRACT
As the prominent aspects of globalization, uncertainty and degradation has gradually been increasing. Such a degradation emerging with respect to individuals, institutions and managements, eventually leads to the collapse of social institutions. In order to prevent it, meaning production should primarily be carried out through the formation of 'value consciousness.' It is vital that sustainable policies pertaining to reaching internal and external publics be pursued and strategic management be achieved accordingly. Thus, being value oriented and considering the interests of public also mean to be open, transparent and governance-based. As the fundamental aspects put forth by Raymond Williams within the context of meaning production; consumption, identity and representation concepts shed light on how discourse is generated. Developing realistic and solution-oriented approaches to social problems can only be achieved by adopting value oriented and symmetric approaches. This study focuses on how value-oriented social and cultural policies are formed through discourse. Hence, the contents of the Internet sites of the Norwegian and Turkish ministries related to social and cultural policies will be examined with discourse analysis method.

Keywords: social policy, cultural policy, citizenship, fundamental rights

INTRODUCTION

It is generally observed that being some of the consequences of globalization, uncertainty and degradation are gradually increasing. Such a degradation that is rising with respect to individuals, institutions and administrations, eventually leads to the loss of confidence in social institutions along with the corruption in these institutions. In order to prevent this, a sort of meaning creation pertaining to the formation of "value formation" is necessitated. "The development of public policies that can unify individuals and groups to provide their support depends upon the existence of core social values and shared social norms to realize those values" (Perucci & Perucci, 2014: 245). In this regard, formulations of sustainable policies to reach internal and external target groups, as well as the realization of strategic management are highly required. Thus, being value-oriented means considering the interests of the public while being open, transparent and focused on governance.

The concepts of production, consumption, identity and representation constituting the meaning production process of Raymond Williams, are quite explanatory for the creation of discourse. A realistic and solution oriented approach to social problems necessitates just a value oriented and symmetric perspective. In this study, whether the social and cultural policies in Turkey are value oriented is studied with discourse analysis.

For the development of social policies, socio-economic rights should initially be recognized. As for the socio-economic rights, first and foremost, education and health should be mentioned. Then, right to labor along with forming labour unions, to bargain collectively and to strike as well as social security rights comprise the main body these rights. In the same way, the rights related to the protection of mothers and children as well as the disabled are within the context of such rights.

It is quite obvious that these rights regard individuals as socio-economic entities and aim to ameliorate the socio-economic conditions surrounding individuals. Realization of such rights imposes some obligations to governments. Briefly, having positive aspects, these rights give clear and heavy responsibilities to governments. For instance, realization of the right to labor depends on the existence of various institutions and assurances from educational opportunities to unemployment insurance.

It should be pointed out that here economic policies play a significant as all these are closely related to economic growth in the first place. On the other hand, the rights and freedoms are important not only on their own, but also for the exercise of all rights and freedoms by individuals (Tanör, 1978: 105 qtd in Koray, 2012: 70)

Furthermore, "social citizenship" dimension is also important. In the societies where social welfare has developed, citizenship cannot be defined with only basic and political rights. Citizenship has also the right to

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receive a share form economic welfare and security even at a minimum level. Garlinton (2014) considers welfare state as an "umbrella term" referring to a set of policies in a country to deal with social problems which are inclusive of the division of wealth.

The welfare states in Europe may differentiate, to a great extent, according to the institutionalization degree as well as the type of socio-economic rights and social citizenship (Koray, 2012: 71) In Young's view, all oppressed people have something in common: They all suffer some inhibition of their ability to develop and exercise their capacities and express their needs, thoughts, and feelings. However, no one set of criteria can be used to describe the condition of all those who are oppressed. Rather, oppression takes multiple forms: exploitation, marginalization, powerlessness, cultural imperialism, and systematic violence. In Young's view, the presence of even one of these five conditions is sufficient for calling a group oppressed (Young, 200: 355). Abeyance of social policies in a society brings about oppression which consists of several problems, such as the exploitation with respect to race, women, labour and children, and also marginalization as the most dangerous form of oppression along with powerlessness, cultural imperialism and violence.

METHOD

Based on the relationships between social power and discourse (van Dijk 1980; Van Dijk, 1989).

The primary purpose of this study is to analyze how value-oriented social and cultural policies are formed through the discourses on the Internet sites of Norwegian and Turkish ministries. As Norway is the first in the UN Human Development Report of 2015, it is taken as a benchmark in this comparison. In this regard, five ministries from each country have been chosen according to the formation of value oriented cultural and social policies. Thus, the Norwegian ministries of Labour and Social Affairs; Children, Equality and Social Inclusion; Health and Care Services; Education and Research; Local Government and Modernisation and the Turkish ministries of Family and Social Policy; Health; Labour and Social Security; National Education; Youth and Sports form the corpus of this study.

The analysis has been conducted according to the semantic categories determined in accordance with the implementation of social and cultural policies:

- Rights
- Citizenship
- Economic welfare
- Effective participation
- Employment
- Equity / Equality
- Governance
- Innovation
- Leadership
- Nation(al)
- Productivity
- Protectiveness
- Public assistance
- Societal

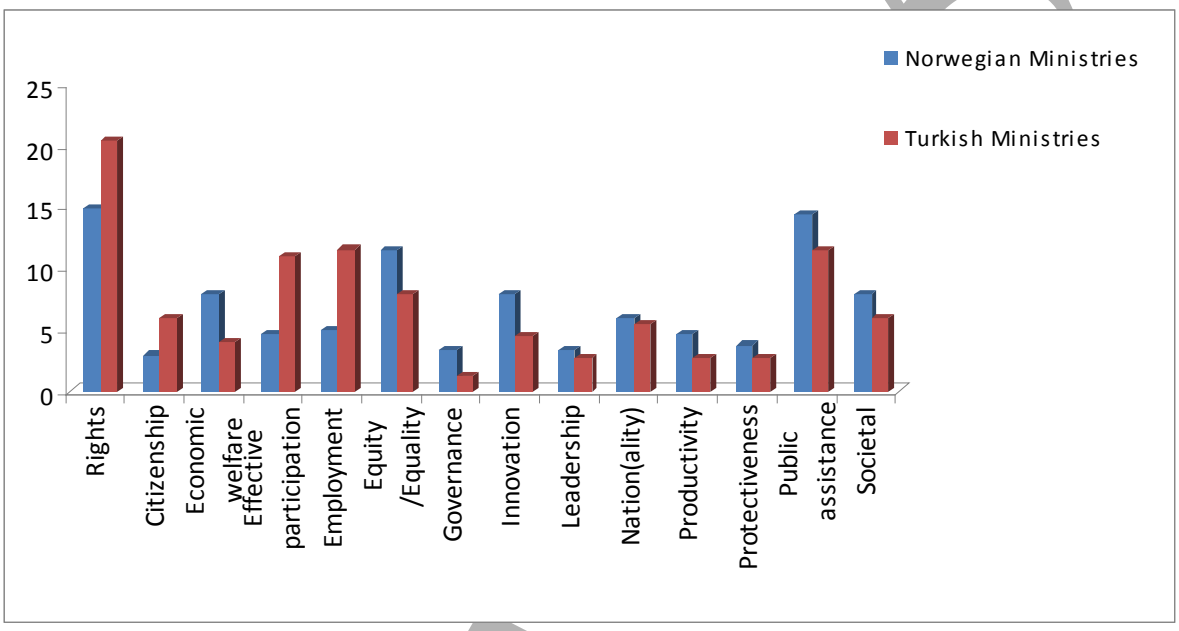
Then, the ratio of the topics, concept and issues has been calculated according to the degree of references within these contexts. Following that, these findings have been tabulated.

Findings

	Ratio of Referred Issues (%)	
	Norwegian Ministries	**Turkish Ministries**
Referred issues / concepts		
Rights	**15**	**20,4**
Citizenship	**3**	**6**
Economic welfare	**8**	**4**
Effective participation	**4,7**	**11**
Employment	**5**	**11,6**
Equity / Equality	**11,5**	**7,9**
Governance	**3,4**	**1,3**

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Innovation	**8**	**4,6**
Leadership	**3,4**	**2,7**
Nation(al)	**6**	**5,5**
Productivity	**4,7**	**2,8**
Protectiveness	**3,8**	**2,8**
Public assistance	**14,5**	**11,5**
Societal	**8**	**6**



Brief evaluations for each referred issue or concept are as follows:

RIGHTS

In the texts of Norwegian Ministries, both the variety and the frequency of the references to rights are relatively higher. That is, labour and social security, basic human rights, improvements for democratic rights and freedoms are the most frequently mentioned rights with the ratio of 15 %. It should be noted that practically there seems to be no references to gay and children rights in the discourse of Turkish Ministries.

On the other hand, the discourses related to providing education to help individuals understand social problems and learn their individual and social rights and the right to open a workplace of his/her own are higher in the text of the Turkish Ministries (20,4 %).

CITIZENSHIP

The significant point in social policy is the social rights. The way of using socioeconomic rights indicate the level of social citizenship in a country. Complete and conscious uses of socioeconomic rights as well as the recognition of them as "rights for real" are exercised in developed countries. As for the discourses of the Turkish ministries, it can be inferred that they pertain to the development and improvement of social citizenship rather than the acquisition of it.

While providing good standard of health for all citizens is 71,4 % in the discourses of Norwegian ministries, this ratio is 23 % in Turkish ministries. Moreover, ownership in the various companies worldwide is 28.5 % in Norway, yet it is not mentioned in the discourses Turkish ministries.

COLLECTIVE AGREEMENT AND ECONOMIC WELFARE

Other important factors as the indicators of development social policies are collective agreement and economic welfare. The ratios of collective labour agreement along with collective, effective and productive utilization of training personnel are 55 % in Norwegian and 45 % in the discourses of the Turkish ministries. Furthermore, the activities associated with labour rights in Norwegian government are quite more with respect to the ones mentioned Turkish ministries.

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Guaranteeing the social rights in democratic welfare states depends on the deregulation of national economies. Hence, the relationship between globalization and welfare states in the future will depend on the decisions on nation states. In this respect, again in Norway, the ratio of the references towards promoting the welfare and happiness of citizens to support and accelerate economic, cultural and social development in national unity and cohesion is rather higher in the discourses.

EFFECTIVE PARTICIPATION

While the ratio of increasing social awareness for the involvement of the groups of special interest and prevention of segregation is 63.6 % in Norwegian ministries, it is 16.6 % in the discourses of the Turkish ministries. Likewise, managing public contribution to the issues regarding healthcare services is 36.3 % in Norway. Nevertheless, the ratio of participation in the respective issues is only 8.3 % in the texts of Turkish ministries.

While there are no references to encouraging participation in national and international educational activities as well as strengthening participation in the arenas through the EEA agreement in the discourses of the Norwegian ministries, these issues are highlighted in the pages of Turkish ministries. It may have resulted from the fact that Turkey still needs participation in international education activities and recognition in the international arenas.

EMPLOYMENT

Depending on the high rate of unemployment, there is a need to regulating and inspecting the work life in Turkey. The difference between the rates of full employment in Norway (50 %) and Turkey (17 %) supports this idea. Nevetheless, the ratios of developing projects for the employment of the groups requiring special policies are almost the same in Norway (33 %) and Turkey (37.5). It is the same for the employment of the disabled.

EQUALITY / EQUITY

High rate of emphasis of equality appears to be quite higher in Turkey, which may have resulted from an acute need for that. Admittedly, the ratio of equality in labour opportunities is quite higher in Norway.

The ratios of Justice and equality as basic values are almost the same. Although gender equality seems to be stressed much in Turkey, it is hard to say that it is in fact exercised effectively. For instance, increasing rate of femicide in Turkey indicates the urgent necessity of education that should be provided as one of the preventive actions with regard to this serious problem. In the same way, it has recently been observed that more campaigns to prevent violence against women are launched and the mass media is used extensively to inform the public. Moreover, such efforts are supported with various law amendments. Moreover, kid brides is a tragic problem particularly in Eastern Anatolia.

GOVERNANCE

The references to the restructuring public administration and the organization of state institutions and organizations as an objective are a great deal higher in Norway. Unlike Norway, Turkey is like a mosaic shaped by different religious and ethnic groups. Therefore, governance is a good administrative approach to enable such societies to form a solid basis. However, governance necessitates a particular democratic and participatory consciousness along with the existence of citizens who are aware of their responsibilities as well as problems and provide solutions accordingly. Consequently, in order to enhance the consciousness towards governance, organization of various conferences and seminars in Turkey are needed more in Turkey.

INNOVATION

Fundamental innovations in the field of education are especially required in Turkey. As for encouraging self-development and following the innovations young business people, women entrepreneurs, small and medium-sized businesses and farmers are supported.

Economic openness leading to productivity growth through specialisation technology transfer and innovation is precisely higher in Norway. Moreover, innovation, modernisation and growth of the public sector seem to be attached importance in Norway.

Although the development of public sector is given importance, privatization is given virtually more weight in Turkey.

LEADERSHIP

Providing education in leadership and advanced managing techniques is given great importance in Turkey as a developing country with the ratio of 67 %.

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Although there is no reference to active leadership engagement in gender balance in Turkish ministries, the ratio of the discourses on this issue is rather high (50 %) in Norway. Likewise, while leadership responsibility to encourage active use of search committees in recruiting processes is not mentioned in the discourses of Turkish ministries, the ratio of the respective issue is 12,5 % in Norwegian ministries.

However, the ratios of leadership responsibility to ensure working conditions that make both men and women become successful, strong, healthy are quite close to each other Norway (25 %) and Turkey (33 %)

NATION(AL)
Developing countries are influenced most by the negative aspects of globalization particularly in economic and social sense. As a result of the fact that global policies are gaining power in social, political and cultural areas against national policies, the ratio of arranging and encouraging scientific meetings related to public administration in Turkey is rather higher than Norway. In the same way, implementation of new education strategies and policies for teaching and learning at national and provincial level is slightly higher in Turkey. Nonetheless, being influenced relatively less by globalization and having an advanced economy, references to fund and investment strategies are considerably high (78.5 %) while there are no references to this issue in Turkish ministries.

PRODUCTION
While administering a strong, open, rules based international trading system is observed in the discourses of the Norwegian ministries, there are relatively no contextual references in the Turkish ministries. Nonetheless, giving importance to production based education as well as providing applied agricultural education is particularly highlighted in the discourses of the Turkish ministries, which again can be interpreted as an indicator of the need for education. Administering a strong, open, rules based international trading system is frequently referred within the context of Norwegian ministries, it is not mentioned in the discourses of Turkish ministries.

PROTECTIVENESS
The ratio of the references to protecting mother and child healthcare, and family planning is slightly higher in Norway. While the ratios of assuring protection measures and providing a secure working environment for civil personnel are quite close to each other in the discourses of Norwegian and Turkish ministries, the ratio of privacy, actual and moral existence, principle rights and independencies of individuals for the protection and storage of individual data is somewhat higher in Norway.

PUBLIC ASSISTANCE
Public administration both for citizens and businesses as well as having technology-savvy citizens and a public "plain language" project leading to significant reduction of time spent both by citizens and public administrations appear to be given importance in the texts of Norwegian ministries. On the other hand, in the discourses of the Turkish ministries the need for education is precisely highlighted.

SOCIETAL
The discourses related to social security is precisely higher in Norway (89,4 %), social interaction appears to be given considerably more importance in the texts of the Turkish ministries. Furthermore, while social media is referred with the ratio of 10.5 % in the discourses of Norwegian ministries, there are practically no references in the texts of Turkish ministries.

DISCUSSION
Lack of qualified personnel who can handle the operation, maintenance and repair of the equipment and apparatus that have been imported particularly in the field of medical science have necessitated the performance of such activities by foreign firms and thus Turkey has suffered currency loss. As a result of developing technology, those equipment have quickly become outdated and heaps of apparatus have emerged.

One of the fundamental reason why Norway is the first in recent United Nations Human Development Index might be the fact that a deep-rooted system has already been established, which enables individuals not only to understand the social problems, but also claim their social rights. Similarly, this system has been internalized in child and education. However, the majority of the population in Turkey, particularly those having a low socio-economic status, seriously needs to be to be aware of their social rights and also claim them. In the same way, these people constitute the fraction that is easily manipulated and influenced most profoundly by the media. Especially the TV serials play a noticeable role in this. Thus, the high ratio of the discourses relating to such issues stems from the necessity to raise awareness of the Turkish people.

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In the discourses of the Turkish ministries raising awareness of contemporary understandings of citizenship through educational activities and also increasing the efficiency, quality and quantity of the services provided via e-State within the frame of citizen-oriented service transformation are pointed more. As seen, educational activities aiming to raise contemporary citizenship consciousness are in the foreground in the respective discourses. As social citizenship consciousness has already been acquired in Norway, there are rather less references to the respective issue.

It is an obvious fact that globalization has a considerable impact on social policies. Social policies pursued in different countries adapt globalization with respect to their levels of welfare. As globalization is structured around national institutions, the influence of it differentiates according to the country it is practiced. In addition, developed countries are influenced by the negative consequences of globalization particularly in socioeconomic dimension less than developing countries. For instance, privatization and the problems of workers have been solved within the frame of social state in developed countries; nevertheless, these problems are not held effectively in developing countries.

CONCLUSION

A welfare state gives revenue assurance to individuals and families, protects them against social risks providing social security opportunities for them and also establishes standards for all citizens in the areas of education, health and social security no matter what their social status is (Flora and Alber, 1990: 29). Overall, in such a structure, government plays a significant role for the promotion and protection of the socio-economic welfare of citizens. As it is seen, all these are the important execution areas of social policies. The fight against poverty and unemployment, provision of minimum subsistence level, social security system and social reliefs, the practices of education, health and housing policies are the fundamental practice areas of social policies. The level of such practices and the security they provide clearly indicate the level of development as a social state.

As Koray (2012) suggests the social policy we exercise today, to a large extent, is a concept of the 20th century, which substantially depends on the developments in democracy and the “social citizenship” rights of the members of a society. Thus, even in the end of the 20th century, in many parts of the world where democracy and citizenship rights have not developed yet, it is hard to expect the establishment of inclusive and relevant social policies as it is hard to talk about democracy (Koray, 2012: 26-27).

Development of industrialization disregarding the environmental dimension, not considering applicable technologies together with the real conditions of Turkey, urban sprawl without considering the self-renewal capabilities of ecological basin, excessive and intensive use of natural sources have unavoidably caused air and water pollution. In other words, negative consequences of industrial projects have seriously been disregarded. Moreover, wrong urban settlement decisions have been made without seriously considering topographic and meteorological conditions.

With respect to the discourse analysis pertaining to the discourses of the Norwegian and Turkish ministries, it has been found out that there are practically more references to social citizenship and welfare state in the texts of Norwegian ministires and virtually more references to the educational activities aiming to raise awareness towrads governance, innovation, rights, effective participation

It should be noted that four factors are presented as critical for the creation of a successful e-government infrastructure: an educated citizenry; adequate technical infrastructures; offering e services that citizens need; and commitment from top government officials to support the necessary changes with financial resources and leadership. As mentioned in the discussion section, all these issues are stressed somewhat more in the discourses of the Norwegian ministries.

In developed countries where the practices pertaining to social policies and globalization are observed, most of the social responsibility campaigns that used to be carried out by the state have been transferred to private companies along with their brands. Most of these practices are conducted in the fields of environment and the disabled. However, the areas needed in Turkey are education, health, unemployment, production and innovation. Therefore, it is noticed that the companies launching social responsibility campaigns do not act in accordance with the real needs of society. Although it is not directly their responsibility, these issues should be under the governance of the state. Therefore, value oriented social policies should be exercised on the basis of both the state and corporations. In the welfare states where social policies are firmly launched, strengthening the public institutions is given importance; however in Turkey, privatization seems to be given weight particularly with respect to the recent practices.

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Not only the dimensions but also the aspects as well as objectives of the social policies exercised in each country are important and these aspects display differentiating characteristics with respect to the state perspective. Value oriented social policies should be exercised on the basis of both the state and corporations.

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DESARROLLO PROFESIONAL DOCENTE EN CHILE Y SU IMPACTO EN EL APRENDIZAJE ESCOLAR: ALCANCES DESDE LA VOZ DE LOS ACTORES INVOLUCRADOS

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La investigación buscó examinar el impacto de los programas de desarrollo profesional docente sobre el aprendizaje estudiantil asociado a la alfabetización científica, desde un modelo teórico basado en la investigación evaluativa reciente sobre las características de programas de formación docente efectivos. Se basó en una propuesta de formación diseñada para fortalecer los conocimientos disciplinarios, didácticos y pedagógicos de los profesores y profesoras que enseñan ciencias en el Segundo Ciclo de Educación primaria en Chile, a saber: Programa de Postítulo en Comprensión del Medio Natural (PPC).

La metodología correspondió a un estudio explicativo que articula procedimientos cuantitativos y cualitativos mediante un diseño cuasiexperimental. A una muestra nacionalmente representativa y estratificada de alumnos de séptimo año de educación primaria (n= 1.500) de docentes formados durante los años 2012-2013 en el PPC (N=600) y Equipos de formadores de profesores (N=9). A los estudiantes les fue aplicado el Test de Alfabetización Científica (TAC), al inicio del PPC de sus profesores y transcurridos seis meses de culminarlo, lo que da oportunidad de evaluar el impacto de éstos en el aprendizaje escolar, asociado a la Alfabetización Científica (AC). Para reconocer los programas eficaces, se utiliza el Índice de Calidad de la Formación Permanente (Ingvarson, 2005) mediante el análisis del Regresión Múltiple "blockwise" y Medida de Intervalos. El Índice incluye variables de contexto (ej. perfil profesional de los docentes beneficiarios), variables de impacto intermedio (eficacia) y de impacto final (aprendizaje escolar). Además, se contempló el estudio de casos, a través de la observación de 8 experiencias de formación eficaces, divididas por zona geográfica, mediante el uso de fuentes documentales y registros anecdóticos para develar el enfoque de formación

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que subyace a las propuestas, características comunes de eficacia y expectativas de logro escolar, esto último mediante la aplicación de una Guía Temática de Grupo de Discusión a formadores de profesores (n= 40) y Protocolo de Entrevista en Profundidad a docentes beneficiarios (n= 8) asociados a estudiantes de alto impacto en la variable aprendizaje estudiantil, todo esto mediante el procedimiento de Glasser y Strauss (1967), para el análisis de Discurso.

Los principales resultados que se encontraron permitieron develar que un análisis de las relaciones propuestas en el modelo teórico evidencia que los PPC, percibidos como efectivos por los docentes beneficiarios, tienen un impacto positivo pero no significativo sobre el aprendizaje escolar, asociado a las dimensiones de la alfabetización científica de los estudiantes observados, en tanto la actitud hacia la ciencia de los estudiantes (empatía y capacidad de reflexión), la autoestima de los docentes beneficiarios, la comunidad profesional y las expectativas de los formadores de profesores y docentes beneficiarios emergen como factores mediadores en el impacto de los PP en el aprendizaje estudiantil.

Keywords: Desarrollo Profesional Docente-Evaluación de Programas- Impacto educativo

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DESIGN AND EVALUATION OF WEB BASED SCIENCE LEARNING ENVIRONMENTS

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ABSTRACT
Web based learning has found its place in educational methods with the development of internet and internet technologies. The materials, that used with web based learning environments, should have some properties like visualization, pedagogic acceptance and convenience for students level. The purpose of this study is to construct two web based science environments for 9th grade students with using two different educational methods: inquiry with 5E learning cycle and expository with expository texts. These web environments are named as Web Based Inquiry Learning Environment (WILE) and Web Based Expository Learning Environment (WELE). Both environments are prepared for "conservation of energy" subject in 9th grade physics lesson. In evaluation part of this study, WILE is tested in two classrooms with 27 students and WELE is tested with 15 students. Students wrote their opinions to WILE and WELE, then 4 students interviewed for WILE and 2 students for WELE. Interview results and general opinions of students, a physics teacher and two physics education experts are represented in evaluation part.

Keywords: Web Based Learning Environment, Internet, Inquiry Teaching Method, Expository Teaching Method

INTRODUCTION

Reaching ways to knowledge are differed with the development of technology in all over the world. Educational programs were redesigned, the investment ratio of governments for education is increased, and also education policies are reconstructed (Çetin & Günay, 2011). This change mainly effected distance education system in a concrete. Distance education process includes (1) written sources are turning into printed materials, (2) multiplication, distribution and accessibility of these printed materials (Al & Madran, 2004). In the past, individuals was using post service, radio, television for distribution and accessibility, but now internet got popular among people.

In human history, there is no any other technology that facilitates communication than internet (Karasar, 1999). Education system mainly contains communication skills and it directly is affected by internet. There are different names used for internet in education, such as web based learning, distance education, online learning, e-learning, internet based learning. The advantages using internet in education are creating a learning environment that highlights interactivity, individuality (Dabbagh & Bannan-Ritland, 2005; Gunawardena & McIsaac, 2003; Khan, 1997) independent of time and place (Gunawardena & McIsaac, 2003; Boisvert, 2000; Moore & Kearsley, 1996).

These advantages of internet are supplied by web based learning environments (WBLE). WBLE presents new and attractive material to the students and provides interactivity. During design process of WBLE, instructional system design (Dick & Carey, 1996), cognitive flexibility theory (Spiro, Feltovich, Jacobson, & Coulson, 1991), and constructivist learning environment (Jonassen, 1999) strategies can be used. There are several instructional system design models but the most popular one is ADDIE (Analysis, Design, Development, Implementation, Evaluation) model and this model can be used for the base of many different instructional material (Selvi, 2008). According to cognitive flexibility theory principles; learning activities must provide multiple representations of content, materials should avoid oversimplifying the content domain, instruction should be case-based, and knowledge sources should be highly interconnected rather than compartmentalized (Culatta, 2013). Constructivist learning environments are constructed by using constructivism approach. This approach includes mainly two things 1) learning is an active process of constructing rather than acquiring knowledge and

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2) Instruction is a process of supporting that construction rather than communicating knowledge (Lefoe, 1998). Due to Nam and Jackson (2007), there are some other points ,that do not mentioned in these models. First of all environments should not force users while reaching the knowledge, accessing should be easy and environments should not include distracted objects. Secondly, environments should provide regular feedback from users.

In the studies, WBLE positively affect students cognitive and affective domains (Çetin & Günay, 2011). Nummennmaa and Nummenmaa (2008) states that when students actively participate in WBLE cooperatively and individually, their affective behaviors are changed positively. In another study, Baki and Güveli (2008) prepare a WBLE for 9th grade students' mathematics subject. They interview with teachers about the usage of this environment. At the end of the study, there is no difference between experimental and control groups on achievement but teachers got positive attitudes towards WBLE. Similarly Kert and Tekdal (2008) prepare a WBLE for physics lesson and try to investigate the effects of WBLE on academic achievement and permanence. They found that in group that uses WBLE have higher academic achievements and permanence levels than that does not use it.

These learning environments try to find out the effects of itself on some dependent variables and do not directly mention the teaching method used in it. Yelon (2006) states that ineffective classroom training transformed to internet is still ineffective and effective learning environments can be produced by using teaching methods well. In science education, Inquiry and expository teaching methods are two of the mostly compared methods (Yager & Akcay, 2010; Nwagbo, 2006). These methods are selected for this study and how they are adapted to web based learning environments are presented in method section of this paper.

PURPOSE AND IMPORTANCE OF STUDY

The purpose of the study is to design web based inquiry and expository physics learning environments and evaluate them by using students, teachers and experts' opinions. The environments are prepared for 9th grade "Conservation of Energy" subject of physics lesson.

While the number of studies related to web based learning environments are increasing in the world, this number is limited in Turkey. So teachers cannot find web based materials for physics lessons. This study is important because they prepared for Turkish students. Secondly, this study is also important because teaching methods are used while preparing WBLEs like inquiry and expository.

METHOD

There are two phase of the study. In the first phase web based learning inquiry and expository environments are prepared and in the second phase these environments are evaluated by using students, teachers and physics experts' opinions.

DESIGN OF WEB BASED EXPOSITORY LEARNING ENVIRONMENT

Web based expository science learning environment (WELE) is constructed by using the definitions of expository teaching method. The procedure while constructing WELE is listed below:

1. Literature Search for expository teaching method: Expository teaching method is a teacher centered method, teacher explains all information and teacher is responsible for students' learning (Bruner, 1961). In this teaching strategy, teacher presents the subject matter rules, provides examples and these examples includes pictorial relationship, application of rules and prerequisite information (Maheshwari, 2013).
2. Subject selection; "conservation of energy" subject is an important subject in physics because it has sociological dimension and it is a difficult subject for students to understand (Paliç ve Akdeniz, 2012). Conservation of energy subject is selected for both learning environments.
3. Determine the aims and objectives of "conservation of energy" subject; according to ministry of education (2013) program, energy subject is a 9th grade subject and contains 6 aims and 15 objectives. Two aims are selected for WELE and presented below.
    - determine mechanical energy, potential energy and mechanical energy concepts.
    - explain conservation of energy and understand one kind of energy can turn to another one.
4. Preparation of definitions, explanations and examples: "Oran Publishing 9th Grade Physics book" is used for definitions, explanations and examples.
5. Collect photos and make solutions of example problems. related photos of conservation of energy are collected by using internet sources and examples are solved by researchers.
6. Construct web based learning environment: WELE is constructed by a computer engineer. The www.dersfizik.net/expo is used internet address of WELE.

Parts of WELE are presented below:
1. User ID and Password: Students log-in the system by using user ID and password. How much time students spend, which parts are completed and how many homework is done by themselves are recorded. Additionally, while students write their opinions and comments, user names are seen at the beginning.
2. Introduction Page: The overall aim of the web-site and the study and the links in the web site are described in introduction page.
3. Conservation of energy 1: Definitions of potential and kinetic energy were provided by using the real life examples. This page is shown in Figure 1.
4. Conservation of energy 2: Conservation of energy was provided by using the equation that initial energy is equal to the final energy in closed systems.
5. Conservation of energy 3: Conservation of energy was applied on an example of a closed system.
6. Exercises: Four exercise problems were presented in an order. Students first saw the problem and then the solution.
7. Problems: Five problems are given to the students. But students only saw the problems, the solution of the problems were not presented.

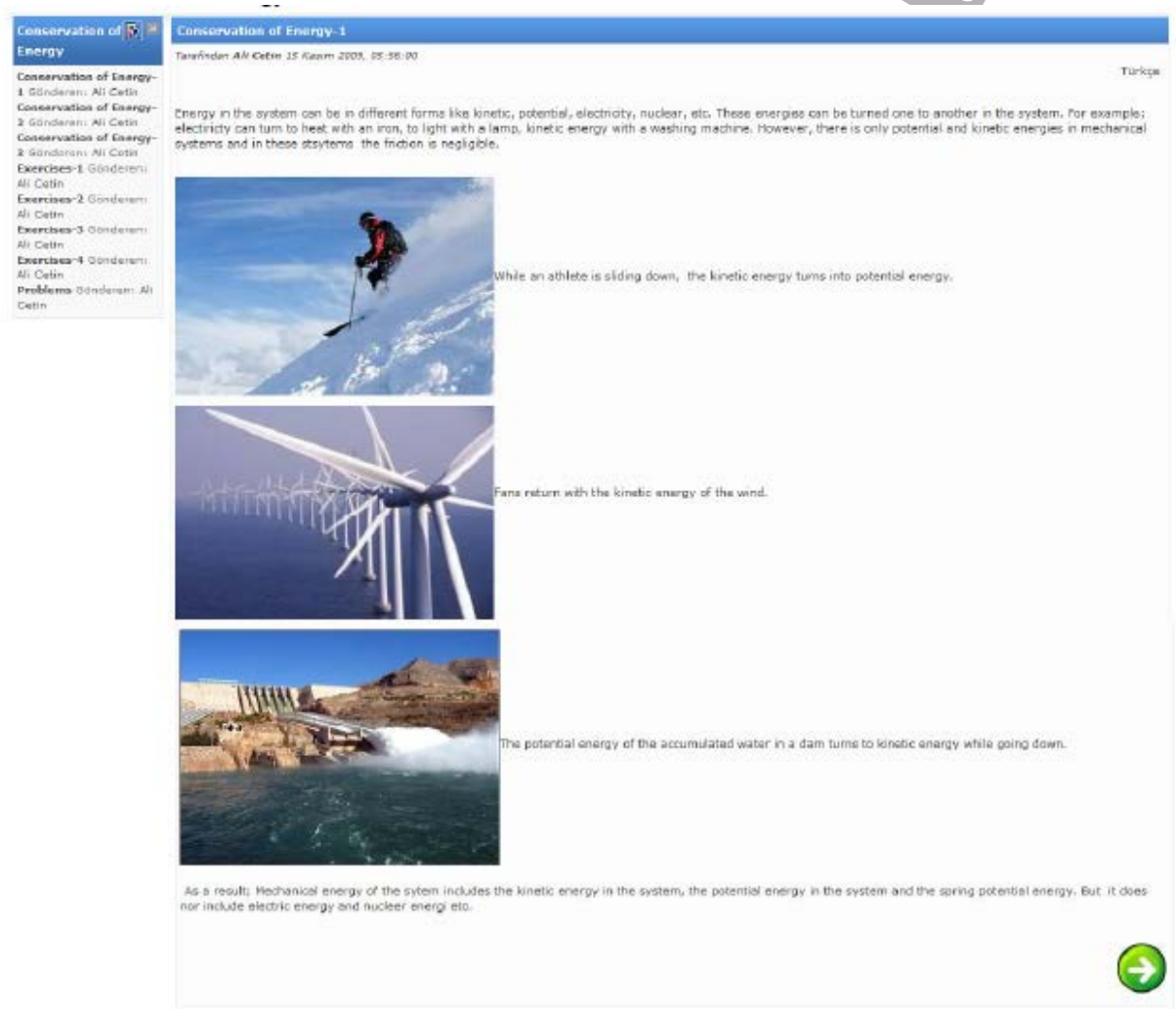


Figure 1: Conservation of Energy-1 page of Web Based Expository Learning Environment

DESIGN OF WEB BASED INQUIRY LEARNING ENVIRONMENT

Web based inquiry science learning environment (WILE) is constructed by using the definitions of inquiry teaching method. The procedure while constructing WILE is listed below:

1. Literature Search for inquiry teaching method: inquiry is a multifaceted activity that involves making observations, posing questions, panning investigations, reviewing what is already known, using tools to gather, analyze and interpret data, proposing answers, explanations, and predictions (National Research Council, 1996). 5E learning cycle is a classroom setting way of inquiry learning (Campbell, 2000).

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2. Subject selection; and Determine the aims and objectives of "energy" subject; these are the same with WELE.
3. Preparation of 5E activities:

Engage Phase: To supply the curiosity of the students, simple pendulum activity was used. A man stands in front of the pendulum. When he releases the pendulum, whether it hits him was asked to the students. Then the video about the simple pendulum was shown in the same page. After the video, several question were asked and the opinions of the students were sent by using message board.

Explore Phase: the simple pendulum applet which is designed by Walter Fendth was used in the explore phase. Some variables in the pendulum could be changed in the applet such as length, gravitational acceleration, mass and amplitude. Students adjusted these variables and applet calculated kinetic and potential energy values. They filled the table related to kinetic and potential energies of the pendulum. Finally, students send their opinions by using message board.



Figure 2: Engage Phase Of Web Based Inquiry Learning Environment

Explain Phase: A discussion forum is used in this phase. The following questions were asked to stimulate the discussion.

1. How do the potential and kinetic energy change during the motion of simple pendulum?

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2. How do the potential, kinetic and total energy change with mass, length, gravitational acceleration, and amplitude?

Elaborate Phase: The details of energy conservation were presented. The energy skate park simulation was used for this purpose. In the simulation, a skater skies on the path and the program calculate his potential and kinetic energies in each time.

Evaluation phase: A test related to conservation of energy was constructed. Students answered this test and sent them to the researcher.

EVALUATION OF WEB BASED LEARNING ENVIRONMENTS

Evaluation is done in three ways. First three classes from a private school participated in the study. WILE and WELE are used by students in their schools' computer laboratory. Two 9th grade classrooms with 27 students used WILE and one 9th grade classroom with 15 students used WELE. Students participated into the system by using their user ID and passwords.

Three questions were asked to all users,
1. What is your general opinion about using these kinds of web based learning environments?
2. What is the best way of this web-site for you?
3. Do you face with any problem while using this web-site?
WILE and WELE students' answers are listed in the table below.

Table 1: Students' General Opinions for Web Based Learning Environments

	WELE Students	WILE Students
Q1	Negative (f=5) Neutral (f=7) Positive (f=3)	Negative (f=3) Neutral (f=2)Positive (f=22)
Q2	Independence of time Independence of place Solved exercises	Simulations Video Independence of time Engagement
Q3	No problem Log in the system	Video download is too slow JAVA was not downloaded in computer lab Log-in the system

Second interviews were done with 4 WILE and 2 WELE students. Interview questions were constructed by researchers and redesigned by a physics education expert. 27 questions were asked during interviews. Then the answers are listed.

1. Which do you prefer to learn "conservation of energy" subject in classroom environment or in web based learning environment?

One expository student selected classroom environment and the other one said both is the same. One inquiry student selected web based learning environment and three of them said both is the same.

2. Do you think whether the other physics subjects can be thought by using web or not?

All students said, all physics subjects can be thought by using web.

3. What can be done to develop this web-site?

Expository students claimed that videos and games should be added to WELE, inquiry students said that the number of videos and simulations should be increased.

4. Did you get fun to be participated in this study?

All students said yes. They are enjoyed and said that using web is better than classic lecture.

5.Do you think, which kinds of discussion are more effective, in classroom or in web based learning environment?

Expository students said classroom discussions. One inquiry students said there is no difference, one claimed in class discussions and two inquiry students preferred web based learning environments.

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One physics teacher and two physics education experts (a research assistant and a associated professor in physics education) filled expert judgment form (EJF). This form is prepared to to get the opinions of experts related to the web sites. One is related to expository teaching and one is inquiry teaching. EJT includes mainly three parts. The first part is related to the general characteristics of the expert and includes 14 questions related to the experts' experiences, education levels, and their expertise related to science and mathematics materials. The second part was related to the properties of W-INQU web site. This web site was constructed according to 5E learning cycle. It includes 5 parts for each phase of the cycle. Twenty-seven Likert scale and four essay type questions related to each phase were asked to the experts. The final part of EJT was related to the properties of W-EXPO group web site. This web site mainly included texts, problems and solutions related to electricity. Twenty-six Likert scale and four essay type questions related to each page were asked to the experts. At the end of the web-site evaluation, some general questions about the usability of the web sites were asked. Likert scale items have four alternatives as "very good", "good", "medium", "bad" and "very bad". Alternatives were coded as "5" for very good, "4" for good, "3" for medium, "2" for bad, and "1" for very bad. Descriptive statistics of EJF for WILE and WELE are presented in Table 2.

Table 2: Descriptive Statistics For Web Based Learning Environments Due To EJF

WELE		
	Mean	Sd
Technical And Visual Evaluation	4.56	0.53
Conservation of energy 1	4.20	0.48
Conservation of energy 2	4.20	0.52
Conservation of energy 3	4.20	0.45
Exercises	4.50	0.57
Problems	3.75	0.95
WILE		
Technical And Visual Evaluation	4.10	0.78
Engage Phase: Simple Pendulum Effect	4.00	0.00
Explore Phase: Simple Pendulum Experiment	4.67	0.57
Explain Phase: Discussion	4.25	0.50
Elaborate Phase: Energy Skate Park	4.75	0.50
Evaluation Phase: Questions	4.75	0.50

Expert judgment form results show that both site are good in technical and visual aspects. Explore, elaborate and Evaluation phases of inquiry learning environment are the mostly admirable parts. Finally, it seems that all parts of WILE and WELE are appropriate for students according to experts.

CONCLUSION AND DISCUUSION

There are two aims of this study, design and evaluation of web based learning environment. For design aim, three main things are considered: technical properties, visual properties and teaching methods. In technical properties, accessing should be easy, videos, photos and simulations should be downloaded fast, learning environment should not include heavy documents to make slower the usage. In visual properties, the distracted objects should not be used, color contrast should be appropriate and the main property of the object should be seen first. For teaching methods, inquiry and expository teaching methods can be used as in the study. For expository teaching method, expository texts, photos, exercises and solutions can be used. For example; a book format can be transformed to web environment, however the content and the interaction effect of the web based learning environments should not be forgotten. For inquiry teaching method, 5E learning cycles' phases can be used. Related activities can be designed for each phase of learning cycle. For example, in engage phase, students curiosity can be supplied by a question, voice, videos. In explore phase, as in the study, simulations can be preferred or students comments can be designed in a list. In explain phase, direct explanations, definitions and determinations can be done or students can explain their findings in explore phase. In elaborate phase, new applications can be developed like new simulations, or new data list. In evaluation phase, Sample problems can be solved by students.

For evaluation aim of this study, three different ways were used.

- First, all students wrote their general opinions to comment section and answered three questions. According to first question, while most of the students who use web based inquiry learning environment (WILE students) are positive for web based learning, most of the students who use web based expository learning environment (WELE students) are neutral. Due to second question, WELE students believe that the main advantages of web based learning are independence of time and place and exercise solutions. Boisvert (2000) states the same advantage as the main advantage of web based learning as that learning can take place in anytime and anywhere. Additionally, WILE students think the same opinion and also they believe that simulations, video and engagement are also good ways of web based learning.
- Second, interviews were organized with 2 WILE and 4 WELE students. According to these interviews, most of the students think that classroom environment and web based environment can be used for "conservation of energy" subject. All students think that all physics subjects can be transformed to web environments. Students want to see more videos and simulations and this shows students get enjoyed from these activities. Students also prefer web sections to classic lectures.
- Third, one physics teacher and two physics experts filled "expert judgment form". Experts graded each pages of WELE and WILE. Finally the grades are presented as mean and standard deviation values. They show that each pages of WELE and WILE are appropriate for students levels and subject matter.

At the end of the evaluation part of the study, we can conclude that inquiry and expository teaching methods can be used while designing web based learning environments and students can use web based learning environments for physics lessons

SUGGESTIONS

- The number of learning environments should be increased by using different subjects and lessons
- Web based learning environments should be developed by using at least one teaching method.
- The number of the studies that investigate the effects of web based learning environments on some variables like achievement, attitudes etc. should be increased.

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DESIGN BASED RESEARCH EXPLORING INTERACTIONS BETWEEN THEORY-RESEARCH-DESIGN-PRACTICE IN OPEN AND DISTANCE EDUCATION

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This study presents an overview of design-based research (DBR) as a research approach providing a bridge between theory, design, research and practice in open and distance education. DBR is the systematic study of designing, developing, and evaluating educational interventions to solve complex problem in educational practice (Plomp, 2007). According to Wang and Hannifin (2005), DBR is defined as a research methodology aimed improve educational practices through systematic, flexible, and iterative review, analysis, design, development, and implementation based on collaboration among researchers and practitioners in real-world settings, and leading to design principles or theories (p.2). Although underlying goals and approaches in all DBR methodologies are similar, DBR has several nomenclatures depending on the field where it is being used such as design experiments, educational design research, design science, design research, formative research, development research, and developmental research in the literature. (Muyinda, 2010)

DBR usually serves three purposes: (a) supporting design and development of prototypical products to solve complex authentic context-specific problem, (b) generating methodological directions for the iterative design and evaluations of such products, and (c) constructing context-rich theoretical knowledge by reflecting on the design experience (Lai, Calandra, Ma, 2009; Reeves, Herrington, & Oliver, 2004; The Design-Based Research Collective, 2003; van den Akker, 1999). According to Reeves et al (2005, p. 103), the characteristics of DBR are listed below:

- Focuses on broad-based, complex problems critical to higher education
- Integrates known and hypothetical design principles with technological affordances to render plausible solutions to the complex problems
- Requires rigorous and reflective inquiry to test and refine innovative learning environments as well as to reveal new design principles
- Takes long-term engagement involving continual refinement of protocols and questions
- Involves intensive collaboration among researchers and practitioners
- Has a commitment to theory construction and explanation while solving real-world problems.

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DBR have pragmatic research goal due to creation synergy between practice and research. Lots of educational research often split from the problems and issue of practice so that researchers criticize lack of relevance of much educational research for educational practice (Design- Based Research Collective, 2003). The theory gains value if design principles are created and the practices are improved.

DBR is conducted in real-world context with social interaction versus laboratory setting with social isolation (Collins, 1999; Collins, Joseph & Bielaczyc, 2004; Wang and Hannifin, 2003). DBR aims to solve complex problems caused gaps between theory and real practice by DBR process which is an iterative, interactive and flexible cycle of design, implementation, analysis and re-design (Design Based Research Collective, 2003).

As a long-term research engagement, DBR is a integrative research methodology using mixed method (use quantitative and qualitative methods) such as survey, expert review, interview, formative evaluation, interview, observation, case study and literature review in order to gather data as depending on research problems. According to the contextual research results of DBR, the theory is formed and updated. Consequently, theory generation and innovation to resolve education problems are produced by DBR.

In this study, the nature and background of DBR and its dilemmas will be explored. The differences characteristics between DBR and possible research methodology will be discussed with some examples. Also, the guiding principles of DBR of and some possible DBR models in education will presented.

Keywords: Educational Design, Design Based Research, Design Research

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DESIGN METHOD OF INTEGRATED CIRCUITS IN EDUCATION

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ABSTRACT
This paper deals with the Transaction Level Modelling (TLM) and Register Transfer Level (RTL). The TLM is considered as a practical design approach to the high complexity of the system design. It is highly effective especially in the implementation of hierarchically-arranged system model. This situation is typical for HW/SW Co-design. The RTL covers lower-level design techniques and it is described on a gate level using the signals. Students try to work with both approaches and also solve particular tasks in tuition materials of the Gate Fields and Advanced Architecture of Processors courses. This approach brings better overview of design methods in terms of education; therefore, they can use the same programming language (SystemC) for design of integrated circuit and a firmware of the device.

INTRODUCTION

Nowadays, rapid development of electronic devices is required as manufactures release new models every six months; therefore, there is an effort to design integrated circuits (ICs) and systems rapidly. It is very important to produce good-quality products which will be complied for rapid development and a low design price.

Modern integrated circuits and systems contain tens of millions of transistors and other important elements creating the final product know as a System-on-Chip (SoC). A SoC consists of a memory located on a chip, a programmable processor or more processors, peripheral devices and other hardware modules. The speed of development is supported by the use of Intellectual Property (IP) cores which are modules performing specifics tasks and also enable the utilization of other proposals for a SoC. For this reason, the designers use the same modules for new proposals and this solution reduces the time for product development and its subsequent commercialization. Therefore, programmable chips manufactures produce modern Field Programmable Gate Arrays (FPGA) containing powerful ARM processors in a single-chip configuration.

The method known as HW/SW Co-design is used due to the growing demands for the integration of components and their numbers on single-chip. Today, the design of hardware and software run concurrently and many manufacturers already apply this method. With the application of these developments in integrated circuits and systems, it is possible to encounter in the automotive, aerospace, industrial automation, consumer electronic and other industries.

The design methods use several kinds of programming languages. These basic languages include VHDL (VHSIC Hardware Description Language) and Verilog. The modern methods work with SystemC (IEEE Standard 1666-2005). Each of these design languages describes different design structure levels.

The current development trend of a SoC also focuses on transfers between individual Transaction Level Modelling (TLM)-Register Transfer Level (RTL) design levels for the faster development of methods for use in HW/SW Co-design. Each of the IP cores can be described in other types; hence, there is the effort to create methods because of the differences in the description of the individual methods but none of them have made their mark on a global scale.

The design of integrated circuits has undergone change rapid changes and it was necessary to react to these changes in education. These methods bring new pieces of knowledge which were mentioned it above. Therefore, we performed a innovation in Gate Fields and Advanced Architecture of Processors courses. These courses were innovated and they are focused on design layers Register Transfer Level (RTL) a Transaction Level Modelling (TLM). Students can work with state-of-the-art design methods and they also can try new ways SoC.

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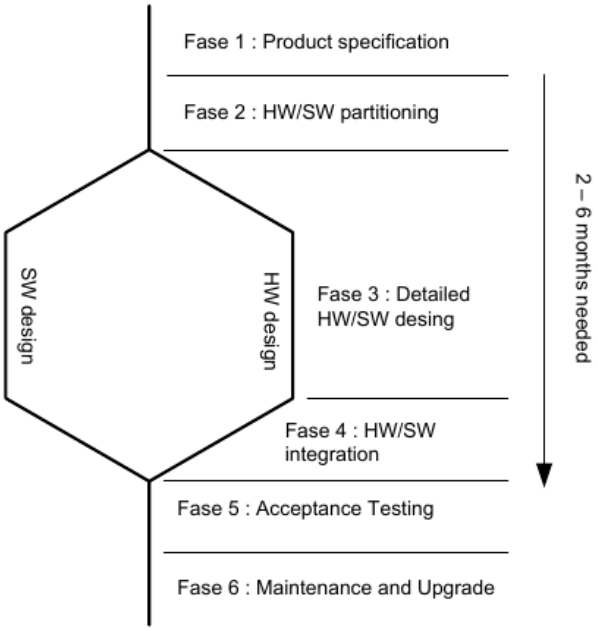


Fig. 1*:* Design flow of implementation (Abdurohman et al., 2009)

Related work

Many scientists work with abstraction levels in different way. Some of them are tried to find suitable conversion methods. Every method solves this problem with own approach. Some researches consider to create a method which is based on Finite State Machine (FSM) (Khan et al., 2007) (Balarin et al., 2006) (Bombieri et al., 2011) \cite{Habibi2006}. They use the FSM like a tool for translation between SystemC and VHDL. This solution seems to be an useful candidate. FSM is generated by Abstract State Machine Language (ASML) due to better simulation and coverage of the RTL.

The authors (Bombieri et al., 2011) mention the Extended Finite State Machine (EFSM) like a method for the conversion. Their work is focused on a fault simulation from RTL layer to the TLM layer due to better simulation speed-up. The EFSM creates phases containing particular steps for conversion between the RTL and the TLM.

Also other research (Moinudeen et al., 2006) is focused on fault simulation which is based on own FSM which is contained a modified Abstract State Machine.

Other usage of is to defined the TLM by FSM (Niemann et al., 2007).

PROBLEM DEFINITION

An integrated circuit can be described at different levels reflecting the design architecture where each has its advantages and disadvantages. Therefore, the current development trend of a SoC also focuses on transfers between individual TLM-RTL design levels for the faster development of methods for use in HW/SW Co-design. Each of the IP cores can be described in other types; hence, there is the effort to create methods because of the differences in the description of the individual methods but none of them have made their mark on a global scale (Habibi et al., 2006).

Register Transfer Level

The Register Transfer Level (RTL) is a description of the hardware at a higher level of abstraction. The design of integrated circuits is defined as a set of registers interconnected by combinational logic which implements logical operations. The HW level can be described as a gate level using the signals in the model which communicate with the individual blocks (memories, data-paths and execution units). The RTL model is based on an accurate clock cycle for the control unit and data-paths (Calazans et al., 2003) (Khan et al., 2007).

The creation of a configuration file for the FPGA is divided into several steps. The first is the synthesis, followed by mapping, placement and their interlinkage. The last step is to create the configuration file itself (Vlcek, 2014).

The VHDL and Verilog languages can be used for the description of the RTL level.

Transaction Level Modelling
The Transaction Level Modelling (TLM) belongs among the system-level design and it is based on the time domain. This level allows focusing on the functionality of the design; as a result, the implementation details are omitted and they will be added in the lower levels. The individual block is captured at an abstract level.

The advantage of the TLM is the simulation speed which is several orders for magnitude higher than for the RTL due to the omission of the implementation details at a lower level (Calazans et al., 2003) (Khan et al., 2007).

The TLM design can be described in the SystemC language.

Difference between SystemC and VHDL
VHDL is a language supporting a description of the structure of ICs. The language describes a design on the gate level and it is used for a simulation verification and testing of HW design at RTL layer. The TLM layer cannot be implemented due to an accurate clock cycle, which means, the signals are bound with input and output port and their states (Calazans et al., 2003) (Automation, 2009).

SystemC is based on the C++ language library containing macros and classes supporting concurrent behaviour, own data types for describing of HW etc. It cooperates with all data types including C++ Object-Oriented Programming (OOP). It fulfills all requirements which are needed for system-level language (Cote et al., 2002) (Moinudeen et al., 2006).

The usage of this language is appropriate for HW/SW Co-design because of the common language for HW and SW designers who can better cooperate in developing a SoC (single testbenches, direct access to the hardware model so as to change the algorithm etc.). SystemC allows to use both design level (RTL and TLM). This brings big advantage for designs because the language is more suitable for design of ICs. The TLM layer has a problem with a design test. The test has low coverage due to difference in description of layers (Vlcek, 2014) (Bhasker et al., 2004).

METHODS
The presented methods represent a new trend which can be seen in design of integrated circuits. As we mentioned before, the methods are used for transfer between particular layers (TLM and RTL). The current trend shows a problem with a coverage of TLM tests. Due to this problem, it is utilized methods which solve the transfer. We propose two methods – Finite State Machine and TLM Transactor.

Finite State Machine
A transfer between levels can be represented in a natural language with the help of formal Finite State Machine (FSM) model where the whole conversion process is expressed by means of natural language specification. The Abstract State Machine Language (ASML) is based on the theory of Abstract State Machines (ASMs) modelling language (.NET framework) and it is used to define the FSM (Bhasker et al., 2004).

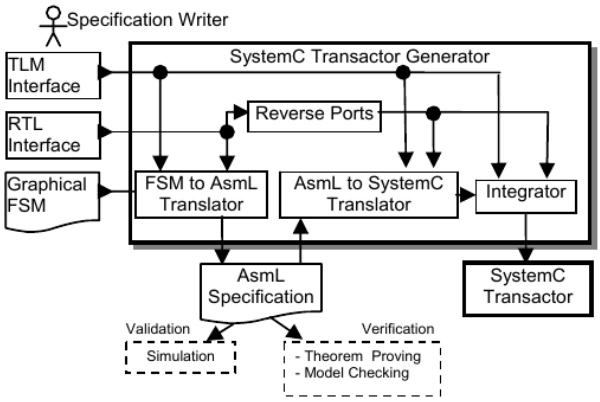


Fig. 2: FSM and SystemC transactor generator (Khan et al., 2007)

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TLM Transactor

The transactor is one of the other methods which are also utilized in the FSM. Its aim is to connect and translate communications at each RTL-TLM proposal level. Each transactor includes a pair of interfaces where the first is assigned to the RTL level and the second to the TLM level; however, they may also be assigned multiple interfaces pairs. If there are multiple transactors, then they may have similar behaviour as in the case of protocols (master, slave etc.) (Balarin et al., 2006).

In paper (Balarin et al., 2006), the authors describe their own draft UTOPIA Transactor which is used for FSM \cite{Bhasker2004}. UTOPIA is a standard protocol (Fig. 2) for connecting devices implementing the Asynchronous Transfer Mode (ATM) and Physical (PHY) layers. Figure 2 shows the interlinkage of the individual RTL level. Here, the transactor is presented as an intermediary for communications between these levels.

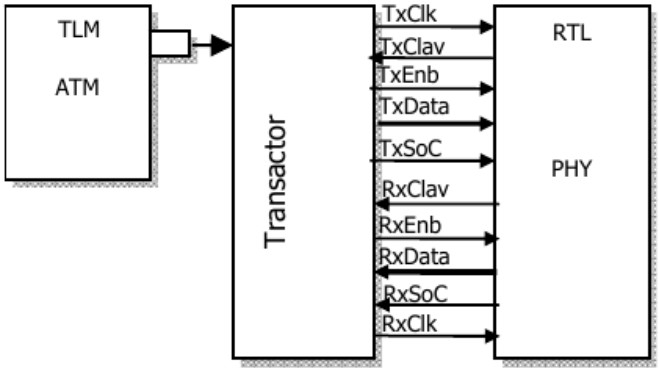


Fig. 3: TLM Transactor (Khan et al., 2007)

EDUCATION OF DESING METHODS ON INTEGRATED CIRCUITS

Students work with proposed techniques which are mentioned in this paper. They use the development kit FPGA ZedBoard Zynq 7000 which includes CPU ARM with a programmable logic. Designs can be processed by programming languages VHDL and SystemC. Both design layers are possible.

Each course has developed own new lecture materials and laboratory tasks. The Gate Fields course is focused on familiarization with gate arrays as a whole. During the semester, students deal with topics of digital (electronic) circuits (logic gates, combinational logic circuits, sequential logic circuits) which means that the lectures are practically oriented on using these knowledges. Furthermore, it is used a basic technique of hardware diagnostics which is called Boundary Scan and its task is to test the internal wiring in integrated circuits and systems. The Advanced Architecture of Processors is also focused on advanced processor types and explains their function and principles. The part of laboratory tasks is an explanation enlarging the knowledge from the lectures and this solution introduces the students into the issues. Students engage in a diagnostic aspects of locating faults which are tested in the design of the processor.

RESULTS

Each of methods solves the transfer in different way. The FSM creates a SystemC file containing a source code for the RTL abstraction. In the other hand, the TLM transactor deals with the transfer via own draft UTOPIA which is used by the FSM. The transfer between TLM and RTL improves an automatic generation test for the higher level of abstraction. The improvement brings better functionality of a SoC and the rapid development of design. RTL test can be used for the TLM abstraction.

The tuition materials provide an option to create own design of integrated circuits to students. This process perform the entire process from theoretical knowledge to the programming their own circuit on the development kit. One part of this work is teamwork which means that they work in teams. Each of them is dedicated to specific activities and encourages their colleagues to new ideas of their own project. Based on the new tuition material students are allowed to work on interesting solutions.

CONCLUSIONS

The aim of this article was to describe integrated circuits and systems design methods. It presented individual proposals for each (RTL and TLM) design level. This was followed by FSM methods which are an interesting

alternative for the connection of RTL and TLM levels for the SoC designs. It uses previously presented transactor methods connecting individual communications through its interface.

Based on these tuition materials, we improved team collaboration by students. The another benefit was the modernization of educational labs where students work with modern FPGA kits.

In another part of the research process, this will be devoted to finding suitable methods for converting design levels for the SoC and the comparison of different methods with each other, and with automatic test generation.

ACKNOWLEDGMENT
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DESIGNING A LEARNING EXPERIENCE PORTFOLIO SYSTEM

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Management of learning experiences approach contains stages such as capturing life experiences via a life logging system, interpreting these experiences by scanning them, determining contexts related to these experiences, giving meaning to the learning experiences they contain and planning-monitoring-evaluating the learning experiences. One of the tools that help the individual to give meaning to his/her learning experiences is reflection. As an activity, reflection, which implies transformation of experience to the learning, contains steps such as capturing experiences of individuals again, monitoring them and evaluating them. Evaluation of the experience, the third of these steps, occurs when experience is examined by the individual according to his/her own intentions and potential knowledge and then he/she integrates the new knowledge he/she gained as a result of this activity to his/her conceptual framework. In this study, the researcher examined how the life logging system can be supported reflective learning process of Boud and friends by using management of learning experiences approach. Moreover, a learning experience portfolio system which enables us to relate the experiences with each other which are captured by the life logging system and wrap them as both episodes and stories, is designed and the potential facilities provided by it to the reflection are discussed.

Keywords: Learning experiences, giving meaning to the learning, reflective learning, life logging, experience portfolio

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DETERMINANTS OF SATISFACTION IN PALLIATIVE CARE PATIENTS

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ABSTRACT
Evaluation of patient satisfaction has had a growing importance on health quality, planning, rationalization of process management and health resources. Furthermore, the scarcity of studies on palliative care and the increase in average life expectancy associated to the increase of patients with chronic conditions that need palliative care, add to the need of research in this area. **Objective**: To analyze how sociodemographic variables, clinic variables and quality of sleep relate with patient satisfaction in palliative care. Through a cross-sectional, quantitative study, we enquired a random sample of 83 Portuguese patients in need of palliative care participated, most of them admitted in ULS (Local Healthcare Units) (37,7%), females (50,6%), with ages between 38 and 93 years (M= 70.95; Sd= 12.77). A clinical sociodemographic sheet was created and used instruments such as ESAS - Edmonton Symptom Assessment System, EORTC In-Patient Satisfaction with Care Questionnaire (In-PATSAT32) and OSQ - Oviedo Sleep Questionnaire were also used to measure the variables. The

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sociodemographic and clinical variables that showed a statistically significant effect in the satisfaction of Patients in palliative care were: younger patients, living in urban areas, with higher income and that are admitted in UMDR (Medium Stay and Rehabilitation Unit) present the highest satisfactions indexes. Regarding sleep quality, the patients with higher satisfaction referred less insomnia, hypersomnia and general sleep satisfaction and higher subjective sleep satisfaction. The results seem to indicate that to monitor the patient's satisfaction it's invaluable to appreciate its variables. Further research and professional education about their influence on healthcare's quality is suggested.

Keywords: Patient satisfaction; Palliative care; Symptoms; Sleep.

INTRODUCTION

There are several diseases that lead to a terminal condition which would beneficiate from palliative care such as oncological diseases, degenerative central nervous system, organ failure, dementia and other. These, when advanced and in fast progression, become complex and lead to a progressive deterioration of their physical state and eventually their death (Pereira, 2010).

Traditionally, the care of individuals at the end of life had a focus on his death, the soul was more relevant than the body. Nowadays, importance is given to all that is going to change his quality of life, give dignity and provide autonomy while respecting the value of life (Sousa, 2012; Misko, 2012).

According to the World Health Organization (WHO), it is relevant to apply palliative care as soon as possible as it provides relief from symptoms, incorporates psychological and spiritual features, upholds life and regards dying as a normal process, neither hasting or postponing it, provides support to both patients and family, enables a life as active as possible, uses a team approach and promotes the increase of quality of life (WHO, 2015). The foundations of palliative care are symptom control, adequate communication, family support and team work (Othero & Costa, 2014).

In Portugal, the rate of people in need of this care at the end of life is between 307,17 and 467,52 per 100.000 people, including adults and children (World Palliative Care Alliance & WHO, 2014). However, Portugal ranked 38th when evaluating availability of end-of-life care. This is a rank by Economist Intelligence Unit (EIU), who studied 40 countries according to their end-of-life care. According to it, Portugal has also one of the lowest rankings of public awareness of end-of-life care (2 in a scale of 1 to 5, in which 5 is the highest) and one of the lowest positions in the quality of death index (31st), behind South Africa and in front of South Korea (EIU, 2010).

The healthcare team has been focusing on the patient's symptomology. Investigation reveals that there isn't a systematic monitoring of symptoms: there are several and professionals don't use instruments that would enable that evaluation and posterior control (Ribeiro, 2012; Sousa, 2012). Other focus has been the quality of sleep since it's associated with health and quality of life. There's a substantial percentage of patients in palliative care with sleep disorders (Sousa, 2012).
Symptoms, treatment, longer lives alongside diseased, limitations caused by the disease, knowledge and uncertainty have a physical and psychological impact on the individual and family. That way, it is easy to understand the importance of symptom control, adaptation to loss of abilities and emotional support. These will influence how the patient perceives the situation and his own satisfaction (Misko, 2012; Nunes, 2014; Othero & Costa, 2014).

Patient satisfaction is increasingly important to the evaluation of quality of healthcare services since it enables the planning and management of procedures and resources. Because of this, institutions are increasingly valuing and promoting patient's contribution to the process (Costa, 2011).

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It's easy to comprehend that patients and family wish to have autonomy, clear communication, dignity and a sense of control in decision making. Only then can patients classify the care received as positive (Alderman, 2013).

PROBLEM STATEMENT

There's a need for investigation in this area because there's a lack of studies focused on patients in need of palliative care and their caregivers. It is also relevant to consider determinant factors such has the increase of life expectancy, lasting chronical and disabling diseases, change of palliative care principles, importance of patients contribution to the evaluation of quality of health services and the reduced number of published articles that approach this subject in Portugal (Santos & Capelas, 2011).

RESEARCH QUESTIONS

The research questions are "What is the level of satisfaction of patients in need of palliative care with nurses, doctors and organization of such care?" and "How do sociodemographic, clinical and quality of sleep variables influence the level of satisfaction of patients in need of palliative care?".

PURPOSE OF THE STUDY

The main purpose is to analyze the link between sociodemographic, clinical and quality of sleep variables and the satisfaction of patients in need of palliative care.

RESEARCH METHODS

A cross-sectional and quantitative study was made to analyse the link between independent variables that are sociodemographic, clinical or about quality of sleep (independent variables) and the level satisfaction of patients in need of palliative care (dependent variable).

This study was made amidst a broader school project by Escola Superior de Saúde de Viseu (centre of Portugal) with the tittle "Investigation in palliative care: contribution for a better care", a teamwork dynamic between teachers and students.

Participants

Participants were gathered through a non-probabilistic sample of 83 patients, mostly female (50,6%), with a median age of 70,95 years (Sd= 12,770). Inclusion criteria: chronical, oncological and palliative patients, hospitalized in continued or palliative care units or even at home with palliative care criteria (limited life prognosis, intense suffering and problems/ needs of difficult resolution that demand specific organized and interdisciplinary support), conscious and oriented and able to communicate or to fill the instrument.

Patients were hospitalized in Continued Care Units (UCCI), Palliative Care Units (UCP), Local Health Units (ULS), Medium Stay and Rehabilitation Units (UMDR) or at home but with and history of recent hospitalization to receive palliative care.

Instrument

To collect the data, a questionnaire was used as a research instrument. It was divided in three sections: one with the sociodemographic characterization, the second with the clinical characterization and the third with the circumstantial characterization. This last one includes the Edmonton Symptom Assessment System (ESAS), EORTC In-PATSAT32 (to evaluate satisfaction) and Oviedo Sleep Questionnaire (OSQ).

Describing according to the last 24 hours, the ESAS analyses nine symptoms (pain, tiredness, nausea, depression, anxiety, somnolence, appetite, wellbeing and breathlessness) but a tenth can be added. The symptoms are rated on a scale of zero to ten, in which ten is the maximum intensity (Monteiro, 2009). In the global perspective, 0-27 was considered as a light symptomology, 38-54 moderate and 55-80 as severe. It has a good global Cronbach's alpha, of ,898.

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EORTC In-PATSAT32 approaches satisfaction according to what the patient feels about the medics and nurses technical ability, interpersonal ability, information given and availability. Other professionals, waiting time, access, exchange of information, comfort and global perception of care are also rated (EORTC Quality of life Group, 2001). It's a Likert scale using 32 items with six options possible: the higher the points, the higher the satisfaction. For each subscale, the Cronbach's alpha was very good, varying between ,904 and ,975.
Using a 15 item scale of which 13 may be joined in three categorical scales is QSO. These three categorical scales are: satisfaction with sleep (one item), hypersomnia (three items) and insomnia (nine options which will also rate its gravity). They are in a Likert scale: the first item goes from one to seven and the rest from one to five. In each scale, the score sits between 9 and 45, in which the latter is the most severe. The other two remaining items inform about parasomnias, organic disturbances and type/frequency of sleep aids (Figueiredo, 2012). There's a good global Cronbach alpha of ,888.

Procedures

The investigators coordinated the application of the questionnaires. The data was collected between April first and the 13th of June, 2014. Afterwards, the statistical treatment was made through SPSS (Windows), applying descriptive methods and parametric and non-parametric tests.
Ethical principles and norms were upheld: this study was approved by the Ethics Commission of Escola Superior de Saúde de Viseu, institutions were asked for permission so that it could be applied on their patients, their respective informed consents stressing that it was voluntary were signed, and privacy and anonymity was maintained throughout the collecting and using of data, encoding the questionnaires and assuring privacy when answering.

FINDINGS

Participants Descriptive analysis

The 83 participants are patients in need of palliative care, majorly women (50,6%) with an age between 38 and 93 years, average 70,95 years (Sd= 12,770) and a coefficient of variation (CV) of 18,00%, suggesting a moderate dispersion (Table 1).

Table 1 – Descriptive statistics on age and gender

Age Gender	n	Min	Max	M	Sd	CV (%)	Sk	S/error	K	K/error	*p*
Male	41	46	93	68,78	12,628	18,36	,108	,369	-,724		,02
Female	42	38	91	73,07	12,698	17,38	-1,044	,365	,569	,717	
Total	83	38	93	70,95	12,770	18,00	-,448	,264	-,523		

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Recoding age in three classes, we determine that 32,5% have 64 years or less, 31,3% have between 65 and 78 years and 36,1% have 79 or more years. The representative age group in males has 64 years or less (41,5%) and in females has 79 years or more (42,9%).

Most of the respondents is single, divorced or widowed (50,6%), the others are married or in civil union. The percentage values presented by the female group are proportionally identic to those of the overall sample. Most of them live in a rural area (65,1%), live out of the district of Viseu (75,9%) and the values presented by each gender have a similar representation to those of the overall sample.

Analysing education, 45,8% of the sample is illiterate, 44,6% have been in school between the 4th and 9th grade (basic education) and 9,6% have been in the 12th grade or higher (secondary or higher education). The male gender presents higher academic qualifications (12,2% with 12th grade or higher) than the female gender (7,1%).

Most of the individuals isn't professionally active (54,2%). When analysing per gender, the males are mainly active (68,3%) but the main part of the females are not (76,2%). Most of the respondents refer a monthly family income equivalent to the national's minimum wage (75,9%), something that has similar representation in both genders.

Concerning religious beliefs, 94,0% of the individuals say they practice some kind of religion, data that has a equivalent representational percentage value in both genders.

Regarding clinical characteristics, 33,7% are hospitalized in a ULS, 25,3% in a UCCI, 13,3% are at home, 12,0% in a UCP and 4,8% are somewhere else. Men are mostly in ULS (21,7%) and women in UCCI (15,7%). Overall, and with representation in both genders, most of the patients are hospitalized because of an oncological disease (67,5%).

Most of the respondents have been hospitalized for less than two weeks (35,5%), data also seen in the male gender (22,2%). However, most of the females have been hospitalized for more than seven weeks (20,6%). Overall, most of the patients say they've had previous hospitalizations (63,9%, with representation in both genders), three or more times (39,6%).

Most say that the disease begun before 2012 (54,12%), data that is also verified in the female gender (30,1%). On the other hand, males refer that the disease has begun since (and including) 2013 (25,3%). Other diseases exist in 55,4% of the respondents (26,5% male and 28,9% female). These include diabetes mellitus type 2, hypertension, hypocoagulation, cataract, hypercholesterolemia, anemia, epilepsy, depression, chronic kidney disease, deep vein thrombosis, stroke and atrial fibrillation.

About the severity of symptoms, these are mentioned from worst to lighter: tiredness (41,0%), pain (39,8%), appetite and wellbeing (equally 37,3%), anxiety (34,9%), depression (31,3%), somnolence (30,1%), breathlessness (28,9%) and nausea (16,9%). Overall, females predominantly refer light and moderate symptomology (both 35,7%) and males mention moderate symptomology (36,6%). The general intensity of symptoms is lower in females (M= 39.40; Sd= 21.09) than in males (M= 41,34; Sd= 21.09) (Table 2).

Table 2 - Descriptive statistics of symptoms intensity.

Gravity per gender Symptoms	Male						Female						Total					
	Light		Moderate		Severe		Light		Moderate		Severe		Light		Moderate		Severe	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%

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Pain	13	31,7	12	29,3	16	39,0	12	28,6	13	31,0	17	40,5	25	30,1	25	30,1	33	39,8
Tiredness	9	22,0	17	41,5	15	36,6	10	23,8	13	31,0	19	45,2	19	22,9	30	36,1	34	41,0
Nausea	22	53,7	12	29,3	7	17,1	23	54,8	12	28,6	7	16,7	45	54,2	24	28,9	14	16,9
Depression	16	39,0	12	29,3	13	31,7	19	45,2	10	23,8	13	31,0	35	42,2	22	26,5	26	31,3
Anxiety	14	34,1	11	26,8	16	39,0	18	42,9	11	26,2	13	31,0	32	38,6	22	26,5	29	34,9
Somnolence	16	39,0	12	29,3	13	31,7	17	40,5	13	31,0	12	28,6	33	39,8	25	30,1	25	30,1
Appetite	14	34,1	10	24,4	17	41,5	17	40,5	11	26,2	14	33,3	31	37,3	21	25,3	31	37,3
Wellbeing	10	24,4	15	36,6	16	39,0	17	40,5	10	23,8	15	35,7	27	32,5	25	30,1	31	37,3
Breathlessness	20	48,8	7	17,1	14	34,1	26	61,9	6	14,3	10	23,8	46	55,4	13	15,7	24	28,9
ESAS Total	12	29,3	15	36,6	14	34,1	15	35,7	15	35,7	12	28,6	27	32,5	30	36,1	26	31,3

Regarding the sleep pattern, subjective satisfaction with sleep varies between 1 and 7 (M= 4,23; Sd= 1,34) and hypersomnia varies between 3 and 15 (M= 6,83; Sd= 3,56), both with a high dispersion around the average and statistically significant differences (p= ,000). This is not the case with insomnia, which is not statistically significant. Most of the patients say they don't have problems while sleeping. When they exist, males refer nightmares 1 or 2 days or 3 times per week (both 24,24%) and females refer snoring 1 or 2 times per week (21,4%). Most of the patients take sleeping pills 6 to 7 days per week (49,4%), with a representational percentage in both genders (46,3% in males and 52,4% in females).

Satisfaction with doctors, nurses and organization of care was analysed. There's a higher average satisfaction with nurses' interpersonal abilities (M= 61,5; Sd= 21,35) and lower satisfaction with doctor's availability ((M= 45,93; Sd= 26,13) and with waiting time (M= 45,93; Sd= 22,10) (Table 3).

Table 3 – Descriptive statistics of satisfaction.

Satisfaction	n	M	Sd
Doctor	83		
Interpersonal abilities		50,40	25,80
Technical abilities		47,29	24,32
Information		46,29	26,81
Availability		45,93	26,13
Total (Satisfaction)		47,62	24,01
Nurse			
Interpersonal abilities		61,75	21,35
Technical abilities		59,54	21,35
Information		54,42	23,40
Availability		57,38	23,75
Total (Satisfaction)		58,27	20,90
Other professionals		50,50	22,78
Waiting time		45,93	22,10
Access		46,39	22,47
Exchange of information		48,80	22,40
Comfort		51,50	24,49
Global perception of care		61,14	21,48

Concerning doctors, patients are more satisfied with their interpersonal abilities (M= 50,40; Sd= 25,80). With nurses, they are less satisfied with the information given by them (M= 54,42; Sd= 23,40). Satisfaction with overall perception of care has the highest average score (M= 61,14; Sd= 21,48) but waiting time has the lowest (M= 45,93; Sd= 22,10).

There's also a positive Pearson's correlation (p< ,05) between the items of satisfaction with doctors and nurses and subjective satisfaction with sleep. However, the correlation is negative between the

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items of total satisfaction with doctors and insomnia, total satisfaction with nurses and insomnia and between satisfaction with doctor's interpersonal abilities, techniques, total satisfaction and overall satisfaction with sleep.

The results are statistically significant between: subjective satisfaction with sleep and satisfaction with other professionals, waiting time, access, exchange of information and comfort; insomnia and satisfaction with other professionals, waiting time and exchange of information; hypersomnia and satisfaction with other professionals and waiting time; overall satisfaction with sleep and waiting time.

A positive correlation ($p< ,05$) exists between satisfaction with care organization and subjective satisfaction with care and a negative correlation between those same items and insomnia, hypersomnia and overall satisfaction with sleep.

Inferential analysis

We also studied the link between satisfaction and age groups: there's only a statistically significant result between satisfaction and waiting time ($p= ,038$). The highest mean rank is among those with 64 years or more ($\bar{r}= 51,24$) and lowest in those that have more than 79 years ($\bar{r} = 36,87$) (Table 4).

Table 4 - Kruskal-Wallis test between satisfaction of patients and age and between satisfaction and habilitation.

Age	≤64 years	65-78 years	≥79 years				*Kruskal-Wallis test*	
Satisfaction	$\bar{r}$	$\bar{r}$	$\bar{r}$				X^2	*p*
Waiting time	51,24	38,33	36,87				6,565	,038
Habilitation	UCCI	UCP	ULS	UMDR	Home	Other	*Kruskal-Wallis test*	
Satisfaction	$\bar{r}$	$\bar{r}$	$\bar{r}$	$\bar{r}$	$\bar{r}$	$\bar{r}$	X^2	*p*
Doctor								
Information	29,31	49,50	41,64	61,25	45,73	35,88	14,112	,015
Availability	31,60	48,11	41,63	61,56	39,51	43,50	11,864	,037
Total (Satisfaction)	31,73	50,67	42,02	61,45	38,91	36,00	12,016	,035
Nurse								
Interpersonal abilities	36,33	51,61	36,16	57,00	43,95	34,63	11,389	,044
Information	31,55	53,56	37,13	61,95	48,45	37,38	15,605	,008
Availability	36,64	55,17	38,45	59,20	41,45	23,88	12,296	,031
Total (Satisfaction)	34,11	56,56	37,20	59,80	44,45	28,63	12,908	,024
Waiting time	31,19	55,06	39,20	63,50	42,27	24,50	17,249	,004
Access	32,52	51,39	37,98	62,92	48,14	29,50	15,947	,007

Through the Anova test, we gathered a statistically significant result in which age influences satisfaction with waiting time ($p< ,05$), but the percentage of explained variation is week (8%). Other statistically significant results were gathered, related to satisfaction with doctor's information, availability and total satisfaction, with nurses' interpersonal abilities, information, availability and total satisfaction, with waiting time and access ($p< ,05$). The highest mean rank is the one for satisfaction with waiting time from patients in UMDR ($\bar{r}= 63.50$) and the lowest is one for satisfaction with nurses availability from patients in other institutions ($\bar{r} = 23,88$).

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Also using the same test, we determined that there are higher averages of satisfaction in UMDR, between 6,77 (Sd= 6,02) and 75,83 (Sd= 19,42), and lower ones in UCCI, from 32,54 (Sd= 26,86) to 56,75 (Sd= 25,50). Except for nurses interpersonal abilities, all the mentioned items of satisfaction have a statistically significant F test (p< ,05), so the institution will influence patients satisfaction. The percentage of explained variation is week (between 13,17% and 22,65%).

The residence area will only influence satisfaction with nurse's information, other professionals, waiting time, access, exchange of information and global perception of care (p< ,005). Those who live in an urban area are more satisfied (higher mean ranks) with access ($\bar{r}$ = 53,14) and less satisfied with the exchange of information ($\bar{r}$ = 49,97). Opposing that opinion, those who live in a rural area are more satisfied with the information ($\bar{r}$ = 37,72) and less with the access.

Analysing the link between satisfaction and monthly income, there's only one result that's statistically significant p< ,05): those who receive the equivalent to or more than two times the national minimum wage are more satisfied with the global perception of care ($\bar{r}$ = 50,80) (Table 5).

Table 5 - U Mann-Whitney test between patient's satisfaction and residence area and between satisfaction and income.

Residence area	Rural	Urban	U Mann-Whitney test	
Satisfaction	$\bar{r}$	$\bar{r}$	UMW	p
Nurse Information	37,65	50,10	548,000	,022
Other Professionals	36,81	51,67	502,500	,006
Waiting time	36,76	51,76	500,000	,004
Access	36,02	53,14	460,000	,001
Exchange of information	37,72	49,97	552,000	,019
Global perception of care	37,39	50,59	534,000	,011
Income	Minimum Wage	≥ 2× Minimum Wage	U Mann-Whitney test	
Satisfaction	$\bar{r}$	$\bar{r}$	UMW	p
Global perception of care	39,21	50,80	454,000	,046

To see how the patients' satisfaction differs from medics to nurses, we applied the student's t-test. Since the difference between means is -10,65 (Sd= 16.88), it's possible to state that satisfaction with nurses is, on average, higher. The value of t is explanatory (t= -5,749; p= ,000), so there are statistically significant differences between satisfaction with doctors and satisfaction with nurses.

There's a positive direct Pearson Correlation between satisfaction with medical care parameters and with nursing care parameters (p= ,000). It is stronger between total satisfaction with doctors and satisfaction with doctors technical abilities ($\bar{r}$ =,952) and weaker between nurses availability and doctors technical abilities. It is also positive the existent correlation between the significant parameters of care organization (p= ,000): stronger between waiting time and with access ($\bar{r}$ =,937) and weaker between satisfaction with waiting time and satisfaction with global perception of care

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($\bar{r}$ =,603).

CONCLUSIONS

We conclude that most of the patients in palliative care are women, with 70,95 years (average), single, divorced or widowed, living in rural areas out of the district of Viseu, illiterate, professionally inactive, receiving the equivalent to the national minimum wage and religious. They have been hospitalized for less than two weeks in a ULS because of an oncological disease which begun before 2012. Patients also have history of other previous hospitalizations and other diseases. Most of them refer moderate symptomology, mainly pain and tiredness.

The satisfaction with the global perception of care had, what we consider to be, a positive score (on average, above 50%). Higher values were attributed to nurses and their interpersonal skills and lower values to doctor's availability and to the waiting time.

Of all the sociodemographic variables studied, only age, area of residency and monthly income will predict satisfaction: it will be higher when they are younger (regarding waiting time), living in urban areas (concerning satisfaction with nurses' information, other professionals, waiting time, access, exchange of information and global perception of care) and with an income equivalent to two times the minimum wage or higher (regarding global perception of care).

About the clinical variables studied, only the place where patients receive palliative care will influence satisfaction with doctors (information, availability and total satisfaction), nurses (interpersonal abilities, information, availability and total satisfaction), waiting time and access.

Concerning the relation between quality of sleep and satisfaction, we infer that there is a positive relation between subjective satisfaction with sleep and satisfaction with care. Contrarily, there's a negative relation between insomnia and satisfaction as with between the latter and overall satisfaction with sleep.

We suggest the development of more investigation in this area with bigger samples and including psychological and sociological variables such as family support; systematic monitoring of satisfaction and it's determinants through a single instrument; use of this data to evaluate the quality of health; include palliative care formation in academic curriculums, also to raise awareness on the subject; higher rate of nurses per patient, improving availability; apply other measures that will improve access and waiting time, the items with the lowest score in our study.

Lastly, it is relevant to stress the importance of this type of investigations, since there have been progressively more individuals with terminal chronical disease and they deserve dignity and quality of care.

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DETERMINATION OF MIDDLE SCHOOL STUDENTS' MISCONCEPTIONS RELATED TO THE UNIT OF "STRUCTURE AND PROPERTIES OF MATTER" USING A TWO-TIER DIAGNOSTIC TEST

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ABSTRACT
Studies on science education show that students have many misunderstandings and misconceptions related to chemistry concepts. Many techniques have been used to determine those misconceptions such as multiple choice tests, interviews, drawing, etc. Two-tier diagnostic test is one of these techniques for using to determine misconceptions and their reasons. For this reason, in this study, it was aimed to determine middle school students' misconceptions related to the unit of "Structure and Properties of Matter" using a Two-Tier Diagnostic Test. The study was conducted with two hundred twenty five 7th grade students, who had already learned the unit of "Structure and Properties of Matter" and studied at three different middle schools in İstanbul. In this study "Structure and Properties of Matter Achievement Test", which was developed by the researchers and ensured validity and reliability, was used to collect data. The test was a two-tier diagnostic test that consists 32 items. Reliability coefficient was found to be 0.90. According to the results, it was found that students had high level of misconceptions about the topics "Stable Atom, Ion, Anion, Cation, Ionic Bond, Covalent Bond, Compound, Homogenous and Heterogeneous Mixtures, Concentrated and Dilute Solutions".

INTRODUCTION

Today, learning takes place based on conceptual basis. This is why, it's very important that students learn concepts in a correct and effective way and make sense of them. The fact that learning basic concepts well, help students to learn further topics has been pointed out by researchers (Briggs and Holding, 1986; Griffiths and Preston ,1992). Although concept learning is important, a lot of problems are faced with in the teaching process. One of them is misconceptions (Alım, 2008, p.177). Misconceptions, can be defined as the information, derived as a result of personal experiences contrary to scientific facts that prevent teaching of scientifically proven facts (Chi and Roscoe, 2002; Koray et al. 2007). One of the most important issue in learning Science and Technology lesson has been regarded as students' misconceptions. In order to ensure meaningful and permanent learning, misconceptions should be identified and be remedied (Osborne and Freyberk, 1996; Baysarı, 2007). There are many studies addressing misconceptions in science in the literature. Research address that students have some misconceptions about the basic concepts of chemistry, such as "The Electron Array and Chemical Properties ", "Chemical Compounds", "Bonds and formulas" and "Mixtures" (Abraham et. al., 1992, 1994; Akgün and Aydın, 2009; Barker, 2000; Bayrak, 2005; Coştu et. al., 2005; Çalık and Ayas, 2005; Dindar et. al., 2010; Goodwin, 2002; Kabapınar, 2001; Lee et. al. 1993; Nicoll, 2010; Ozmen, 2004; Papageorgıou and Sakka, 2000; Say, 2011; Stavy ,1990; Taber, 1998; Tezcan and Salmaz, 2005; Uzun, 2010; Uzuntiryaki and Geban, 2005; Urek and Tarhan, 2005; Valanides, 2000).

Different techniques have been used in order to determine students' misconceptions. Techniques often used are; concept maps (Ross and Munby,1991), conversation (Osborne and Gilbert, 1980; Coll and Taylor, 2001; open-ended questions (Glazar and Vrtacnic, 1992) and multiple choice tests (Nakipoglu and Tekin , 2006 ; İnce, Acar Sesen and Kirbaslar, 2012). While techniques used in determining the students' misconceptions, help to define what misconceptions students have, it is not possible to have an idea about the causes of these misconceptions. So, in order to define misconceptions, and their reasons , two-tier diagnostic tests have been used (Garnett and Treagust, 1992; Odom and Barrow, 1995; Tan, Goh, Chia and Treagust, 2002). The first section of two-tier tests includes information assumptions similar to multiple choice tests. Here, there is a question item called a root agent, or an information assumption with various number of choices that follow (Chen, Lin and Lin, 2002; Karataş, Köse and Çoştu,2003; Treagust and Haslam, 1986). The second section that differentiates two-stage

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tests from multiple choice tests, can be made up of open ended questions that require students to justify their reasons for marking the choices in the first section, or multiple choice options again (Tan and Treagust, 1999; Peterson et al., 1989). The second part of the research is prepared depending on, the literature study, the results from interviews and open-ended questions or already defined students misconceptions (Jang, 2003).

THE STUDY

In this study, it was aimed to determine middle school students' misconceptions related to the subjects of "The Electron Array and Chemical Properties", "Chemical Bonds"," Compounds and Formulas", "Mixtures" in the unit of "Structure and Properties of Matter" by using a Two-Tier Diagnostic Test. This study was conducted with two hundred twenty-five 7th grade students, who had already learned the unit of "Structure and Properties of Matter" and studied at three different middle schools in İstanbul in 2013-2014 academic year. As data collection tools, "Structure and Properties of Matter Achievement Test" which have been designed by the researcher and tested in terms of validity and reliability were used. The test was a two-tier diagnostic test that consists 32 items. Reliability coefficient was found to be 0.90. Lertap 5 was used to analyse students' misconceptions.

FINDINGS

Results of students' misconceptions related to "Electron Sequence and Chemical Properties" under the unit of "Structure and Properties of Matter Achievement Test" and their percentages and frequencies are given in Table 1.

Table 1: Students' misconceptions about "Electron Sequence and Chemical Properties " defined as a result of "Structure and Properties of Matter Achievement Test".

	Concept	Misconceptions	f	%
Electron Sequence and Chemical Properties	Stable Atom	Stable atoms tend to give out electrons.	33	15
		Atoms containing only eight electrons in the last layer may participate in formation of links.	27	12
	Ion	When an electron is disconnected from any atom, anions are formed.	68	30
		When an electron is disconnected from any atom, an electron is disconnected, and loses its energy.	23	10
		Cation is formed when a neutral atom receives an electron.	27	12
	Atom Model	An neutral atom with 2 electrons in its last orbit, is expected to form a (-2) anion.	43	19
		For an atom, to be chemically determined, it has to have 2 electrons in its outmost energy level.	18	8
	Cation and Anion	In order to have noble gas structure, cations (+) by accepting electrons and anions by giving electrons are formed.	38	17
		Atoms become anion by accepting proton, and become cation by giving protons.	27	12
		Polyatomic ions are in form of cations.	25	11
		There is only one kind of atom in the structure of polyatomic ions.	25	11
		During bond-formation, all electrons of both atoms play the most active role.	32	14
		There is electron sharing in NaCI, and electron exchange in H_2O.	43	19

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As shown in Table 1, it was detected that, students had misconceptions about "Stable atom" approximately 12-15%, about "Ion" in ratio of 10-30%, about "Atom Model" in ratio of 8-19%, about "Cation and Anion" concept approximately in ratio of 11-19%.

Table 2: Students' misconceptions about "Chemical Bonds" defined as a result of "Structure and Properties of Matter Achievement Test"

	Concept	Misconception	f	%
Chemical Bonds	Ionic Bond	The bond that keeps Na and Cl atoms together is the metallic bond.	23	10
		A single Cl atom makes only ionic bond with a different atom.	32	14
		Salt (NaCl) and water (H2O) both have Ionic structure.	29	13
	Covalent Bonds	Salt (NaCI) and water (H2O), both have covalent structure.	50	22
		Covalent structures consist of electron exchange.	38	17
		In covalent structures, as anion and cation have opposite loads, they attract each other.	36	16
		When covalent bond is formed, the electrons in the last layer of the atoms change places.	25	11
	Covalent Bond Made up of Different Elements (HCI)	Made bond with the Cl atom of the H atom; It is ionic bonds.	56	25
		Made bond with the Cl atom of the H atom; It is metallic bond.	27	12
		HC l compound is formed with ionic bonds.	63	28

As shown in Table 2, it was detected that, students had misconceptions about "Ionic Bond" in ratio of 10-14%, about "Covalent Bond" in ratio of 11-22%. Approximately 12-28% of them had misconception about "Covalent Bond Made Up of Different Elements (HCI)" concept.

Table 3: Students' misconceptions about "Compounds and Formulas" defined as a result of "Structure and Properties of Matter Achievement Test".

	Concept	Misconception	f	%
Compounds and Formulas	Compound	Compounds are divided into components physically.	27	12
		There is no specific ratio between the compounds and components.	23	10
		Water is solution.	68	30
		Water is mixture.	34	15
		The compound is formed as oxygen atoms make chemical bonds.	81	36
	Ionic and Molecular Compound	When atoms form the compound, they don't lose their features.	25	11
		Compound, is the smallest unit that different type of atoms form by means of ionic bond.	34	15
		Molecular structure compounds are formed only by common use of same type of atoms	54	24

As shown in Table 3, it was detected that, students, under the heading of " Compounds and Formulas ", have misconceptions about "Compound" in ratio 10-36%, about " Ionic and Molecular Compound " concept approximately in ratio 11-24%.

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Table 4: Students' misconceptions about “Mixtures” defined as a result of "Structure and Properties of Matter Achievement Test".

	Concept	Misconception	f	%
Mixtures	Mixture	Salt dissolves homogeneously both in water and oil.	23	10
		Materials that make up the heterogeneous mixture, dissolve evenly to each part of the mixture.	46	20
		Salty water is a heterogeneous mixture.	54	24
	Dissolution Event	Salt,melts in water.	23	10
		When we put edible salt to a glass of water, a new compound is formed as the salt ions are combined with water.	29	13
		When a little bit of sugar is added to water, the concrete sugar, becomes fluid.	65	29
		When sugar is added in water, sugar disappears.	43	19
	Dissolution Rate	Granulated sugar and sugar cubes dissolve at the same rate when put into two different container with water at the same temperature.	47	21
		Equal amounts of crushed sugar dissolves more than cube sugar .	29	13
	Dilute Concentrated Solution	Adding water to the solution is a process of increasing its concentration	41	18
		When sugar is added in water, it dissolves to its ions.	32	14
	Conductivity Solution	Pure water and sugar water transmit electricity.	23	10

As shown in Table 4, it was detected that, students, under the heading of "Mixtures", have misconceptions about "Mixture" in ratio 10-24 %, about "Dissolution Event" in ratio 10-29 %, about "Dissolution Rate" in ratio 13-21 %, about " Dilute Concentrated Solution " in ratio 14-18 %, about “Conductivity Solution” concept approximately in ratio 10%.

CONCLUSIONS

As a result of "Structure and Properties of Matter Achievement Test" applied within the scope of this study, it was detected that, students, among the concepts under the heading of "Electron Array and Chemical Properties" have the highest misconception with “*When an electron is disconnected from any atom, anions are formed."* It was also detected that students have misconceptions such as; “*Stable atoms tend to give out electrons.*”, "*Atoms containing only eight electrons in the last layer may participate in formation of bonds*.", “When an electron is disconnected from any atom, an electron is disconnected, and loses its energy.", "Polyatomic ions are in form of cations." In this study, it was detected that students are confused about stable atom and neutral atom concepts in a way similar to the misconception about stable atom concept indicated by Uslu (2011); as "*If the number of protons and electrons are equal, if there is no need for proton and electron, the atom is stable."* Similar findings to misconceptions detected within the scope of the study as in, *"Cation is formed when a neutral atom receives an electron.", "For an atom, to be chemically determined, it has to have 2 electrons in its outmost energy level.", "An neutral atom with 2 electrons in its last orbit, is expected to form a (-2) anion.", In order to have noble gas structure, cations (+) by accepting electrons and anions by giving electrons are formed.”, “Atoms become anion by accepting proton, and become cation by giving protons."* have been indicated by other researchers as well. (Kara and Ergül, 2012; Uzun, 2010; Uzuntiryaki, 2003). The misconceptions detected as in *"There is electron sharing in NaCI, and electron exchange in H_2O."* coin with the results of Butts and Smith (1987). When misconceptions related to concepts under the heading of "Chemical bond" were studied, it was detected that, misconceptions of the students were at a high rate about concepts such as "Ionic Bond", "Covalent Bond", and "Covalent Bond Made Up of Different Elements (HCI)”, and the highest rate of misconception was in "*HCl compound is formed with ionic bond."* Students' misconceptions as in, "*A single Cl atom makes only ionic bond with a different atom"* was detected by the researcher, within the scope of this study. Besides, the misconception as in "*The bond that keeps Na and Cl atoms together is the metallic bond", "Salt (NaCl) and water (H_2O) both have Ionic structure."* were detected by other researchers. (Nicoll, 2010; Taber, 1998). It was also indicated that; misconceptions that were detected in this study as in " *Salt (NaCI) and water (H_2O), both have covalent structure", "Covalent structures consist of electron exchange", “ In covalent structures, as anion and cation have opposite loads, they attract each other." ,"When covalent bond is formed, the electrons in the last layer of the atoms change places.", " Made bond with the Cl atom of the H atom; It is ionic bonds.", “ Made bond with the Cl atom of the H atom; It is metallic bond.", "During bond-formation, all electrons of both atoms play the most active role"* are similar to other studies (Nicoll, 2010; Taber, 1998; Urek and Tarhan, 2005; Altınyuzuk,

2008; Uzun, 2010). Other misconceptions showing that students are confused about ionic and covalent bond such as; *"Ionic bond is the bond among molecules.", "Covalent bond is common usage of electrons by different metals"(*Butts and Smith, 1987; Altınyüzük, 2008), *"Covalent bond is the strength of attraction between the negative and positive ends of atom*"(Nicoll, 2010), *"NaCI is a covalent bonded compound."* (Butts and Smith, 1987), "*Covalent bond, is formed as a result of electron exchange between two metals."* (Urek and Tarhan, 2005), "*There is intermolecular bond in ionic compounds."* (Taber, 1998) have been detected in other researches as well. With regards to the concepts under the heading of "Compounds and Formulas"; a high misconception rate was detected about "Compound" and " Ionic and Molecular Compound " concepts. It was detected that the students had the highest rate with misconceptions such as; "*The compound is formed as oxygen atoms make chemical bonds.", "Water is a solution."* It was also detected that students had misconceptions such as; "*Compounds are divided into components physically.", "There is no specific ratio between the compounds and components. ", "Water is a mixture."* The detected misconceptions correspond to the results of researches conducted by Uzun (2010), Konur and Ayas (2008), Uzuntiryaki and Geban (2005), and Meseci, Tekin and Karamustafaoglu (2013). Misconceptions such as; *" When atoms form the compound, they don't lose their features.", "Compound, is the smallest unit that different type of atoms form by means of ionic bond.", " Molecular structure compounds are formed only by common use of same type of atoms "* were indicated by Urek and Tarhan (2005), Novick and Nussbaum (1978) as well. It was detected that with regards to the concepts under the heading of "Mixtures"; students had high rate of misconceptions such as, "Mixture", "Dissolution Event ", "Dissolution Rate ", " Dilute Concentrated Solution " and " Conductivity Solution ". It was found that the highest misconception students had was as *"When a little bit of sugar is added to water, the concrete sugar, becomes fluid."* Another misconception as; *"Salt dissolves homogeneously both in water and oil"* was also indicated within the scope of the study. The misconceptions such as "Materials that make up the heterogeneous mixture, dissolve evenly to each part of the mixture." , "Salty water is a heterogeneous mixture." parallel to the results of the research conducted by Kalın (2008), Kalın and Arıkıl (2010). The misconception that *"Salt,melts in water ."* also show similar results to the results of different researchers (Uzun, 2010; Akgun and Aydin, 2009; Kalın and Arıkıl, 2010; Valanides, 2000; Kabapınar, 2001; Kuşakcıekim, 2007; Lee.et.al. 1993; Say, 2011). The misconception that *"When we put edible salt to a glass of water, a new compound is formed as the salt ions are combined with water."* corresponds to the results of Coştu et al. (2005), Papageorgıou and Sakka (2000), Ebenezer and Fraser (2001), Kabapınar (2001). The misconception; *"When sugar is added in water, sugar disappears"* correspond to Uzun (2010), Akgün ve Aydın (2009),Uzuntiryaki and Geban (2005), Ebenezer and Erickson (1996), Abraham et. al. (1994), Lee et al. (1993). The misconception that "*Granulated sugar and sugar cubes dissolve at the same rate when put into two different container with water at the same temperature "* is similar to the misconception defined by Uzun that; "*There is no relation between the grain size and dissolution."* The misconception "*Adding water to the solution is a process of increasing its concentration."* is similar to Meşeci, Tekin and Karamustafaoglu's (2012) studies. The misconception detected among the students; "*When sugar is added in water, it dissolves to its ions."* is similar to the results of the study conducted by Sen and Yilmaz (2012). Also the misconception, "*Pure water and sugar water transmit electricity."* is similar to the results of the study conducted by Uzun (2010). In order to ensure meaningful and permanent learning, it is very important to realize learning process by defining the misconceptions of students. It is therefore, believed that, students' misconceptions found as a results of this study about subjects within "Structure and Properties of Matter " unit will be helpful to educationalists, in planning the educational program and implementing it.

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DETERMINATION OF THE KNOWLEDGE LEVELS OF STUDENTS STUDYING AT THE HEALTH RELATED DEPARTMENTS ABOUT RENEWABLE ENERGY RESOURCES AND PROTECTION OF THE ENVIRONMENT

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ABSTRACT
This study was conducted in order to determine the knowledge and awareness levels of students who studied the elective subject of environmental ethics at the Vocational School of Health Services (AVSHS) in Aydın, Turkey. The results of 172 students' questionnaire showed that the students did not have sufficient knowledge about renewable energy, renewable energy recourses, the Kyoto protocol and whether the resources used to produce energy at present cause to the release of greenhouse gases or not.

Key words: Renewable energy sources, environmental awareness, environment and energy knowledge, Kyoto protocol

INTRODUCTION

Environmental problems are among the most discussed matters which consider whole people and waiting to be solved. Ecosystem is a functional and renewable community of living organisms in conjunction with the nonliving components of their environment and an interacting system by means of transferring materials and energy.

Increasing population numbers in Turkey and in the world, industrialization, transition to the city life and desire to have more comfortable and luxurious life increase the demand for energy and natural resources. Traditional energy resources, fossil fuels which have negative effects like global warming and air pollution, have a big portion in supplying this demand. Use of excessive energy brings along some problems, particularly excessive use of limited resources of the World and damages given to the environment during the production of energy are on the top of the list (Kaygusuz, 2002).Increasing the awareness and knowledge of people and taking measures in these matters is considered as an important step towards solving the problems. Therefore, there has been an increase in the numbers of studies in terms of generating environmental awareness and protection of environment in people especially young ones (Bradley, Waliczek & Zajıcek, 1999, Töman & Çimer, 2013, Yurtseven, et al. 2010). If communities and individuals are not made aware about energy, even we provide much more new and different resources, it is a fact that it will be insufficient considering the increasing population and industrialization rates. But, when the awareness level of consumers increase, their positive attitudes towards environment also increase (Bradley, et al., 1999).The success of energy policies are evaluated based on the criteria that whether the demands towards the present and future requirements of community are provided widely in benefit of community without damaging environment and accepted by community (Ediger & Kentmen, 2010).

In recent years, reducing environmental problems to minimum (especially global warming) has become important to leave a better world for future generations. In this context, there has been a big effort to develop alternative technologies and resources, and to increase their use instead of intensively used energy production methods from fossil resources in the last two centuries. When we looked at the previous studies related to renewable energy and renewable energy sources mostly have been carried out in the areas such as engineering and economics. These studies were carried out to determine the awareness of individuals about energy or the attitudes of individuals towards a certain type of energy (Kaygusuz, 2002; Kaldellis, 2005; Kaya, 2006; Swofford & Salttery, 2010; Fırat, Sepetçioğlu & Kiraz, 2012). In the previous literature in education area, issues such as environmental awareness, pollution, protection of environment and education on environment have been studied (Jınlıang & et al. 2004; Alım, 2006; Tunç, Ömür & Düren, 2012; Özdemir, 2010; Aydın, 2010; Doğan, 2013).

There have not been many researches on the training of subject and determining the knowledge level of individuals (Töman & Çimer, 2013; Yücel, 2007). Knowledge plays an important role in developing individual positive attitudes towards their environment and new technologies as in many matters (Uzun & Sağlam, 2007; Özcan, 2010). Therefore, this study was performed to determine whether the students studying in the field of health sciences at the vocational high school have the sufficient knowledge about environmental issues, renewable energy, and global partnerships in terms of protection of environment.

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In this study, answers were sought for the questions below:
1. Do the students know what the renewable energy is and what the renewable energy resources are?
2. Do the students know the difference between the renewable energy resources and fossil fuels used intensively at present in terms of environmental effects?
3. Do the students have any information about global (international) protocols or treaties like Kyoto protocol aiming the protection of environment?

MATERIAL AND METHOD

This study is a descriptive survey case study. Questionnaire consisted of five close-ended questions on demographic features and six close-ended and one open-ended seven questions on research subject.

The questionnaire consisted of two parts; the questions in first part assessed the demographics of the students. The knowledge of students related to environment, protection of environment, energy and renewable energy types were assessed with the questions in the second part.

Study Group

The study group was the students of Adnan Menderes University (ADU), Aydın, Turkey, and the study samples were students, at the Aydın Vocational School of Health Services (AVSHS), who took the elective subject of environmental ethics students during 2012-2013 and 2013-2014 academic years.

Data Analysis

The answers given to the questions in the survey were transferred to the Statistical Package for the Social Sciences (SPSS) program, and below analyses were realized.

Sex, education program (P)/department (D), whether they took any course about environment or not, whether they read any book about environment. The answers they gave for how much they were interested in the environmental news in the printed and visual media and to the questions about renewable energy were determined for the participants.

One-Way ANOVA was used to determine whether there was a correlation between demographic and study issue data. The significant level was $p < .05$.

Demographic Features of Participants

D/ P distribution of the students who participated the survey is shown in Table 1.

Table 1: P/D distribution of students who participated the survey.

Program / Department	**n**
Environmental Health Program (EHP)	41
Physiotherapy Program (FTRP)	16
Medical Secretarial and Documentation Program (MSDP)	31
First Aid and Emergency Program (FAEP)	8
Medical Laboratory and Techniques Program (MLTP)	25
Dialysis Program (DP)	13
Medical Imaging Techniques Program (MITP)	13
Anesthesia Program (AP)	3
Nursing Department (ND)	3
Midwifery Department (MD)	2
4 Year Degree Departments(4YD)	14
Various Vocational Schools (VVS)	3
Total	**172**

The numbers of students who taken any lesson/course about the environment before were 68 (39.8%), not taken were 103 (60.2%), and one of the participant did not answer this question.

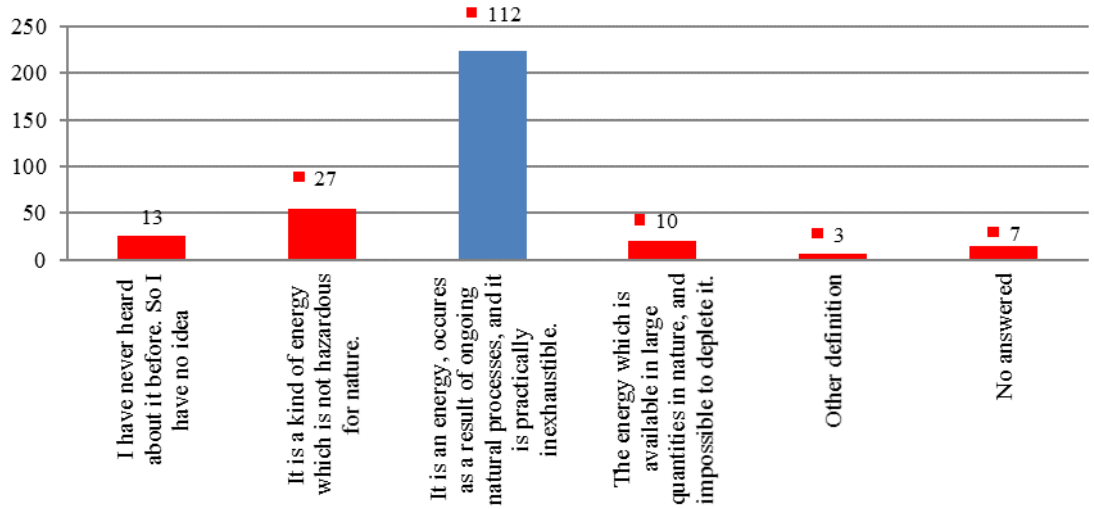
The numbers of students who read any book about environment were 97 (56.7%), who didn't read were 74 (43.3%) and one of the participants did not answer it.

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When we looked at the answers that given to the question of "When you read or watch one of the printed or visual media products (newspaper, magazines, internet, TV, etc.) how much attention do you pay to the news about environment?" Only one quarter of participants (n:44; 25.6%) have stated that "in daily life, I put into practice things which I hear or read." Ninety one of participants (52.9%) stated that "I just read", thirteen (7.6%) of them said that "I am usually not aware of this kind of news", twenty four (14%) of them said that "I see but I am not interested in".

FINDINGS

First question related to research issue was close-ended definition of renewable energy. When we looked at the given answers related to the definition of renewable energy, correct alternative was marked by 112 (65.1%) students, while thirteen students (7.6%) stated having no idea because they did not hear about it before. Twenty seven students (25.7%) marked as harmless energy and ten students (5.8%) chose the definition of lasting energy meaning it is available in huge amounts in nature so it is unlikely to deplete it. Three students (1.7%) gave different definitions (Figure 1).

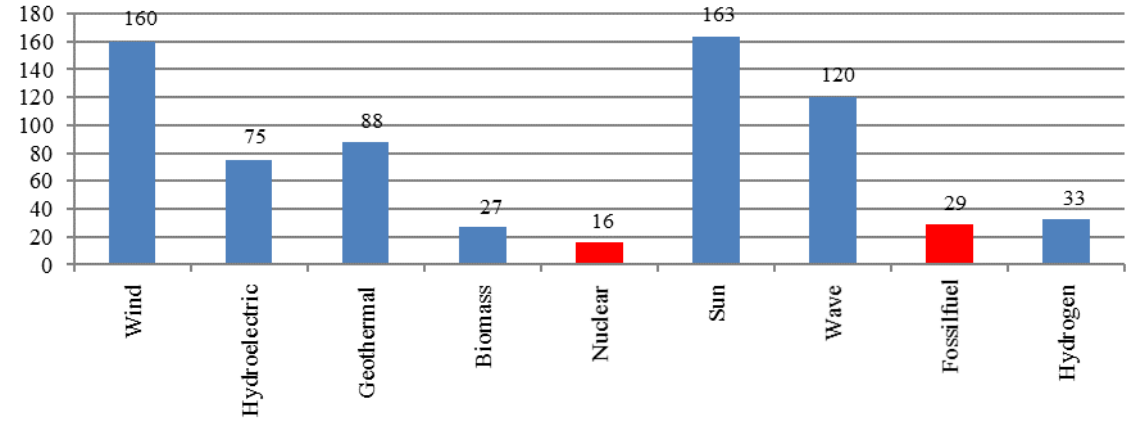


**The labeled blue column shows the correct answer.*

Figure 1: Answers given to the question of "Which is the correct definition of renewable energy?"

There were no significant differences in relation to P/D, whether or not students took course and whether or not students pay attention to news. There was a significant difference in relation to students read any book about environment ($p < .05$).

Next question was "choose from the following energy types which are the renewable". When we looked at the frequencies, the most marked energy types were respectively solar (n:164), wind (n:161), wave (n:120) and geothermal (n:89) energy. The least known forms of energy were biomass (n:27) and hydrogen (n:33). On the other hand, nuclear energy (n:16) and fossil fuels (n:29) have been known incorrectly as renewable by some students (Figure 2).



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* *The labeled red columns show the false answers.*

Figure 2: Answers given to the question of "Which energy types are renewable?"

Following this question, there was a list including the names of some energy resources that are used and unused as renewable. Considering the responses, the best known renewable energy resources were solar, wind, hot air stream and rivers respectively similar with the answers of the previous question (Figure 3).

The description of Kyoto protocol, an international agreement linked to the United Nations Framework Convention on Global Climate Change, was asked in order to learn whether the students know it or not. Approximately half of them (42.77%) chose the option "I have never heard it before." Only 4.22% of students chose the option "I know and I can define correctly" (Figure 4). 31.93% of them had heard it before, but stated that they did not have any idea about what it was. There was a significant difference between whether they studied any subject before on environment or not. In terms of studied subject, there was a significant difference between EHP and FTRP, MSDP, FAEP, MLTP. Based on whether they take notice of the warnings, there was a significant difference between the students who marked "I do not usually take notice" option and students who marked "I put into practice things I read or hear" option ($p < .05$).

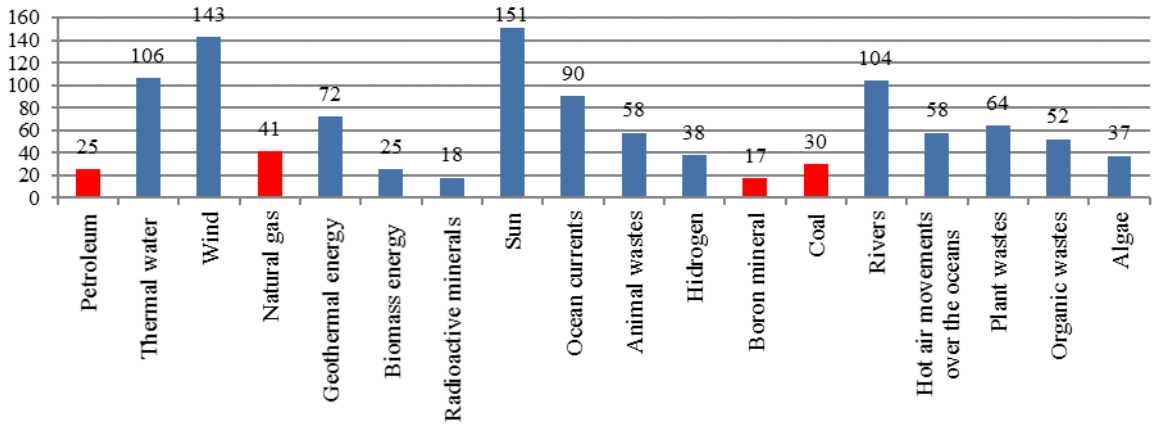


Figure 3: Answers of the question of "in your opinion: which are the products that used to be renewable energy resources the following list?"

There was no significant difference regarding whether they read any book or not ($p > .05$).

Second question in relation to the Kyoto protocol was "Is our country a member of the Kyoto protocol?" 60.82% of the students marked the option "I have no idea". This result is in parallel to the answers of previous question.

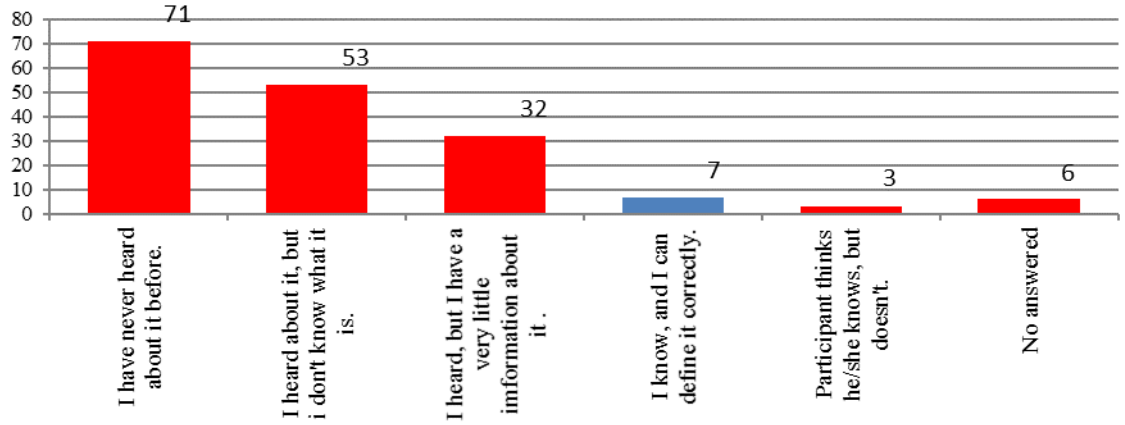


Figure 4: Answers given to the question of "What does it come to your mind when the Kyoto Protocol mentioned?"

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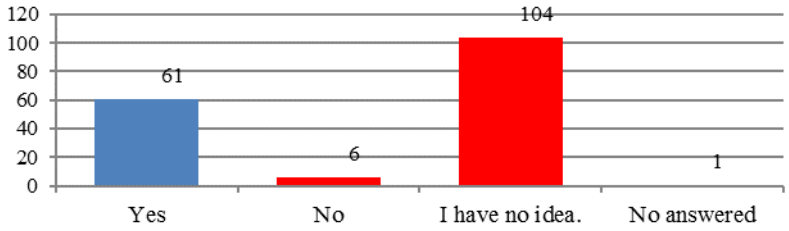
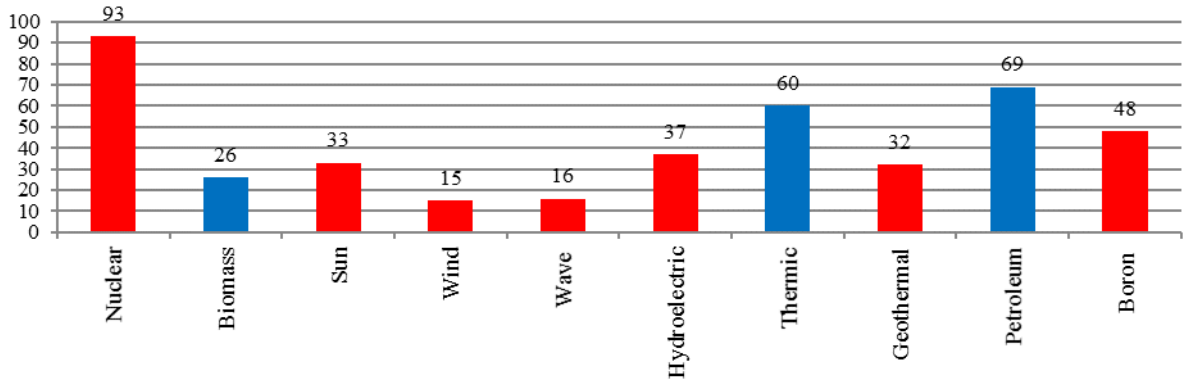


Figure 5: Answer given to the question of "Is Turkey a member of the Kyoto Protocol?

One third (35.67%) participants know that Turkey is a member of the Kyoto protocol, and marked correct option (Figure 5). In terms of subject studied, there was a significant difference between EHP and FTRP, MSDP, FAEP, DP. Also there was a significant difference in relation to whether they studied any subject about environment before or not, whether they read any book about environment or not, and taking notice of warnings, between who marked the option of 'I do not usually realize' and who marked other options ($p < .05$).

By giving the names of some energy resources and energy types in 6th question, it was asked "which does cause to the greenhouse gas emission?". When the answers were evaluated, it was seen that students had false information about the emission of fuels. The number of students who knew that greenhouse gas emission is caused by carbon-based fuels such as biomass, oil and thermal energy was very low. Many of students had a wrong thoughts of which fuels such as nuclear (n:93), boron (n:48), hydroelectric energy (n:37), sun (n:33), etc. cause the greenhouse gas emission (Figure 6).



** The labeled red columns show the false answers.*

Figure 6: Answers of the question of "Which following fuels or energy types are the causes of the greenhouse gas emission?"

The final question was open-ended, and students were asked to define some key concepts such as emission, energy agriculture (enagri), alternative energy, green-energy and solar cell related to renewable energy and environment. When the answers were examined, it was seen that most of the students did not answer the concepts especially enagri, green energy and emission. Also, most of the answers were wrong. The most frequent correctly defined concept was "Alternative Energy" (Figure 7). There was only a significant difference in relation to the definition of solar cell in favor of who read a book ($p < .05$).

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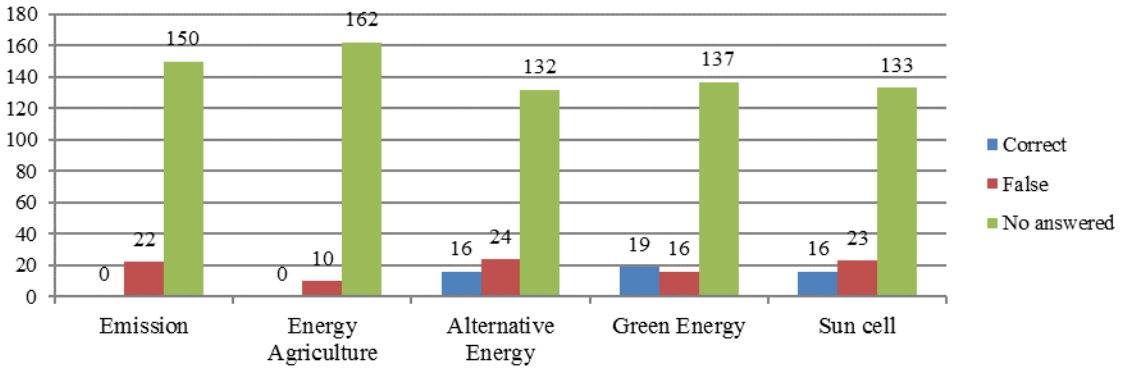


Figure 7: Shows the defining distributions of some key concepts related to energy and environment.

CONCLUSIONS

An ecosystem is a natural system consisting of all plants, animals and microorganisms (biotic factors) in an area functioning together with all the non-living physical (abiotic) factors of the environment (Christopherson, 1997). While creatures are shaped by the physical and chemical conditions of the ecosystem, they affect and change the conditions of their environment. Considering the energy needs and energy utilization of humankind, reducing the occurrence of pollution due to energy production from fossil fuels will contribute to the protection of environment. Increasing the knowledge level of consumers about environment and renewable energy is one of the important factors.

According to the results of this study, it was determined that students did not have sufficient knowledge about what renewable energy was, which resources in nature could be used as a source of renewable energy, and about the topics like which energy resource during the energy producing process could cause greenhouse effect. Furthermore, they had wrong information. One of the most important reason of this situation is environmental issues are not adequately integrated at the primary and secondary education level in our country. When the contents of science and social subjects related to environment at the primary and secondary school levels were observed, it was seen that such topics about the importance of energy resources and renewable energy in the biology, chemistry and geography lessons are very short (usually 1-2 hours) (MEB, 2005 and MEB, 2013).

Sun, wind, geothermal and rivers have been stated to be the most known renewable energy resources. The reason for this, they are frequently encountered around us. On the other hand, petrol (4.5%), natural gas (23.8%), boron (10%) and coal (17.4%) were marked as renewable energy resource by the students who had wrong information about these fuels.

It was observed that only 4% of the students knew about the Kyoto Protocol which was constituted in the aim of taking precautions against the threat of global warming that the earth will face near future, 41% of the students did not hear about it and other 50% of the students did not have sufficient and right information. Yılmaz, et al. (2002), reported that education provided about environment is insufficient, and especially students studied chemistry at the secondary school have a bit more information about the topic. These statements are in accordance with our findings and support our results. On the other hand, when the curriculums of the Ministry of National Education (MNE) were investigated, it was observed that the Kyoto Protocol was not included in the year 2013 (MEB, 2013) and it was only one hour subject in the 10th year chemistry syllabus(MEB, 2005) and the students gain their knowledge about environment through printed or visual media. Also, most of the students (64%) didn't know that Turkey is a member of the Kyoto Protocol. This topic has been situated in the last lesson of the 12th grade course of The Contemporary History of Turkey and World in 2008 (MEB 2008). Students, if do not study in relation to environment or in the area of environment, they do not get sufficient education about environment (Çabuk & Karacaoğlu, 2003). In this study, the answers given by the students studying at the EHP in relation to the environment were significantly different comparing to the answers of students studying at the FTRP, MSDP, FAEP, DP programs which do not include subjects related to environment.

The students were given a list of several names of energy resources used at present and were asked which ones were likely to cause to greenhouse gas emission, and majority of the answers were wrong. It was observed that most of the participants had misinformation about nuclear, boron, hydroelectric, geothermal, wind, and the sun which are not the cause of greenhouse gas emission. Topics related to energy resources, are available in the biology and physics subjects at 9th grade, and more widely in the chemistry subject syllabus of 10th grade (MEB,

2013). But, according to the secondary school education curriculum structure, students, except ones studying in science and math area, there is no the lessons which are physics, chemistry and biology in curriculum of the social sciences departments later than 9th grade. Also, because of the topics being not linked between the subjects, it can lead to the insufficient learning or wrong-learning of students. In the literature, a strong attitude towards environment is associated with the education provided at school (Kumar & Patil, 2007 as cited in Tunç, et al. 2012).

In an open-ended question in the survey, the participants were asked to define some terms related to renewable energy such as emission, alternative energy, green energy, and solar cell. It was observed that 70-80% of the participants did not answer. The best known terms by the students were green energy (11%), alternative energy (9.3%) and solar cell (9.3%). It was notable that these terms were defined correctly by in small numbers of the students and these were mostly EHP students (green energy 9/19; alternative energy 8/16; sun cell 10/16). The reason of low correct answer numbers of 8-10 out of 41 EHP students is likely because the environmental ethics subject is thought in the first term of first year and the questionnaire was performed at the beginning of the first term; therefore the EHP students had not studied their major subjects. But, there are also some students coming from the environmental health division from high schools of health sciences thus this difference arises from the students who studied subjects related to environment at the high school level.

When we evaluate the data and consider the global needs, in my opinion it is beneficial to provide more hours of education about renewable energy topic in the curriculums of MNE for high schools. The content of topics should be revised according to present circumstances and during the university education, elective subjects about environment, energy and energy resources should be available. Encouraging students to take these subjects may help to make public aware of these issues.

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DETERMINING THE PRE-SERVICE TEACHERS' LEVELS OF AWARENESS FOR ENVIRONMENTAL PROBLEMS

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ABSTRACT
The aim of this study is to determine the levels of awareness of the pre-service science teachers for environmental problems. A total of 136 pre-service teachers, who are studying in the third and fourth grade of Department of Science Education, Faculty of Education, participated in this study. Data in the study was collected using the 44-item scale called "Awareness Scale for Environmental Problems'' developed by Güven and Aydoğdu (2012). When the results of the study were evaluated, it was found that the Pre-Service Science Teachers' awareness for environmental problems showed a significant difference in favor of the fourth grade according to the class [U = 693.000, p <.05] and in favor of female students according to gender [U = 1556.500, p <.001].

Keywords: Science Education, Environmental Problems, Awareness, Pre-Service Teachers

INTRODUCTION

The excessive and poorly planned utilization of natural resources due to the rapid development of the industrial sector, the increasing human population, the growing material demands of society, and the continuous efforts to improve life standards has had the inevitable effect of altering the balance of nature and causing numerous environmental problems that threaten our entire world. The most significant of environmental problems our world faces today include the depletion of the ozone layer; deforestation; air, water and soil pollution; the excessive accumulation of solid wastes; noise pollution; pollution caused by transportation; the excessive use of chemical harmful to the environments; erosion; scarcity and hunger; the extinction of animal and plant species; global warming; and climate change (İleri, 1998; Kışlalıoğlu & Berkes, 2007).

The most important approach in tackling environmental problems is educating and increasing the level of awareness of all individuals within society about these issues (Bozkurt & Cansüngü, 2002). To ensure that individual understand environmental problems, and work on finding solutions for them, it is necessary to organize an effective environmental education programs (Aldrich & Benjamin, 1997). Environmental education is a continuous educational process that increases the awareness level of individuals regarding the environment; allows them to understand the concepts, values and attitudes concerning the environment; and allows them to gain the necessary knowledge, skill, values and experiences for solving environmental problems, such that they can leave a clean and healthier environment for future generations (Doğan, 1997; Vaughan et al., 2003). The raising individuals who are sensitive about environmental issues, who have solid knowledge and awareness regarding the environment, and who are willing to take part in activities pertaining to environmental problems, can only be achieved through the education provided by qualified teachers with strong environmental awareness. For this reason; it is of considerable importance to evaluate and determine teachers' and pre-service teachers' level of awareness and attitudes regarding the environment, since they assume a very important mission in the raising of future generations and in contributing to the creation of conscious and knowledgeable societies. In this context, the present study aimed to identify the level of awareness of pre-service science teachers regarding environmental problems.

METHODS

The study participants consisted of 136 third- and fourth-year students attending the Science Teaching Department of a university in northern Turkey. The study method was based on the screening model, which is a qualitative study method. The study data were obtained using the "Awareness on Environmental Problems Scale" developed by Güven and Aydoğdu (2012), which contains 44 items, and has a Cronbach's Alpha reliability coefficient of .90.

Data Analysis

Data were analyzed using the SPSS statistical package programs. The participating pre-service teachers' level of awareness on environmental problems was analyzed with respect to gender and class/year by using the Mann

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Whitney U test. Data obtained from the students' answers to the scale items were analyzed in terms of percentage (%) and frequency (f).

RESULTS

The results of the Mann Whitney U test used for evaluating the effect of gender on the pre-service science teachers' level of awareness regarding environmental problems are provided in Table 1.

Table 1. Mann Whitney U test results concerning the pre-service science teachers' level of awareness on environmental problems according to gender.

Gender	N	Mean rank	Rank Sum	U	p
Female	92	73.58	6769.50	1556.500	0.029
Male	44	57.88	2546.50		

According to Table 1, female students had a higher level of awareness regarding environmental problems [U = 1556.500, p <0.05]. When the mean ranks were taken into consideration, it was determined that the female pre-service teachers had a better level of awareness regarding environmental problems than the male pre-service teachers.

The results of the Mann Whitney U test used for evaluating the effect of class/year on the pre-service science teachers' level of awareness regarding environmental problems are provided in Table 2.

Table 2. Mann Whitney U test results concerning the pre-service teachers' level of awareness on environmental problems according to gender.

Class/Year	N	Mean rank	Rank Sum	U	p
Third-Year	65	43.66	2838.00	693.000	0.000
Fourth-Year	71	91.24	6478.00		

According to Table 2, fourth-year students had a higher level of awareness regarding environmental problems [U = 693.000, p <0.001]. When the mean ranks were taken into consideration, it was determined that the fourth-year pre-service teachers had a better level of awareness regarding environmental problems than the third-year pre-service teachers.

The results concerning the percentage (%) and frequency (f) distributions of the answers provided by the pre-service science teachers to the scale items are provided in Table 3.

Table 3. The percentage (%) and frequency (f) values of the answers provided by the pre-service science teachers to the scale items.

Items	Class/ Year	Yes		No Idea		No	
		f	%	f	%	f	%
1. Air pollution, the greenhouse effect, global warming, climate change and the depletion of the ozone layer are the causes of very significant global problems in the present-day world.	**3**	**62**	**95.4**	3	4.6	-	-
	4	**71**	**100.0**	-	-	-	-
2. Solving environmental problems passes through increasing environmental awareness and education.	**3**	**62**	**95.4**	3	4.6	-	-
	4	**71**	**100.0**	-	-	-	-
3. As noise is a relative concept, it cannot be considered as a form of pollution.	**3**	6	9.2	11	16.9	**48**	**73.8**
	4	5	7.0	1	1.4	**65**	**91.5**
4. Biomass energy, hydroelectric energy, water energy and wind energy represent renewable energy sources.	**3**	**59**	**90.8**	6	9.2	-	-
	4	**68**	**95.8**	3	4.2	-	-
5. Environmental problems have existed since the dawn of history, and the ecological balance has always found a natural solution for them by itself.	**3**	**37**	**56.9**	9	13.8	19	29.2
	4	22	31.0	7	9.9	**42**	**59.2**
6. Chemical wastes and substances are broken down by microorganisms before they can cause any water pollution.	**3**	16	24.6	6	9.2	**43**	**66.2**
	4	3	4.2	1	1.4	**67**	**94.4**
7. The efforts of a single country is not sufficient for addressing and preventing environmental problems; all countries across the world must exhibit joint efforts for preventing environmental problems.	**3**	**65**	**100.0**	-	-	-	-
	4	-	-	5	7.0	**66**	**93.0**

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8.	The most important causes of air pollution is the use of fossil fuels and the exhaust gases emitted by cars.	**3**	**65**	**100.0**	-	-	-	-
		4	**71**	**100.0**	-	-	-	-
9.	The greenhouse effect is caused by gases formed through the burning of fossil fuels, which increase the amount of heat from solar radiation that is trapped within the atmosphere.	**3**	**65**	**100.0**	-	-	-	-
		4	**70**	**98.6**	1	1.4	-	-
10.	Some of the environmental problems in the present-day world are caused by natural events, such as floods and volcanic eruptions.	**3**	**45**	**69.2**	20	30.8	-	-
		4	**62**	**87.3**	9	12.7	-	-
11.	Air, water and soil are renewable and inexhaustible resources.	**3**	16	24.6	14	21.5	**35**	**53.8**
		4	7	9.9	2	2.8	**62**	**87.3**
12.	Noise pollution can be prevented through forestation and the increased use of mufflers and mass transportation.	**3**	**49**	**75.4**	16	24.6	-	-
		4	**69**	**97.2**	2	2.8	-	-
13.	Reducing CO_2 emissions will have significant effect in preventing the greenhouse effect and global warming	**3**	**44**	**67.7**	21	32.3	-	-
		4	**68**	**95.8**	3	4.2	-	-
14.	Increasing the use of natural gas and mass transportation will significantly reduce air pollution.	**3**	65	100.0	-	-	-	-
		4	**70**	**98.6**	1	1.4	-	-
15.	Owing to their extraordinary ability to adapt, human will eventually be able to adapt and live in polluted environments.	**3**	20	30.8	16	24.6	**29**	**44.6**
		4	10	14.1	3	4.2	**58**	**81.7**
16.	One of the environmental problems encountered in large cities in noise pollution, which is the cause of many of problems in urban settings.	**3**	**65**	**100.0**	-	-	-	-
		4	**68**	**95.8**	3	4.2	-	-
17.	To prevent acid rains, fossil fuels containing basic substances should be used instead.	**3**	**39**	**60.0**	26	40.0	-	-
		4	**40**	**56.3**	31	43.7	-	-
18.	Solid wastes are broken down by soil microorganisms; they consequently do not lead to any pollution.	**3**	9	13.8	2	3.1	**54**	**83.1**
		4	2	2.8	2	2.8	**67**	**94.4**
19.	The most important measures for the prevention of water pollution is the establishment of more waste water treatment facilities and the proper elimination of wastes.	**3**	**65**	**100.0**	-	-	-	-
		4	**70**	**98.6**	1	1.4	-	-
20.	One of the causes of the depletion of the ozone layer is the photochemical reactions of ozone triggered by solar radiation.	**3**	**53**	**81.5**	12	18.5	-	-
		4	**45**	**63.4**	26	36.6	-	-
21.	Nuclear weapons and reactors are the cause of radioactive radiation.	**3**	**62**	**95.4**	3	4.6	-	-
		4	**71**	**100.0**	-	-	-	-
22.	Global environmental problems is the main cause of the extinction of species across the world.	**3**	**46**	**70.8**	19	29.2	-	-
		4	**67**	**94.4**	4	5.6	-	-
23.	Sustainable development involves the transfer of existing resources to future generations.	**3**	**65**	**100.0**	-	-	-	-
		4	**63**	**88.7**	8	11.3	-	-
24.	Desertification, soil pollution and one-sided agricultural activities are prime causes of food scarcity in the present-day world.	**3**	**59**	**90.8**	6	9.2	-	-
		4	**69**	**97.2**	2	2.8	-	-
25.	Environmental impact assessment is an effective method for preventing environmental problems.	**3**	**55**	**84.6**	10	15.4	-	-
		4	**63**	**88.7**	8	11.3	-	-
26.	Indifference, negative attitudes and lack of education are important causes of environmental problems.	**3**	**62**	**95.4**	3	4.6	-	-
		4	**71**	**100.0**	-	-	-	-
27.	Environmental problems are issues of a global and cross-boundary nature.	**3**	**53**	**81.5**	9	13.8	3	4.6
		4	**69**	**97.2**	2	2.8	-	-
28.	Chlorofluorocarbon gases are the main cause of the depletion of the ozone layer.	**3**	**65**	**100.0**	-	-	-	-
		4	**65**	**91.5**	6	8.5	-	-

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29.	Owing to their natural characteristics, centers of tourism do not experience any significant environmental pollution.	**3**	-	-	9	13.8	**56**	**86.2**
		4	4	5.6	1	1.4	**66**	**93.0**
30.	Global warming will provide a solution for humanity's heating-related requirements; global warming is hence a positive development for humanity.	**3**	18	27.7	13	20.0	**34**	**52.3**
		4	5	7.0	3	4.2	**63**	**88.7**
31.	Water pollution leads to dramatic changes in flora and fauna, while also causing eutrophication and a decrease in species biodiversity.	**3**	**42**	**64.6**	23	35.4	-	-
		4	**69**	**97.2**	2	2.8	-	-
32.	Light pollution impedes astronomy research by causing an artificial brightness in the sky.	**3**	**44**	**67.7**	21	32.3	-	-
		4	**51**	**71.8**	20	28.2	-	-
33.	There is no cause-and-effect relationship between desertification and global warming.	**3**	15	23.1	7	10.8	**43**	**66.2**
		4	1	1.4	3	4.2	**67**	**94.4**
34.	Acid rains are only observed in inhabited areas with a high density of industrial facilities and organizations.	**3**	19	29.2	10	15.4	**36**	**55.4**
		4	18	25.4	7	9.9	**46**	**64.8**
35.	Recycling refers to the processing of certain products for reuse and reutilization.	**3**	30	46.2	**35**	**53.8**	-	-
		4	**46**	**64.8**	25	35.2	-	-
36.	Choosing and using agricultural practices suitable for the type of soil, and constructing set against the natural inclination of the terrain are effective means for combating soil erosion.	**3**	**53**	**81.5**	12	18.5	-	-
		4	**71**	**100.0**	-	-	-	-
37.	Present-day environmental problems are the products of developments in the 20th and 21st centuries.	**3**	62	**95.4**	3	4.6	-	-
		4	66	**93.0**	5	7.0	-	-
38.	Environmental problems require that individuals change their life-style and consumption habits.	**3**	6	9.2	9	13.8	**50**	**76.9**
		4	-	-	3	4.2	**68**	**95.8**
39.	Illuminate large cities and high skyscrapers with copious amounts of light is the indication of a developed society.	**3**	16	24.6	18	27.7	**31**	**47.7**
		4	7	9.9	9	12.7	**55**	**77.5**
40.	The greenhouse effect is a natural process necessary for maintaining the earth's temperature and ensuring the continuation of life on earth.	**3**	**50**	**76.9**	15	23.1	-	-
		4	**67**	**94.4**	4	5.6	-	-
41.	Radioactive pollution is caused by radiation emitted by radioactive elements in nature	**3**	**50**	**76.9**	10	15.4	5	7.7
		4	22	31.0	6	8.5	**43**	**60.6**
42.	Global warming, the greenhouse effect, climate change and the depletion of the ozone layer are all natural events occurring independently from environmental pollution, and as part of the earth's natural geological cycle.	**3**	24	36.9	10	15.4	**31**	**47.7**
		4	10	14.1	1	1.4	**60**	**84.5**
43.	The depletion of the ozone layer differs between the northern and southern hemispheres, and also between equatorial and polar regions.	**3**	**49**	**75.4**	16	24.6	-	-
		4	**58**	**81.7**	13	18.3	-	-
44.	Only countries which experience environmental problems are responsible for preventing and addressing them.	**3**	22	33.8	12	18.5	**31**	**47.7**
		4	11	15.5	1	1.4	**59**	**83.1**

According to Table 3; all or most of the pre-service science teachers expressed that air pollution, the greenhouse effect, global warming, climate change and ozone layer depletion are very significant global problems (95.4%, 100.0%), and that the most important causes of air pollution is the use of fossil fuels and the exhaust gases emitted by cars (100.0%, 100.0%). Most of the pre-service teachers also expressed that increasing the use of natural gas and mass transportation will help in significantly reducing air pollution (100.0%, 98.6%); that the greenhouse effect is caused by gases formed through the burning of fossil fuels, which increase the amount of heat from solar radiation that is trapped within the atmosphere (100.0%, 98.6%); and that reducing CO_2 emissions will have significant effect in preventing both the greenhouse effect and global warming (67.7%, 95.8%). The majority of the pre-service teachers similarly expressed that the greenhouse effect is a natural process necessary for maintaining the earth's temperature and ensuring the continuation of life on earth (76.9%, 94.4%); that global warming is not a solution for humanity's heating-related requirements, and that it is not, in this respect, a positive development for humanity (52.3%, 88.7%); and that there is a cause-and-effect relationship between desertification and global warming (66.2%, 94.4%). Most pre-service teachers also

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described that chlorofluorocarbon (CFC) gases are the main cause of the depletion of the ozone layer (%100.0, %91.5); that one of the causes of the depletion of the ozone layer is the photochemical reactions of ozone triggered by solar radiation (81.5%, 63.4%); and that the depletion of the ozone layer differs between the northern and southern hemispheres, and also between equatorial and polar regions (75.4%, 81.7%). The majority of pre-service teachers also thought that fossil fuels containing basic substances should be used to prevent acid rains (60.0%, 56.3%); and that acid rains are not solely observed in inhabited areas with a high density of industrial facilities and organizations (55.4%, 64.8%). Furthermore, many of the pre-service teachers expressed that global warming, the greenhouse effect, climate change and the depletion of the ozone layer are not natural events occurring independently from environmental pollution, and that they are not part of the earth's natural geological cycle (47.7%, 84.5%).

The pre-service science teachers also described that noise is not a relative concept, and it can hence be considered as a form of pollution (73.8%, 91.5%); that noise pollution can be prevented through forestation and the increased use of mufflers and mass transportation (75.4%, 97.2%); and that noise pollution is one of the environmental problems encountered in large cities, and that it is the cause of many other problems in urban settings (100.0%, 95.8%).

Most pre-service science teachers also expressed that biomass energy, hydroelectric energy, water energy and wind energy are renewable energy sources (90.8%, 95.8%); that air, water and soil are not renewable and inexhaustible resources (53.8%, 87.3%); and that nuclear weapons and reactors are the cause of radioactive radiation (95.4%, 100.0%). It was also determined that most third-year pre-service teachers considered radioactive pollution as being mainly caused by radiation emitted from radioactive elements in nature (76.9%), while most fourth-year pre-service teachers expressed the opposite view (60.6%).

The pre-service science teachers mainly described that chemical wastes and substances are broken down by microorganisms before they can cause any water pollution (66.2%, 94.4%); that solid wastes are not broken down by soil microorganisms, and they consequently lead to pollution (83.1%, 94.4%); and that the most important measures for the prevention of water pollution is the establishment of more waste water treatment facilities and the proper elimination of wastes (100.0%, 98.6%). Furthermore, many of the third-year pre-service teachers did not known that the term "recycling" refers to the processing of certain products for reuse and reutilization (53.8%), while most of the fourth-year pre-service teachers knew the meaning of recycling (64.8%). In addition, the majority of the teacher expressed knew that sustainable development involves the transfer of existing resources to future generations (100.0%, 88.7%).

Most pre-service science teachers also expressed that some of the present-day environmental problems in the world are caused by natural events, such as earthquakes floods and volcanic eruptions (69.2%, 87.3%); that desertification, soil pollution and one-sided agricultural activities are the prime causes of food scarcity in the present-day world (90.8%, 97.2%); that water pollution leads to dramatic changes in flora and fauna, while also causing eutrophication and a decrease in species biodiversity (64.6%, 97.2%); light pollution impedes astronomy research by causing an artificial brightness in the sky (67.7%, 71.8%); and that illuminating large cities and high skyscrapers with copious amounts of light is not an indication of a developed society (47.7%, 77.5%).

It was also observed that many pre-service science teachers considered that owing to their extraordinary ability to adapt, humans will eventually be able to adapt and live in polluted environments (44.6%, 81.7%); that global environmental problems cause the extinction of species (70.8%, 94.4%); that present-day environmental problems are the products of developments in the 20th and 21st centuries (95.4%, 93.0%); that environmental problems require that individual change their life-style and consumption habits (76.9%, 95.8%); and that environmental impact assessment is an effective method for preventing environmental problems (84.6%, 88.7%). In addition, many pre-service teachers expressed that choosing and using agricultural practices suitable for the type of soil and constructing set against the natural inclination of the terrain are effective means for combating soil erosion (81.5%, 100.0%), while disagreeing with the thought that owing to their natural characteristics, centers of tourism do not experience any significant environmental pollution (86.2%, 93.0%). It was observed that while most third-year pre-service teachers believed that environmental problems have existed since the dawn of history, and that the ecological balance has always found a natural solution for them (56.9%); most fourth-year pre-service teachers held the opposing view (59.2%).

Many of the pre-service teachers considered that solving environmental problems passes through increasing environmental awareness and education (95.4%, 100.0%); that indifference, negative attitudes and lack of education represent important causes of environmental problem (95.4%, 100.0%); that the responsibility for preventing and addressing environmental problems does not solely befall onto the countries in which environmental problem exist (47.7%, 83.1%); and that environmental problems are issues of a global and cross-boundary nature (81.5%, 97.2%). In addition, while most third-year pre-service teachers expressed that the efforts of single countries is not sufficient for addressing and preventing environmental problems, and that all countries across the world must exhibit joint efforts for preventing environmental problems (100.0%); most fourth-year pre-service teachers expressed the opposing view (93.0%).

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CONCLUSION

In this study, it was determined that, with respect to gender, female pre-service teachers showed a significantly higher level of awareness regarding environmental problems [U = 1556.500, p <0.001], while, with respect to class/year, fourth-year pre-service teachers significantly showed significantly higher levels of awareness regarding environmental problems [U = 693.000, p <0.05]. We believe that this difference was mainly due to the "Chemical Wastes and Environmental Pollution" course that fourth-year pre-service teachers attended during their fourth academic year's spring semester, which covers in detail the subject of environmental pollution. Based on the study results, we determined that pre-service science teachers were generally aware of the different types of environmental problems, the dynamics which lead to environmental problems, and the issues and negative developments stemming from environmental problems. In addition, we also determined that the pre-service teachers were generally aware that environmental problems represent global issues; that environmental education is important for raising individuals' knowledge and level of awareness concerning environmental problems; and that sustainable growth is very important for future generations.

Since humans represent the prime causative factor of environmental problems, the most important measure for their prevention is to increase individuals' level of knowledge and awareness regarding the environment. Therefore; increasing individuals' level of knowledge and awareness regarding the environmental and current environmental problems, ensuring that they become more sensitive towards environment-related subjects, and encouraging them to change their behaviors and attitudes that contribute to environmental pollution all represent essential prerequisites for effectively addressing and solving environmental problems. These prerequisites can only be achieved through an effective environmental education. Teachers have an important influence on the knowledge and attitudes of individuals, and hence assume a very important mission within society in this respect. Consequently, ensuring that pre-service teachers are sufficiently knowledgeable about the environment is vital for the raising of future generations who are environmentally-aware. For this reason; it is both necessary and important to include environment-related courses into the university curricula of pre-service teachers, and to further increase the environmental knowledge and awareness of these candidates through various educational activities.

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DEVELOPING A LANGUAGE TEST: CLASSIFYING EXAMINEES INTO CATEGORIES

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ABSTRACT
The objective of many language tests is to classify examinees into categories, e.g. with respect to the Common European Framework. The paper focuses on how to develop a test that maximizes the probability of correct classification for a pre-defined value of the cut-off score, i.e. the score which separates examinees into categories. This is a computationally complex problem difficult to solve by exact optimization methods, so metaheuristic algorithms may prove a better option here. Specifically, this paper explores the use of simulated annealing, adapted to the nature of the problem.

Keywords: language, educatin, examminees

INTRODUCTION

This paper focuses on the use of simulated annealing when developing a test whose aim is to classify examinees into categories according to their performance in the area being tested. A common example of such tests are language tests which classify examinees into the categories defined by the Common European Framework of Reference.

The Framework specifies six levels of language proficiency: A1, A2, B1, B2, C1 and C2. This paper deals with a specific situation where our aim is to classify examinees into only two categories: those who have reached the B2 level and or those who have not. However, the methods suggested below are applicable even when classifying examinees into more than two categories. First, let B2* be the category containing levels B2, C1 and C2, and let B1* be the category containing levels A1, A2, and B1. Let us assume that the test which is to be developed consists entirely of items with a single correct answer, each worth 1 point when answered correctly and 0 points when answered incorrectly.

In the context of language testing, we often use the principles of Measurement Decision Theory (MDT), which are explained in the next section. For now, it is sufficient to say that when a test consists of items whose difficulty estimates are known from prior testing (e.g. pilot testing), it is possible to use the principles of MDT to determine what score is necessary for an examinee to obtain in order to be classified as belonging to a particular category. The score value which separates one category from another is called the cut-off score. The methods to calculate the cut-off score after the test has been administered are fairly straightforward. The problem arises when the cut-off score is determined before the actual testing (e.g. when it needs to be kept constant across several test administrations) and the test must be developed accordingly. In addition, the test often needs to meet other requirements concerning its content (e.g. a specific number of items testing particular skills such as reading, listening etc.) or its statistical properties (e.g. having a satisfactory value of the mean item discrimination, i.e. the power to differentiate between respondents of different abilities). It is also often necessary to prepare several tests at the same time for different test administrations. It is very difficult to develop a test, or several tests, which would meet all the above-mentioned criteria, without a suitable algorithm. Thus, the aim of this paper is to design an algorithm which will enable us to choose such items from a pool of items with known estimates of difficulty for each category (B1*, B2*) and with known estimates of item discrimination, so that all the resulting tests meet the following criteria:

- no item is included in more than one test;
- the mean item discrimination in each test is greater than or equal to a certain minimum value;
- the number of items in each test corresponds to the test specification; should the test cover several domains (reading, listening etc.), the number of items testing each domain corresponds to the test specification;
- the cut-off score in each test is as close as possible to a certain pre-defined value.

MEASUREMENT DECISION THEORY

As the algorithm described below is based on the principles of Measurement Decision Theory (MDT), these will now be briefly explained. MDT was developed by Rudner (2009) and is based on the Bayes theorem, which can be mathematically formulated as follows:

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$$P(A|B) = \frac{P(B|A) \cdot P(A)}{P(B)},$$

where $P(A)$ and $P(B)$ are the probabilities of events A and B, $P(A|B)$ is the probability of A given that B is true and $P(B|A)$ is the probability of B given that A is true. In our case, A means that an examinee belongs to a particular category and B means that an examinee obtained a certain test score.

To calculate the probability that an examinee belongs to B1* or B2* if they have obtained a certain test score, we need the following information:

- the probability that a randomly chosen examinee belongs to B1* or B2*;
- the probability that an examinee obtains this test score if they belong to B1* or B2*.

To find out the former, all we need to know is the distribution of categories in the target population. Finding out the latter is substantially more complicated though, because the probability of obtaining a certain test score depends on the parameters of items in the test.

Let us assume the test contains k items. Let r_i be the mean item difficulty for B1* (i.e. the proportion of examinees belonging to B1* who can answer item i correctly) and let s_i be the mean item difficulty for B2* (i.e. the proportion of examinees belonging to B2* who can answer item i correctly). As each item is worth one point, r_i and s_i also denote the mean item score for B1* and B2* respectively. The mean test score is then the sum of mean item scores across all k items.

To find the test score variance, we need the covariance matrix of the items it contains. Let $\mathbf{\Sigma}_{B1*}$ and $\mathbf{\Sigma}_{B2*}$ be the item covariance matrices for B1* and B2* respectively. The diagonal elements of these matrices are the variances of the item scores, the off-diagonal elements are the covariances of the item scores between items. The variance of the score in item i can be calculated as $r_i(1 - r_i)$ for B1* and $s_i(1 - s_i)$ for B2*, because the answer to an item follows a Bernoulli distribution (1 = correct answer, 0 = incorrect answer). The test score variance is then calculated as $\mathbf{e}^T\mathbf{\Sigma}_{B1*}\mathbf{e}$ for B1* and $\mathbf{e}^T\mathbf{\Sigma}_{B2*}\mathbf{e}$ for B2*, where $\mathbf{e}$ denotes an all-ones vector with k elements.

Let us denote by μ_{B1*} and μ_{B2*} the expected value of the test score for B1* and B2* respectively. Accordingly, the test score variance shall be denoted by σ^2_{B1*} and σ^2_{B2*}. Let us assume that the test score in each category follows a normal distribution. Hence:

B1* test score $\sim N(\mu_{B1*}, \sigma^2_{B1*})$, where $\mu_{B1*} = \sum_{i=1}^{k} r_i$ and $\sigma^2_{B1*} = \mathbf{e}^T\mathbf{\Sigma}_{B1*}\mathbf{e}$;

B2* test score $\sim N(\mu_{B2*}, \sigma^2_{B2*})$, where $\mu_{B2*} = \sum_{i=1}^{k} s_i$ and $\sigma^2_{B2*} = \mathbf{e}^T\mathbf{\Sigma}_{B2*}\mathbf{e}$.

The probability that an examinee who belongs to B1* gets a particular test score is then equal to the value of the probability density function of the normal distribution with mean μ_{B1*} and variance σ^2_{B1*}; the same holds true for B2*. In order for a particular value of test score to be the cut-off score, both the categories must have an equal probability of obtaining it, which makes the probability equal to 0.5 in the case of two categories. Let h be the value of cut-off score. Hence,

$$P(B1^*|h) = \frac{d(h|B1^*) \cdot P(B1^*)}{d(h|B1^*) \cdot P(B1^*) + d(h|B2^*) \cdot P(B2^*)} = 0.5,$$

where

$P(B1^*|h)$ denotes the probability that an examinee belongs to B1* if the value of their test score is h;

$d(h|B1^*)$ denotes the value of the probability density function for the cut-off score h given that an examinee belongs to B1*, where the test score follows a normal distribution with mean μ_{B1*} and variance σ^2_{B1*};

$d(h|B2^*)$ denotes the value of the probability density function for the cut-off h score given that an examinee belongs to B2*, where the test score follows a normal distribution with mean μ_{B2*} and variance σ^2_{B2*};

$P(B1^*)$ denotes the probability that a randomly chosen examinee belongs to B1*;

$P(B2^*)$ denotes the probability that a randomly chosen examinee belongs to B2*.

The equation for $P(B2^*|h)$ is analogous.

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OPTIMIZATION MODEL

Let us now formulate a mathematical model for the above mentioned problem. Our goal is to choose such items from a pool of items with known estimates of difficulty for each category (B1*, B2*) and with known estimates of item discrimination,, so that the cut-off score in all the resulting tests is as close as possible to a certain pre-defined value and at the same time the tests meet other requirements concerning their content and other statistical properties.

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Let us assume that we need to develop two tests, each testing k different domains (reading, listening etc.), and altogether we have n items to choose from. The content specification of both tests is equal, i.e. every test should contain the same number of items in each of the domains being tested, and these are also equivalent in both tests. Let us also assume that we want some of those items to be included in the test in any case, for example for their good content. Last but not least, we want the cut-off scores in the two tests to be equal to h_1 and h_2 respectively.

The model includes three constraints:

(1) No item is included in more than one test.
(2) The number of items in each test must correspond to the test specification, i.e. each test must contain a specific number of items in each of the domains being tested.
(3) The mean item discrimination of each test must be greater than or equal to a certain value.

Let x_i, y_i be binary variables, where $x_i = 1$ if item i is included in the first test, $y_i = 1$ if item i is included in the second test.

Parameters

r_i = mean score in item i for B1*;
s_i = mean score in item i for B2*;
$\mathbf{\Sigma}_{B1^*}$ = item covariance matrix for B1*;
$\mathbf{\Sigma}_{B2^*}$ = item covariance matrix for B2*;
q_i = discrimination parameter for item i;
t_{ij} = 1, if item i tests domain j, 0 otherwise, where $j = 1…k$;
h_1 = pre-defined cut-off score in the first test;
h_2 = pre-defined cut-off score in the second test;
Q = minimum mean item discrimination in each test;
Tj = the number of items testing domain j which should be included in each test.

Objective function

minimize

$z = [P(B1^*|h_1) - 0.5]^2 + [P(B1^*|h_2) - 0.5]^2$, i.e.

$$z = \left[\frac{d(h_1|B1^*)\cdot P(B1^*)}{d(h_1|B1^*)\cdot P(B1^*) + d(h_1|B2^*)\cdot P(B2^*)} - 0.5\right]^2 + \left[\frac{d(h_2|B1^*)\cdot P(B1^*)}{d(h_2|B1^*)\cdot P(B1^*) + d(h_2|B2^*)\cdot P(B2^*)} - 0.5\right]^2$$

where

$d(h_1|B1^*)$ denotes the value of the probability density function of the normal distribution with mean $\sum_{i=1}^{n} x_i r_i$ and variance $\mathbf{x}^T\mathbf{\Sigma}_{B1^*}\mathbf{x}$ for h_1;

$d(h_2|B1^*)$ denotes the value of the probability density function of the normal distribution with mean $\sum_{i=1}^{n} y_i r_i$ and the variance $\mathbf{y}^T\mathbf{\Sigma}_{B1^*}\mathbf{y}$ for h_2;

$d(h_1|B2^*)$ denotes the value of the probability density function of the normal distribution with mean $\sum_{i=1}^{n} x_i s_i$ and variance $\mathbf{x}^T\mathbf{\Sigma}_{B2^*}\mathbf{x}$ for h_1;

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$d(h_2|B2^*)$ denotes the value of the probability density function of the normal distribution with mean $\sum_{i=1}^{n} y_i s_i$ and variance $\mathbf{y}^T \boldsymbol{\Sigma}_{B2^*} \mathbf{y}$ for h_2.

In order for h_1 and h_2 to be the cut-off scores, an examinee obtaining them must have a 0.5 probability of belonging to B1* when taking the corresponding test. Therefore, our goal is to choose such items for both the tests so as to minimize the difference between the probability that an examinee belongs B1* when obtaining these scores, and 0.5. Specifically, the objective function is formulated as the sum of squared differences.

Subject to

(1) $x_i + y_i \leq 1 \quad \forall i = 1 \ldots n;$

(2) $\sum_{i=1}^{n} t_{ij} x_i = T_j \quad \forall j = 1 \ldots k;$

$\sum_{i=1}^{n} t_{ij} y_i = T_j \quad \forall j = 1 \ldots k;$

(3) $\sum_{i=1}^{n} q_i x_i \geq Q;$

$\sum_{i=1}^{n} q_i y_i \geq Q;$

$x_i \in \{0,1\}$	if item i is included in the first test, then $x_i = 1$, otherwise $x_i = 0$	$\forall i = 1 \ldots n;$
$x_i = 1$	for items which have to be included in the first test	$\forall i = 1 \ldots n;$
$y_i \in \{0,1\}$	if item i is included in the second test, then $y_i = 1$, otherwise $y_i = 0$	$\forall i = 1 \ldots n;$
$y_i = 1$	for items which have to be included in the second test	$\forall i = 1 \ldots n;$

SOLUTION

We may consider using some common optimization methods to solve this problem, e.g. a modification of the branch and bound algorithm (Chinneck, 2004), but the problem is computationally complex due to the nonlinearity of the objective function and the presence of binary variables; nonlinear optimization problems with binary variables are known to be NP-hard even if the objective function is quadratic and constrains linear (Murray and Kien-Ming, 2008). Furthermore, from the point of view of the test developer, it might be desirable to find not only one optimal solution, but several satisfactory solutions, from which the developer could choose the best one according to other test properties such as their content. That is why metaheuristic algorithms may prove a better option here. Specifically, we used simulated annealing to solve the problem.

Simulated annealing is described in more depth in Bertismas and Tsitsiklis, (1993). Its name and inspiration comes from annealing in metallurgy. First, we define four input parameters: initial temperature $T > 0$, cooling rate s belonging to the interval (0, 1), number of neighbour solutions checked in each iteration h and total number of iterations N.

Let x_0 be the initial solution, which meets all the constraints specified above, and let x^* be the best solution found by the algorithm. Each solution x is a matrix with two columns, where each column is a binary vector indicating which items are included in the corresponding test. The value of 1 in row i and column j means that item i is included in test j. Let $f(x)$ denote the value of the objective function for x.

The main steps of the algorithm, modified with respect to the nature of our problem, are as follows.

Initialize (T, $x = x_0$, $x^* = x_0$)
for $i = 1$ to N
  for $j = 1$ to h
    Generate a neighbouring solution x' by replacing one item in one of the tests by another. Should this item be included in the other test as well, replace it by the item removed from the first test. Otherwise, the other test remains unchanged.

    if the new solution meets all the constraints then
      if $f(x') < f(x)$ **then** $x = x'$, $x^* = x'$
      else if $e^{-\Delta/T} >$ random (0,1), where $\Delta = f(x') - f(x)$, **then** $x = x'$
  $T = T \cdot s$

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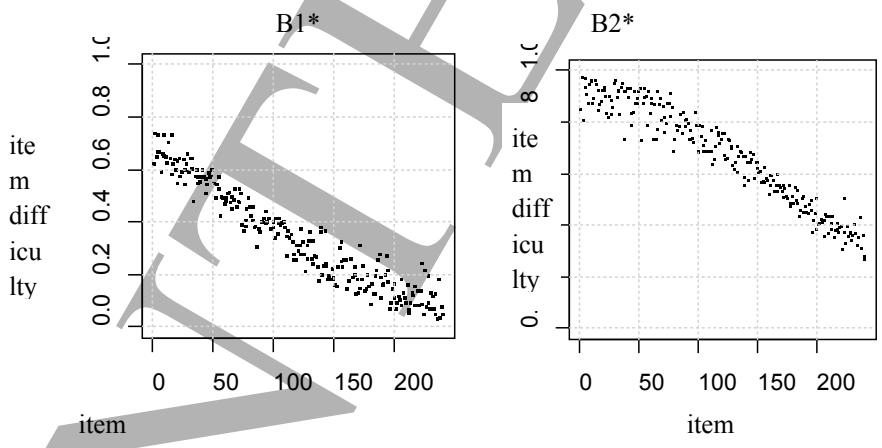
RESULTS

Let us now verify the suitability of the method described above. Our aim will be to develop two tests, with 60 items each, which should enable us to decide whether an examinee has reached at least the B2 level according to the Framework. Let us suppose that 75 percent of people in the target population belong to B1* and 25 percent of people belong to B2*. The cut-off score in the first test is set to h_1 points and the cut-off score in the second test is set to h_2 points where $h_1 = h_2$ are all integer values in the interval (28, 42). So the optimization model formulated above will be solved for 15 different values of pre-defined cut-off scores, while the data and the other input parameters of the model will remain unchanged.

Both the tests also need to comply with the following specification: each must contain 20 items testing reading comprehension and chosen by the test developer prior to the use of the algorithm, 10 items testing grammar, 10 items testing phrases for conversation, 10 items testing listening skills and 10 items testing vocabulary, i.e. 5 different domains. This specification reflects the fact that most language tests contain several domains, some of them usually similar to the ones chosen in this case, even though the actual specification varies from test to test. As for the last four domains (grammar, conversation, listening, vocabulary), the items will be chosen by the algorithm from an item pool containing 50 items from each domain. To sum up, the aim is to choose 40 items from an item pool consisting of 200 items in such a way that when combined with the 20 items chosen by the test developer beforehand we get two tests satisfying the following conditions:

- no item is included in more than one test;
- the mean item discrimination in each test is greater than or equal to 0.45;
- the number of items testing each domain corresponds to the test specification;
- the cut-off score in the first and second is as close as possible to h_1 and h_2 respectively.

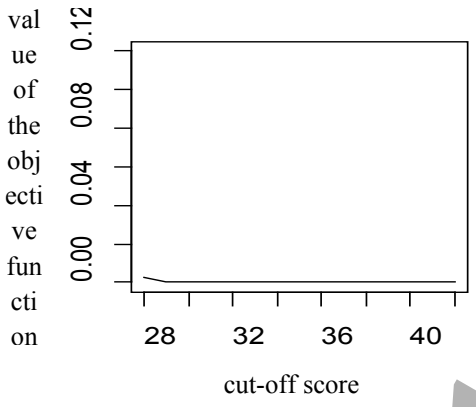
The data used during the verification process were obtained as follows. First, we randomly generated the parameters of item difficulty and item discrimination for the required number of items. Then we generated a matrix containing the answers of 200 respondents from B1* and 200 respondents from B2* to those items and calculated the estimates of item difficulty, item discrimination and item covariance matrices. The resulting sample item difficulties for each category are depicted below, mean sample item discrimination is equal to 0.57 (in reality, there are usually some problematic items with low or negative discrimination, but we will not consider those now).



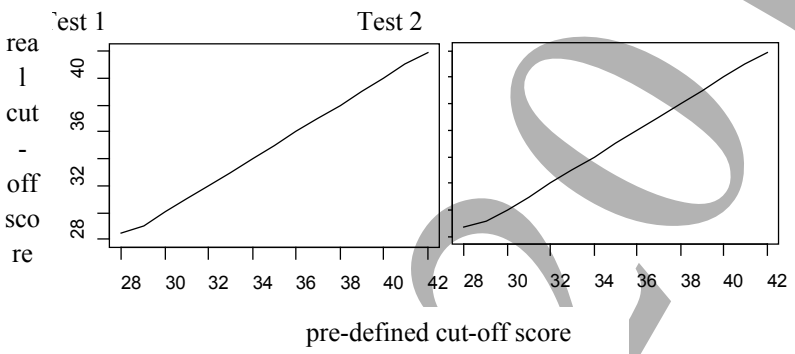
Graph 1: Estimated item difficulties for item used in the simulation

The effectiveness of the algorithm depends on the choice of the input parameters, which are usually a compromise between the effort to find the best solution and to find a good solution in a reasonably short time. The input parameters used in this case were: $T = 100$, $s = 0.8$, $h = 10$, $N = 100$. We replicated the process 10 times for each value of the pre-defined cut-off score. The mean values of the objective functions and the mean values of the corresponding cut-off scores of the best solutions are depicted on graph 2 and 3 respectively. We can see that the algorithm found a satisfactory solution for all the pre-defined cut-off score values (for the values from 30 to 41, the resulting cut-off score differed from the pre-defined value by less than 0.1 points).

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Graph 2: Mean values of the objective function



Graph 3: Mean values of the cut-off score of the best solution

CONCLUSIONS

The paper focused on the development of tests whose aim is to classify examinees into different categories. In this context, we often use the principles of Measurement Decision Theory, so these were first briefly explained. The aim of this paper was to find a way to maximize the probability of correct classification for pre-defined values of the cut-off score, i.e. the score which separates examinees into different categories. This was formulated as a nonlinear programming problem with binary variables. Such problems are difficult to solve by common optimization algorithms, as they are computationally very complex, so simulated annealing was used instead. This algorithm enabled us to find a satisfactory solution for all the pre-defined values of the cut-off score while respecting other requirements often placed on tests concerning their content and other statistical properties.

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DEVELOPING COMPETENCES FOR THE WORLD OF WORK – GOOD PRACTICES IN APPRENTICESHIP IN EUROPEAN COUNTRIES

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Globalization of the world of work, technological challenges and demographic change require all individuals to gain new knowledge, competences and skills, in new ways throughout their lives. For a young person, is essential to get a compresive range of education as a mix of specific knowledge, competences and skills, alongside with right information about labour market trends and oportunities.

In this context, apprenticeship opens up new perspectives for individuals developping a sucessfull career, and assures a highly qualified and adaptable workforce. In the center ofapprenticeship is the principle of dual-system based on combination of education in schools with training in company i.e. offering the real context and practical possibilities to apply the theoretical knowledge. It have been demonstrated that training in dual-system has many advantages for individuals, for companies and for labor market perspectives.

In this article, we intend to learn from best practices, and select the practice of German system for vocational training, in order to identify the more relevant solutions and elements for transferring. For facilitating comparative analyze, the good practice exemple is presented under a structure that include: a brief description of the good practice and why is it worthwhile to be considered a good practice; the target group and requirements; the theoretical/practical approach; the competences achieved; and the opportunities for transferability in other national frameworks. As a result, we extract the best elements to transferr them in vocational education and training in Romania.

Doing so, apprenticeship contributes to denveloping a skilled workforce responding to labor market needs, also with improving the quality and performance of education and training systems.

Keywords: apprenticeship , vocational education and training, best practices

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GENERATING HIGHER-ORDER THINKING SKILLS IN ISLAMIC EDUCATION THROUGH INFORMATION COMMUNICATION TECHNOLOGY (ICT)

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ABSTRACT
Technological advancement leaves a great impact on today's education system. The impact of the development in information communication technology (ICT) has brought changes in teaching and learning. This transformation sees the change from the use of conventional method of using chalk and board to the use of ICT like computers and the Internet. Teaching approach based on the latest technology is applied in order to increase the nation's level of education to be not only on the same level as the developed nations but is also world class. This library research is meant to find out whether teaching and learning (T&L) using ICT can give an impact on the students that is in increasing their higher-order thinking skills in Islamic Education. Active learning environment using ICT enables the students to access information more widely, to be more motivated to explore and collaborate with the real-life situations in addition to sharing ideas and creativity. Findings of past researches indicate that by using ICT in T&L it can generate critical and creative thinking, problem solving and communication skills. A careful preparation, complete facilities and access as well as ICT skills can lead to a more effective use of ICT in T&L.

INTRODUCTION

The rapid development in information communication technology (ICT) brings changes in teaching and learning (T&L). The advancement of technology has helped teachers in their teaching and learning process in the classroom. Compared to the conventional methods, this method of using the latest technology is found to be more interesting. ICT-intergrated teaching encourages students to think actively in order to build understanding. This approach increases students' interest and motivation in giving response in the learning process.

ICT is made up of diverse forms of technology used to store, dissiminate, build, broadcast and exchange information. Instruments like computers, laptops, mobile phones and various software normally used in T&L help transfer teaching content and achieve the intended objectives. The technology that is used in teaching facilitates the teaching and learning process and expedites students' understanding and generates students' thinking ability.

Higher-order thinking skills (HOTS) are also given the emphasis in the education system shift besides the use of ICT. HOTS is the continuation of critical and creative thinking skills (CCTS) that focuses on values, analysis, exploration and innovation. The implementation of HOTS in the classroom is carried out using various T&L startegies and methods like thinking instruments, high level thinking and enquiries. This will help students generate their thinking in order to make decisions, solve problems, be creative, to innovate and also to create. The use of ICT in T&L is seen as one of the ways that is capable of helping students enhance their thinking ability.

Activities of recalling information, performing tasks and solving simple problems are low level thinking that do not fulfill the needs of the generation that lives in this era of globalization. To realize the objective of increasing students' level of thinking to achieve higher-order thinking, T&L startegies of using ICT have to be made diverse and the scope widen. In addition, the critical skills needed, going into the 21st century, are identified among others as skills that involve communication, collaboration, problem solving, information communication technology literacy as well as creativity and innovation. Realizing this fact, integrating ICT in

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T&L is seen as an effort to deal with future challenges. Besides it can also be used to persuade the students to be actively involved in the learning activities.

In relation to that, the present T&L approach has to be fresh and exciting in order to ensure we can produce the generation of khalifah of the future. Islamic education is the core subject that can produce servants dan caliphs who possess great character and are able to carry the responsibility to improve him/herself, the society, religion and the country. Students do not use HOTS in Islamic Education just for answering exam questions but also to solve problems faced by Muslims in their daily life. This skill encourages students to conquer knowledge, gain understanding, apply religious practices in daily life and also disseminate knowledge in order to fulfill the responsibility as a Muslim.

ICT-BASED LEARNING IN ISLAMIC EDUCATION

The use of ICT is utilized fully in order to increase the quality of learning and now it becomes one of the main focus in Malaysia Education Blueprint (MEB) 2013-2025 in its 7th shift. ICT use has to be maximize in order to broaden the access and provide high quality teaching for all students irrespective of geographical areas (MOE, 2013) on par with the developed nations and is also world class. The integration of technology in education has the potential to optimize the effectiveness of T&L process by shifting from the conventional methods to the modern ones (Karimah, 2004). According to Norasmahani, Khadijah & Shahlan (2014), T&L transformation using technology has grown from conventional teaching to e-learning, d-learning and now m-learning in line with the rapid technological development and the world without borders.

T&L in Islamic Education trains the students to think and encourages them acquire vast knowledge, possess exemplary character, be ethical and intelligent, and are able to use ICT effectively (Islamic Education Curriculum Section, 2002). This is in line with Zuliana (2001) who supports Al-Qtaibi's (1997) view that says Muslim teachers should be encouraged to carry out T&L using creative and innovative approaches which are suitable with the needs and situations of the society. However, according to Siti Fatimah & Ab. Halim (2010) Islamic Education teachers are still not skillful in using ICT in the T&L process. Islamic Education teachers should grab the opportunity to master the latest technology so that their T&L will become more innovative, interactive and effective, and eventually generate higher-order thinking among their students.

The learning outcomes of using ICT have indicated improvements in students' intellectual skills, cognitive strategies, problem solving, oral information, motor skills and attitude. ICT-based T&L includes a wide spectrum of teaching objectives and utilizes interactive approaches to ensure that teaching is conducted by the teacher and this enables the teacher to get immediate response from the students. Teacher's role is only as a facilitator and not the main source of reference (Aliff et. al, 2014). In addition to that, self-learning in the T&L of Islamic Education makes it possible for the students to access and obtain the information on their own by utilizing search engines like *Google* and *Yahoo.* Students can surf website that offer Islamic knowledge contents and among the popular ones are for example Al-Islam.com, IslamiCity, Islamweb. Net, e-zakat dan Talk Islam (Md. Yusuf & Maimun, 2009).

There are several computer applications for Islamic Education available which are meant for tutorials, exercises and practice, simulations, problem solving, games and tools using various types of software for learning about akhlaq, du'as (supplications) and daily practices, al-Quran, Islamic values, Islamic Education (KAFA), stories about the prophets and solah (Md. Ishak, 2010). Furthermore, learning strategies which are active, flexible, reflective and independent are carried out along side collaborative and cooperative approach through discussions in electronic groups (*e-group*), *blog*, *facebook* dan *WebQuest* (Md. Yusuf & Maimun, 2009).

In addition to that, T&L of Islamic Education using computers as research and administration tools, media dan sources for T&L (Zaradi & Rozita, 2003) and also as the supporting material can encourage the students to respond actively while T&L process is taking place. According to Baharudin & Nik Rahimi (2008) the use of multimedia will give a positive impact on T&L activities through multimedia and 3D presentations. This agrees with the the research findings of the study conducted by Mohd Jasmy et.al (2014) that finds out even Islamic education teacher themselves see the importance of the use of ICT in ensuring the effectiveness of their T&L.

However, it cannot be denied that ICT too has its disadvantages like the proliferation of cyber crimes, negative influence, porn site, time wasting and even as a threat to peace and harmony. Nevertheless, Hassan Langgulung (1991) is of the opinion that the use of ICT in Islamic Education has to be looked at from a positive perspective that is in the context of the relationship as individuals and as an ummah. In relation to that,

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Ab Ghani and Nor Hashimi (1997) recommends Islamic education teacher to make full use of the advantages of ICT in education and this includes input ability, projection, copying, retrieving, connection, simulation and animation in order to achieve maximum effectiveness of T&L.

The use of ICT plays its role as part of the effort to achieve the objective of Islamic Education system that is to educate and develop individuals who have faith and taqwa in Allah swt (Wan Khairudin & Ab. Halim, 2008). Furthermore, according to Tajul Ariffin (1993) the use if ICT will influence the development of Islamic Education in broadening the scope of knowledge paradigm and creating the unity between Islamic dan modern knowledge. Islamic knowledge can be used to form World Islamic education network in order to spread the concept of tawhid in the effort to further develop Islamic Education. Thus, T&L in Islamic Education will become more effective especially in increasing students' understanding and skills (Latifah et.al, 2010) besides increasing their interest and motivation to be more responsive in the learning process.

HIGHER-ORDER THINKING SKILLS IN THE 21 CENTURY

The present education aspiration is to produce students who posesss ability in all aspects including leadership, spiritual, physical, intellectual, emotional dan sosial. Leadership skills, multilingualism, national identity, ethics and spirituality as well as the ability to use high thinking skills can mould the type of students who can attain self-wellbeing, fulfill the needs of the society and the country, and also capable of competing globally.

Higher-order thinking that is expected is the type of thinking that can produce students who are capable of thinking creatively, critically and who are also innovative, able to solve problems and can make wise decisions. Therefore, the Ministry of Education Malaysia (MOE) (2013) defines HOTS as the ability to apply knowledge, understanding, skills and and values in reasoning and reflecting in addition to solving problems, making decisions and producing innovations and other new things.

HOTS is an interpretation of the cognitive domain of Bloom's taxonomy which was revised by Anderson (2001). Four out of the six cognitive levels are HOTS levels which include application, analysis, evaluation and innovation (Anderson & Krathwohl, 2001). Innovation is the highest level in high level of thinking while knowledge and understanding belong to the low level of thinking. Application meanwhile represents both high and low levels of thinking (Curriculum Development Section, 2014).

HOTS in the context of T&L is a type of critical thinking that analyzes and interprets something from the real-life situations and is out of the teaching content. This kind of thinking activities refers to something that is going to be implemented according to the Islamic principles based on the necessity that is related to the teaching content discussed in the T&L of Islamic Education. The need to think continuously is emphasized in the Quran and Hadith. Only with the sharpness of mind that one has the advantage to solve any issue (Shahrin & Azman, 2003). This is because the mind is the greatest gift that Allah has given to mankind and it enables man to think, reflect, understand and learn about Allah's creations and also to make distinctions between what is good and what is bad.

The ability of the mind to understand knowledge, study and solve problems as well as to make decisions is in itself a thinking process (Shahrin & Azman, 2003). This process is formed in order to increase students' thinking ability to achieve a higher level where they are able to apply knowledge, skills and values and also to analyze information in order to make considerations and decisions. Besides that, students are able to generate ideas, products and methods that are creative and innovative in fulfilling the more complex needs of life in the 21st century.

IMPLEMENTATION OF HOTS THROUGH ICT-BASED LEARNING

The application of suitable theories, strategies and approaches of T&L based on ICT can ensure the learning objectives are met besides honing the HOTS. Unesco (2002) has outlined the importance of ICT as influencing the competency of individuals in terms of critical thinking, decision making, working in a team, dynamic management and effective communication. Technology-integrated T&L can assist students develop higher-order thinking (Siti Noridah, 2012; Rosseni et.al, 2010; McMohon, 2007).

In addition to that, according to Churhes (2008), Lorin Anderson, who is the student of Bloom, has adjusted the learning of the 21st century students with the implementation of the use of ICT. The knowledge aspect is identified when students do their tasks by searching for information using the search engine. Students understand the information when they do the Boolean search. The level of application is achieved when students can use the computer application. Meanwhile the level of analysis can be performed by the students who make document link or obtain references and supporting material. The students evaluate when they voice

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their opinions in the social media like *blog*, *facebook*, *twitter*, *telegram* and *whatsapp.* The students will reach high level when they produce programs or documents using ICT.

Teachers also recognize the viability of technological applications as the means to apply HOTS. The utilization of these applications makes it necessary for teachers to change the techniques of preparing questions, make activities and tasks more challenging and challenge the mind of the students in order to increase their potential and the thinking ability. Teachers will help students to think creatively, solve problems and make decisions by teaching them cognitive strategies to make them competitive and capable of mastering the skills. Studies indicate that problem solving activities, brainstorming and discussions of questions can generate students' HOTS in T&L (Siti Noridah, 2012).

Based on the constructivism theory, active learning encourages students to build new concepts or knowledge and solve problems using the existing knowledge and the knowledge they have just acquired (Curriculum Development Center, 2001). This theory clearly supports the use of ICT in T&L as part of student-centered learning that allows active response to happen when students are given the freedom to carry out learning activities. Aliff et.al (2014) also explains that students will use higher-order thinking to interpret and integrate new information with the existing one in order to produce innovation and to solve problems.

Teachers always use technology as part of their teaching aids for instance radio, television, projector, compact disc/DVD, computer and the Internet. The use of multimedia, CD, the Internet, e-mail, web page, all sorts of software and prototypes that can stimulate the mind are used by teachers in their T&L. Strategies of using these materials assist students' mental growth and intellectual capability in line with the Curriculum Development Section (CDS) (2014) suggestion that teachers should use ICT to help students increase understanding, generate ideas and perform high level thinking. Besides that, students' motivation and interest will increase too because they can access, analyze, sort and share information, and also they can complete assignments on their own. This can enhance their creative and innovative thinking capability, problem solving and communication skills.

Creative and Innovative Thinking Skills

Thinking skills are a skill set that is developed in line with the knowledge aspect as well as values in all subjects. Creative thinking is the ability to create something new. This type of thinking will grow and become what is called out-of-the-box thinking that heads toward a much wider prospect and it involves various elements that often times will lead to great ideas and creative decisions. The involvement of students and computers refers to the three elements which are subject content, thinking skills and computer savviness. Siti Noridah (2012) supports Muir's (1994) view that says technology is a tool that helps students think creatively and critically.

Md. Ishak (2010) agrees with Edward de Bono who contends that thinking is a skill to operate intelligence potential. Thinking is a mental activity to solve problems using the existing knowledge in order to understand, make decisions, plan, act on and solve problems and all these have the potential to be communicated. The elements of creative and critical thinking can be included during information presentation and learning activities in the software that has been developed. This skill can encourage students make innovations by blending the analyzed findings and then share them with others.

In addition to that, the use of J-QAF module software called Bestari Solat (Smart Solah) model that integrates several dynamic elements like pictures, animation and sounds increase students' interest and help them understand what they learn (Md. Ishak, 2010). The combination of several media in learning can motivate students use the 'preferred' senses to absorb knowledge and eventually generate thinking skills. Students are able to appreciate religious practices through the combined elements and from this they can relate it to the reality of the day-to-day life of a Muslim.

According to Siti Fatimah & Saemah (2008) the choice of materials taken from the website to be used in T&L needs to be analyzed using critical thinking in order to ensure clarity, accuracy, detail adequacy, relevancy, content-depth and in addition to that it shoud also be logic, all-encompassing, significant and fair. Besides that, online learning activities require students to use high-order cognitive skills in order to search for information, solve problems and find rational answers. Furthermore, the students can put together the information and the solution and apply it in the real-life situation.

Web-based T&L also helps students build confidence and develop certain skills. According to Kosakowski (1998), web-based learning can produce students who are critical and analytical. This skill develops from self-exploration for information through the web and from this the students will form their understanding from

their own findings that they discovered in the web about a certain topic that they have learned (Norliza et.al, 2013). The students' minds will be more open and the knowledge they obtain is more meaningful when they are able to create and build knowledge on their own (Asniza and Zaidatun, 2010). Creative thinking that has been developed encourages students to create dan produce innovations for the benefit of the society.

Problem Solving Skills

Problem solving is defined as skills in critical thinking and/ or logic that enables an individual to achieve solution to a personal conflict which the individual has never been able to achieve before. This agrees with the CDS (2014) that explains Stein & Lane's (1996) view which states that thinking ability, reasoning and problem solving must start from performing complex, high-order cognitive tasks, learning that cut across curriculum dan finding solutions to real-life problems.

Problem solving skills can be acquired by utilizing problem solving applications, simulation of real-life situations and fun, entertaining games. ICT applications can give students the opportunity to solve an assortment of problems that the students might have not come across before which are related to the real-life situations (Paul et al. 2006). Solution that goes through the deduction process, synthesis dan logic application is needed because every solution is different from one person to another due to the methods used, and also due to the situation and environment that are different . Furthermore, the main features of problem solving is to stimulate analytical thinking because original thinking is needed in order to solve problems.

Besides that, this skill can be used to boost self-confidence, create awareness of the self, increase knowledge, add experience, decide and fortify actions to be taken in order to solve problems. Students can also enhance their analyzing and decision making skills, and learn to be more appreciative of changes that happen and adapt themselves accordingly. The use of ICT is an opprtunity for self-learning through exploration of diverse disciplines of knowledge. Students can also access Islamic education references and material easier and faster (Kamarul Azmi & Ab. Halim, 2007). This self-learning material gives freedom to students to decide the direction and take control of their learning. It gives them the encouragement to make wiser decisions and thus provides the expected/ intended respose.

Students are able to solve problems given to them and work together as a group in cooperative learning using ICT applications (Wan Hasmah & Nur Munirah, 2013). Simulation activities in Islamic Education can enhance students' problem solving skills and encourage high level thinking. These skills can help students face problems that can occur in their daily life. Evaluation and analysis are made in order to come up with the best solution that is based on the Syariah.

Communication Skills

Communication skills can be enhanced through T&L that uses ICT when the interaction that happens generates verbal and non-verbal communication skills. Khadijah et al. (2014) states that the ICT applications in T&L creates communication between students, students and teachers or teachers with their teaching material, and also between teachers. Communication between teachers or students with the parties that are involved in learning also occurs. As an example, collaborative learning encourages cooperation between students and develops communication skills through questions, references and feedback.

Mohd Nasri's (2010) study shows that multimedia software development for 'Jawi j-Qaf year one remedial class model: Single letters' that applies cooperative learning in groups has managed to encourage discussions, cultivate positive interactions and cooperation between students and ultimately generate higher-order thinking. According to Azliza Awang (2007) this kind of T&L is able to attract the attention of the students through the use of graphics and multimedia elements that can make the activities more effective, interesting and easy to understand. Cooperative learning based on situations, projects, problems and discussions gives opportunities to students to search for information, gather materials, communicate and evaluate the outcomes (Aliff et al. 2014) through challenging tasks. This learning process can increase the level of students' motivation (Siti Fatimah, 2010; Norsiati, 2008) and give the opportunity to the students to learn according to their own ability (Rahmad & Shuki 2009; Kamarul Azmi & Ab. Halim 2007).

Besides that, the use of the Internet in T&L can stimulate and encourage students to take part in online discussions unlike conventional learning. Images, graphics, texts and sounds make the students want to be involved in interactive learning activities throughout the T&L session. According to Zuliana (2001) the use of the Internet in education as the material for T&L or additional references for teachers and students is a viable approach as it can be accessed everywhere, fast, current, and the scope is worldwide . In addition to that, through the Internet the students can indirectly communicate with field experts. When the students'

communication becomes more expansive and their motivation increases (Md. Yusof and Maimun, 2009) it encourages active participation that is capable of increasing understanding and thinking.

CONCLUSION

The aim of T&L in Islamic Education is to produce individuals who have strong faith in God, possess exemplary character and amiable personality, and have strong moral integrity. These students are able to contribute to their own wellbeing and also the society, religion and nation. The fast changing globalized world makes the use of ICT in the T&L of Islamic Education even more significant. It acts as a means to integrate Islamic knowledge with the modern knowledge in order to help students deal with the challenges in the era of the borderless world. It also can generate higher-order thinking through the enhancement of creative and innovative thinking, problem solving and communication skills. These skills can build self-confidence and sharpness of the mind in order to produce excellent *khalifatullah*.

However, an effective implementation of HOTS using ICT in the T&L of Islamic Education requires careful planning in all aspects from the technical side to the facilities and applications to be used according to the needs and suitability of the target group. Complete equipment like computers and reliable internet service ensures that the T&L session will run smoothly and achieve its objectives. Other than that, computer savviness among teachers and students will ensure the effectiveness of the T&L. Software development skills are also important to ensure the application produced can stimulate the minds of the students to be able to perform higher-order thinking.

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DEVELOPING SOCIAL SKILLS OF PRESCHOOL CHILDREN THROUGH PLAY

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The aim of this study is to investigate effect of the play on the social skills of 48-66 months old children. The study group is composed a total of 30 children, attending a preschool affiliated to Ministry of Family and Social Policies in Ankara in 2014-2015 academic year. Data was collected with Preschool and Kindergarten Behaviours Scales (PKBS-2) which was also developed by Merrell in 1994, demographic information form and semi-structured interview questionnaires which was also developed by researcher. In the study, researchers planned play activities aimed at improving social skills of children and, activities were performed to children by teacher for 45 minutes of a day for 6 weeks. Analysis of data is continuing.

Keywords: play, social skills, early childhood education, child, preschool

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DEVELOPING WITH RESIDUAL PRACTICE IN EFL CLASSROOMS

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ABSTRACT
This article explores the concept of residual practice as a means of understanding the importance of daily experience on classroom management. The suggested theory can adequately illuminate the nature and process of learning while teaching in classrooms. This article aims to provide residual practice as a comprehensive framework for evaluating the impact of daily experience on classroom management. Residual practice is a voluntary, collaborative process in which a teacher and two professional colleagues explore and reflect on learning and teaching practice. Specifically, the suggested model which emphasizes the dialectic process with a teacher and two professional colleagues represents that core features of effective classroom management is based on residual practice which requires the teacher and two professional colleagues as feedback receiver and provider. In this study the designed model was implemented and the semi structured interviews were given to five EFL teachers who taught in multilingual classrooms. The findings indicated that the suggested model helped the participant EFL teachers develop new perspectives in their classroom management strategies and contributed to their professional development. Furthermore, some implications were provided for teachers in Cyprus.

Keywords: Residual practice, teaching identity, peer coaching, professional development

INTRODUCTION

Peer coaching is a confidential process through which two or more professional colleagues work together to reflect on current practices; expand, refine, and build new skills; share ideas; teach one another; conduct classroom research; or solve problems in the workplace (Robinson, 1991). It is mostly agreed that when teachers improve themselves, their practice will improve and their students' success will increase as well (Zwart, Wubbels, Bergen & Bolhuis 2007). Richardson and Placier (2001:920) claim that "changes in beliefs appear often to precede changes in practices, or that the process of changing beliefs and practices is at least interactive and synergistic". Peer coaching has nothing to do with evaluation. It is not intended as a remedial activity or strategy to "fix" teachers. Several school systems have supported peer coaching as a way to increase feedback about instruction and curriculum. Although there are similarities residual practice is not peer coaching. Instead the residual practice is the experience or practice left over at the end of the teaching process. The residual practice goes around five questions that the teacher is required to ask herself/himself; (1)What did you believe in? (2) What happened? (3) What's left over? (4) What would you do if…? (5) What will you do with what you learnt? In this learning process, both the successful practitioner and the school leader are expected to act as a feedback receiver or provider. It should be highlighted that the degree of formality among these people is required to be equalized by focusing on the actions not the individual teacher personally.

The primary benefit of residual practice for teachers is a deeper understanding of their own teaching style and its impact on their classroom management. Another specific benefit may include the professional development process of teachers. Supovitz (2001) suggested that logic behind professional development is that high-quality professional development will change teaching in classrooms, which will, in turn, increase student achievement. Moreover, recent literature has claimed that teachers' knowledge gained from professional development influences teaching practice (Blank & Alas, 2007; Yoon, Dun- can, Lee, Scarloss, & Shapley, 2007).

Residual practice provides an important starting point for classroom management. A well-managed classroom includes continuum of strategies to establish clear learning goals which aims to develop appropriate behaviour including contingent and specific praise, group contingencies and behaviour contracts. Continuum of strategies is also helpful to reduce the amount of inappropriate behaviour to occur in the classrooms. Residual practice is presented to explore the usefulness of teachers' daily experiences. Residual practice was inspired by the teachers' dissatisfaction with classroom management techniques and the inability to account for how people learn and perceive new activities, knowledge, and skills without engagement in formal educational or training processes. The

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idea of residual practice has served as an extremely useful practical and theoretical resource in studying learning in classrooms and it has enabled us to explore its applicability in a range of contemporary classrooms in Cyprus. The idea also encourages informal learning processes with an experienced staff. Issues will be discussed by colleagues who value one another's advice or wait for a chance for a discussion since they do not automatically meet each other when they are not teaching. The notion of cycle time is a useful but only partial way of understanding continuity, conflict and innovation in schools in relation to learning from experience. Sometimes teachers change practices without the impact of a new concept. Many of the forces responsible for the on-going evolution of teachers come from external pressures such as the system of the school, learners, curriculum, classroom climate, and the administration of the school.We explore the issue of residual practice as a powerful rationality for producing teaching identities. To build a personal and educational identity both as a learner and as a teacher, we all of a sudden realize how little we have thought about it in all these years. A teaching identity is formed throughout the teaching and learning journey. As it was mentioned before, it is teachers' residual practice through cycle time. It should not be mixed with reflection which means "holding up mirrors to our practice. In other words we need to think about (to reflect on) what we are doing and why (Harmer, 2013 p. 410). It is also not a list of do's and don'ts as Bawcom (2005:50) suggests;

_____	Attending conferences	_____
_____	Getting a certificate/diploma/degree	_____
_____	Peer Observations	_____
_____	Peer Counselling (time spent talking to colleagues)	_____
_____	Lesson planning/ creating materials	_____
_____	Reading professional journals/books	_____
_____	Time with students (outside the classroom)	_____
_____	Time getting to and from place of work	_____
_____	Writing articles	_____
_____	Syllabus design/writing a (text) book	_____
_____	Doing (classroom) research	_____
_____	Doing administrative duties	_____

Figure 1: Professional priorities (from Bawcom 2005:50)

It helps teachers consider the many factors that shape who they are as teachers. A teaching identity can be used to deepen teachers' understanding of themselves, students, head teachers, and the system of the school. Sharing their own teaching identity charts with peers can help them build not only their own teaching practice but also relationships among teachers in institutions. In this way, identity charts can be utilized as an effective school community-building tool.

Multiple variables influence an individual teacher's behaviors and attitudes. These overlapping categories of teaching identity include, but are not limited to, characteristics such as approach, method, strategy, character, and level of ability. We need to be careful, of course, that generalizations about teaching identity do not substitute one set of assumptions for another. Although teachers who have teaching characteristics in common often share norms of behavior, attitudes, or speaking styles, not every teacher endorses these views. It is important to remember that even those who do identify with a particular group will not share the same thoughts or actions in practice. Teachers' values define their practice, not the values of the policy-makers. A teacher's primary responsibility is to teach in the classroom. Teachers' sense of purpose has deeply personal, intellectual, and moral dimensions that must be more fully recognized (Collay, 1988, 1989; Grumet, 1980; Nieto, 2003; Shields, 2004; Zinn, 1997). Much of the literature about teacher sustainability identifies teacher development of classroom practice as critical to their career

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satisfaction (Shen, 1997). Still other researchers suggest teachers thrive on a more expanded role that includes collaborating with colleagues and influencing school-wide decisions (Barth, 1999; Elmore, 2002; Holloway, 2003). Research on teachers' actions rather than their roles and responsibilities offer a bridge for teachers who experience conflict between classroom management and teaching identity. 'Good teaching cannot be reduced to technique; good teaching comes from identity and integrity of the teacher' Palmer J. Palmer (1998).

This study has produced a number of fairly straightforward examples of professional development strategies such as residual practice, teaching identity, and teaching identity charts. These proposed theories could be modified through experience and brought directly to the classroom practice. Drawing comparisons with the concepts of earlier studies, the present paper investigates what impact, if any; residual practice has had on teachers' perceptions of their professional developments.

METHODOLOGY

This study aimed to explore the concept of residual practice as a means of understanding the purposively selected EFL teachers' development of their classroom management skills. For this purpose, a case study approach was adopted. This approach helped the researcher to investigate the participant teachers' perceptions regarding their classroom management skills in depth. The participants of the study participated voluntarily in this investigation. Prior to the investigation the participant teachers' informed consent was received. In this investigation one experienced teacher worked with four novice teachers to evaluate, give and receive feedback from each other on each other's daily experiences on classroom management. The experienced teacher was a male teacher with 21 years of experience in teaching and the other participants were two male and two female teachers with only one year experience in teaching. In this design of collaboration, one experienced teacher worked with two novice colleague in each meeting. In other words, one experienced teacher collaborated with two novice teachers in order to understand, evaluate, receive and give feedback on each other's daily classroom practices. The experienced teacher met every two colleagues every fortnight. In this study, the data was collected through reflective reports and teaching identity charts which yielded rich evidence about the residual practice and the participants were also given 30 minutes semi-structured interviews for the purpose of collecting data about the participant teachers' subjective views and evaluation regarding the process of development in their management skills after the implementation of the model. During the investigation, the participant teachers were asked to keep reflective reports about the classroom management issues, particularly about the classroom management difficulties they faced during teaching daily. They were also asked to fill in the teaching identity charts which formed a basis for them to look at, evaluate and compare their previous learning and experiences about classroom management practices and their present classroom management practices. After 8 weeks of collaboration, the participant teachers were interviewed to collect data about their subjective views regarding the designed model, residual practice. The collected data was analysed qualitatively. Each case was analysed and then a cross-case analysis was employed to see the similarities and differences among the participants. Cross-case analysis is a research method that facilitates the comparison of commonalities and difference in the events, activities, and processes that are the units of analyses in case studies (VanWynsberghe & Khan, 2007). Pseudonyms were used for the participant teachers. The following two key research questions were adopted:

Why did the participant teachers choose to engage with this designed collaborative model?
What did they gain from this process?

FINDINGS AND DISCUSSION

When the participant teachers were asked why they chose to engage with the designed model they mainly emphasized their need for collaborating with their colleagues in their work context. Particularly, the novice teachers expressed their need to improve their classroom management skills. Mike, Philip, Janet and Jill were the novice teachers while Antony was the experienced teacher in this collaboration. Mike said: "I think teachers learn a lot from each other. Sometimes I face with some problem in my classroom that I cannot find answers to from the books. I need someone more experienced than me to ask for advice." Similarly, Jill expressed the need for collaborating with someone who is more experienced than her to guide and help her particularly in the management of her classroom. She stated: "I desperately need guidance in some situations. I try to solve the problems when they arise in the class while teaching based on my theoretical knowledge but I realize that still I should develop more practical strategies most of the time." Philip's view was not much different than Jill in his need for developing more practical strategies to solve the classroom management problems when they arise in class. He said: "What I feel most of the time is that I have the theoretical knowledge for classroom management but I need to develop the practical side of it. Sometimes you need to find how to solve the problems practically…you need to share your experiences and get guidance from

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someone who is more experienced than you." Janet's view was more based on finding the most appropriate strategies that can work best for your own students besides improving your practical side. She said: "What happens in reality is so different than the knowledge you receive in books. I think, I have theoretical knowledge but I need to learn from more experienced teachers than me about the practical issues." For the experienced teacher Antony: "classroom management depends on the craft knowledge of the teacher that he/she gains and develops throughout experience in teaching." For this reason he expressed his willingness to share his experiences with the novice teachers and help them develop. Besides, he stated that "learning is a lifelong process. Therefore, there is always something he can learn from the novice ones as well."

When the participant teachers were asked what they gained from their engagement with the designed model of collaboration and residual practice, their response were on the positive side. They all indicated that they have gained a lot from this collaboration with each other and the engagement with this model where they kept reflective reports and teaching identity charts. Jill said: "Keeping reflective reports gave me a chance of looking what I am doing in my class in more depth and made me more aware of the problems I face with while teaching…Teaching identity charts helped me compare present my classroom management strategies with the previous ones." Philip stated that: "When I first started keeping reflective reports they were not so meaningful for me but later I realized that the things I wrote enabled me to look at my classroom practices in management more critically…I found filling in teaching identity charts really useful because they give you a chance to look at your strategies you used before and how far you have changed them in time." Similarly, Janet and Mike expressed the benefit of keeping reflective reports and filling teaching identity charts. Janet said: "It is the first time I kept reflective reports and used a teacher identity chart but I found them very useful especially when you are not experienced in teaching you need them. They help you develop your management skills practically." Mike stated that: "I realized that your skills can develop if you are aware of your weaknesses and find ways of improving them. Keeping reflective journals helped my awareness about what I am doing in class and teaching identity charts enabled me to see my development." As the experienced teacher, Antony expressed the benefits the novice teachers gained in this process of keeping reflective reports, filling in teacher identity charts and collaborating with each other. He said: "I think this process contributed a lot to the novice teachers and me as well. With the help of the reflective reports they kept I was more able to see what kind of management problems they were experiencing and the strategies they were using to solve them. They formed the basis of our discussion and sharing with them. This enabled them to develop their repertoire of management skills. Besides, teaching identity charts enabled them to look at their self- development in management skills.

CONCLUSION

It could be argued that the proposed concepts and practice provide important insights in to the nature of professional development and workplace learning more generally. However, our case study research into complex institutional settings suggests that patterns and forms of participation are highly diverse. There is a need, therefore, for teaching identities to be explored more to find out the sum total of the teaching practice and residual practice. As well as identifying enduring strengths in residual practice, the paper particularly through its analyses of case study data, has identified limitations in its approach that can be usefully addressed and developed. The control and organisation of work will affect teachers' opportunities to learn. To remove barriers and boundaries which facilitate or inhibit participation is as vital as reflecting on what teachers are doing. Further in depth studies of workplace learning in a wide range of contexts are required if all the issues affecting learning and their inter-relationships are to be fully understood and theorized.

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DEVELOPMENT OF COMMUNICATION SKILLS OF PRE-SCHOOL PUPILS WITH SPEECH DISABILITIES

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ABSTRACT
The authors present outcomes of the preparatory class for pupils with the speech disabilities. It is the unique project in the Slovak republic because it has been running in the common primary school and not in the special primary school as it is recommended. The authors present several positive research findings they have achieved through measuring the pupils language abilities (phonemic awareness and phonologic differentiation) during the running of the preparatory class for pupils with speech disability since 2002. Research is designed as an experiment, using pretest – posttest model, and outcomes are statistically worked out. The outcomes highlight the significantly better communication skills of pupils in the preparatory class for pupils with the speech disability. The paper has been developed as a part of the project Cultural and Educational Agency of the Slovak republic (KEGA) – KEGA 007UKF-4/2013: Development of communication skills of pre-school pupils with speech disabilities.

Key words: communication skills, speech disabilities

INTRODUCTION

Currently, in the field of etiopathogenesis of learning disabilities of pupils, the leading role plays a so-called linguistic theory of its development, which is based on the assumption of weakened linguistic abilities of an individual as a factor affecting school performance (it focuses mainly on awareness of the phonemic structure of words, phonologic differentiation and linguistic sense). We consider the weakening or language skills disorders, in accordance with several authors (in Slovakia mainly V. Lechta, M. Mikulajová), as one of the most decisive factors in the field of development of specific learning disorders of pupils. In case, we accept the reciprocal link between language and learning disorders (LD´s), we should also accept the possibility that if the speech disorder was not present, or less intense, the specific learning disability should not be noticeable. In this case, it might be possible to avoid a development, or at least to reduce the risk or intensity of already developed specific learning disorder by elimination or reduction of speech disorders intensity. V. Lechta (2008) describes the link between learning disorders and language development problems.

W. Simon (1981, p. 76) stated in the early eighties that the reading and writing is the complex function of the speech. According to him, the low achievements in the reading and writing are not the problem in close area. It is necessary to see the relation between low achievements and the speech dimension, which is crucial condition of the reading and writing development.

R. Paul (1995) notes that disrupted speech development influences psychic development of the child and it is the indicator of the school failure, especially in the form of specific learning disabilities and speech disabilities.

M. Mikulajová (2001) considers language skills (language sense, understanding of speech, phonemic skills - especially phonemic awareness) as crucial in reading development. According to the author, it is proved that individuals suffering from broken speech development, aphasia, or learning disabilities, have significantly weakened ability of phonemic awareness. So we may conclude that a systematic training may reduce a risk of speech disorders development, as well as learning difficulties in future.

O. Zelinková (2008) considers speech problems a possible reason of LD´s development. She defines two components of speech: a receptive component (understanding of speech) and an expressive component (expressing, speaking). The author also defines a separate area of auditory perception as a possible source of LD´s. She describes it as a so-called phonemic hearing, which is the ability to discriminate and differentiate auditory units. She distinguishes two forms of phonemic hearing: phonemic awareness (understanding of syllabic and speech sound structure of words – speech which is presented by letters), phonological awareness (ability to isolate the first and last speech sound of a word, ability to perceive a rhyme, ability to add or omit a part of a word, ability to divide words to syllables).

A speech disorder of children is one of the most frequent disorders which a school psychologist (in primary school) has a contact with in his/her practise. It mainly relates to preschool children who should be trained in the first year of a primary school. It is necessary to put parents wise to this fact because insufficient speech development of

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children may occur as a significant risk during training. Based on the facts described above, we are interested in possibility to avoid specific learning disabilities, to work in a preventive way, or to eliminate them as much as possible. Therefore, we have chosen the form of a preparatory class for pupils with speech disabilities. It is based on a linguistic theory of development of specific learning disabilities of pupils, inclusive approach to pupils with special educational needs and we also took into consideration current legislation.
In the following text we outline content, applied methods, structures and forms of teaching and a brief history of the preparatory class for pupils with speech disabilities in the primary school.

THE STUDY

Preparatory class for pupils with speech disabilities (hereinafter preparatory class) in the district Hlohovec, Slovakia was founded as initiative of former staff of pedagogical and psychological counseling in Hlohovec in 2001. The aim was to focus children, who have been diagnosed speech disabilities within the school ability diagnosing process, in the preparatory year in order to improve their language skills and thus eliminate a risk of development of specific learning disorders within their future school attendance.
In the current school year, there are three preparatory classes (see Table 1). Class teachers have appropriate education (special pedagogy). The preparatory class has both intervention and diagnostic functions. After completing the preparatory class, pupils with already diagnosed certain level of abilities or identified restrictions or developed abilities and skills, are individually integrated to basic classes. While implementation the preparatory class for pupils with speech disabilities, we follow assumptions described in the introduction of this paper.

Table 1 Count of the pupils and count of classes in Preparatory year for pupils with speech disability in primary school in Hlohovec, Slovakia

School year	Count of pupils	Count of classes
2001/2002	7	1
2002/2003	9	1
2003/2004	15	2
2004/2005	7	1
2005/2006	9	1
2006/2007	12	1
2007/2008	11	1
2008/2009	7	1
2009/2010	8	1
2010/2011	8	1
2011/2012	10	1
2012/2013	19	2
2013/2014	16	2
2014/2015	25	3

The aim of the preparatory class is to develop a weak area of language and cognitive development of pupils, and thus reduce possible manifestations of learning disabilities as much as possible in the future. It is based on assumption that learning disabilities more or less relate to language ability disorders (they influenced them in a negative way) (M. Mikulajová, 2001). It is possible to reduce the occurrence or intensity of learning disorders of pupils in future by elimination of language ability disorders (understanding, sense of language, phonemic awareness), moreover it is possible to decrease their negative impact on academic performance of pupils.
There are pupils in the preparatory class, who have been diagnosed a speech disability, dysphasia, dyslalia, or verbal dyspraxia. All activities, methods and procedures lead to development of communication skills of students. All learning areas have a language support with the aim to remove or eliminate problems of children. An important part of speech therapy is cooperation with parents, teachers, psychologists and other professionals within the intervention process.
The most preferable way of teaching is via an experience during education process. There is emphasized a focus on language in all activities and thus improve language skills of pupils. The preparatory class is developed in a pleasant atmosphere with a number of stimuli which work in accordance with psychological, special and pedagogical, medical and social areas. Pupils perceive stimuli by multiple senses. The teacher creates a pleasant atmosphere; he/she works with pupils in a sensitive and patient ways, to make the school work as interesting as possible.
Methods and forms alternate according to the needs and abilities of pupils, treatment to each pupil is individual, due to the low number of pupils in the class. Each pupil has an opportunity to demonstrate their knowledge and

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skills and the teacher is able to appreciate and especially to develop them further. Each pupil works in a different level and a teacher adapts to this system. All education is based on humanistic principles.
To improve the language skills of pupils in preparatory class, we use specific procedures, forms and teaching aids, which are reflected in the school educational program in the education plan and also in the timetable. We focus on the emphasis on the development of communication abilities, especially phonemic awareness. We use the method of Training of phonemic awareness according to D.B. Eľkonin to develop these abilities.
We put the emphasis on logopedics care, not only directly, but also secondary, as all activities in most subjects focus on language. They have 10 lessons a week logopedics care. This is so-called logopedics intervention group. Furthermore, pupils have three lessons of the Slovak language, mathematics 3 lessons, 2 lessons of physical education, art education 2 lessons, 1 lesson of music and 1 lesson subject "Nature and me" in a week. Three times a week they have 4 lessons and twice 5 lessons.
The aim of our research was to find out whether the specific methods used for teaching pupils in the preparatory class will improve weak areas of their language skills. If so, we wanted to find out whether the level of the skills is significantly different before and after the completion of the preparatory class, in favor of the state after its completion, which was also the hypothesis of our research. We chose the method of measurement of selected indicator, which we assume to be essential in the field of formation of specific developmental learning disorders. It refers to phonemic differentiation. We applied the method of Phonologic differentiation by Škodová (Slovak modification by Rafajdusová, I. & Sümegiová, Z., 1993) and the method of Auditory distinction according to Wepman-Matějček (Slovak modification by Rafajdusová, I. & Mikulajová, M., 1993) to find out the level of these indicators. We applied these methods individually to all pupils in the preparatory year within the entrance diagnosis. It was carried out during spring and summer months last school year. That year in May and June of the school year, we carried out re-diagnosis using the same methods. The period of time between both diagnoses was approximately 12 – 14 months. The count of the pupils in the preparatory class in primary school in Hlohovec, in school years 2001/2002 to 2013/2014 was 92. We excluded the pupils in the school years 2009/2010 – 2012/2013 and 2014/2015 from the research group because of missing data. Finally, the research sample consisted of 92 pupils in the preparatory class and 30 pupils in the control group.
We used the Wilcoxon test and independent t-test as the statistical methods in the programm SPSS 20.0. We accepted the standard level of significance $\alpha \leq 0.05$.

FINDINGS
Results of the statistical analysis are displayed in the tables 2 – 5.

Table 2 The impact of the intervention on the phonologic differentiation of the pupils in the Preparatory class

school year	PD pretest				PD posttest				Z	p
	N	M	SD	SEM	N	M	SD	SEM		
2001/2002	7	14.29	3.817	1.443	7	19.00	3.606	1.363	2.388	0.017
2002/2003	9	17.67	2.345	0.782	9	21.89	3.180	1.060	2.673	0.008
2003/2004	15	15.67	4.353	1.124	15	19.80	3.610	0.932	3.377	0.008
2004/2005	7	16.57	6.079	2.298	7	19.57	5.593	2.114	2.120	0.034
2005/2006	9	16.22	2.906	0.969	9	21.67	2.739	0.913	2.689	0.007
2006/2007	12	13.42	4.166	1.203	12	17.08	5.213	1.505	3.074	0.002
2007/2008	11	15.64	4.965	1.497	11	19.36	5.045	1.521	2.766	0.006
2008/2009	7	15.14	4.488	1.696	7	19.00	2.646	1.000	2.375	0.018
2013/2014	15	18.80	3.427	0.885	15	20.40	5.974	1.542	1.368	0.171
all	92	16.05	4.275	0.446	92	19.74	4.521	0.471	7.410	<0.001

Legend: N = count; M = mean; SD = standard deviation, SEM = standard error of mean, Z = testing criterion (Wilcoxon test); p = significance; PD = phonologic differentiation test

Table 3 The impact of the intervention on the auditory distinction of the pupils in the Preparatory class

school year	WM pretest				WM posttest				Z	p
	N	M	SD	SEM	N	M	SD	SEM		
2001/2002	7	14.00	2.000	0.756	7	18.43	1.813	0.685	2.388	0.017
2002/2003	9	13.89	1.616	0.539	9	17.00	1.871	0.624	2.701	0.007
2003/2004	15	11.67	2.895	0.747	15	15.33	3.222	0.832	3.437	0.001
2004/2005	7	10.29	3.039	1.149	7	13.71	4.152	1.569	2.375	0.018
2005/2006	9	14.11	2.522	0.841	9	16.33	3.082	1.027	2.699	0.007
2006/2007	12	10.08	3.343	0.965	12	13.08	3.988	1.151	3.089	0.002
2007/2008	11	11.64	3.529	1.064	11	14.64	4.523	1.364	2.956	0.003

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2008/2009	7	12.86	3.024	1.143	7	15.71	2.563	0.969	2.388	0.017
2013/2014	15	12.93	4.448	1.148	15	14.47	3.335	0.861	1.263	0.207
all	92	12.28	3.359	0.350	92	15.22	3.545	0.370	7.408	<0.001

Legend: N = count; M = mean; SD = standard deviation, SEM = standard error of mean, Z = testing criterion (Wilcoxon test); p = significance; WM = Wepman-Matějček test

Table 4 The changes of the phonologic differentiation and auditory distinction in the group of the pupils without the intervention

test	pretest				posttest				Z	p
	N	M	SD	SEM	N	M	SD	SEM		
PD	30	15.17	4.069	0.743	30	15.47	4.158	0.759	1.249	0.212
WM	30	11.70	3.064	0.559	30	12.30	3.250	0.593	2.766	0.006

Legend: N = count; M = mean; SD = standard deviation, SEM = standard error of mean, Z = testing criterion (Wilcoxon test); p = significance; PD = phonologic differentiation test; WM = Wepman-Matějček test

Table 5 The comparisons of the phonologic differentiation and auditory distinction between the groups with and without the intervention

group	PD pretest				t	p	PD posttest				t	p
	N	M	SD	SEM			N	M	SD	SEM		
with intervention	92	16.05	4.275	0.446	1.025	0.310	92	19.74	4.521	0.471	4.581	<0.001
without intervention	30	15.17	4.069	0.743			30	15.47	4.158	0.759		
group	WM pretest				t	p	WM posttest				t	p
	N	M	SD	SEM			N	M	SD	SEM		
with intervention	92	12.28	3.359	0.350	0.842	0.401	92	15.22	3.545	0.370	3.992	<0.001
without intervention	30	11.70	3.064	0.559			30	12.30	3.250	0.593		

Legend: N = count; M = mean; SD = standard deviation, SEM = standard error of mean, t = testing criterion (independent t-test); p = significance; PD = phonologic differentiation test; WM = Wepman-Matějček test

We found out:

- Significant differences in the pretest and posttest situation of the pupils in the preparatory class in the phonologic differentiation in the relation to goal-directed intervention (except the school year 2013/2014). The range of Z-values was from 2.120 to 3.377 and the range of p-values was from 0.034 to 0.002 in particular school years. The value of Z was 7.410 and the value of p was <0.001 in the comparison of of pretest and posttest contex in all school years together (table 2).
- Significant differences in the pretest and posttest situation of the pupils in the preparatory class in the auditory distinction in the relation to goal-directed intervention (except the school year 2013/2014). The range of Z-values was from 2.375 to 3.437 and the range of p-values was from 0.018 to 0.001 in particular school years. The value of Z was 7.408 and the value of p was <0.001 in the comparison of pretest and posttest context in all school years together (table 3).
- Low level of differences in the phonologic differentiation and in the auditory distinction in the control group of the pupils (table 4). Despite of this fact we acquired the significant difference in the auditory distinction of the pupils in the pretest and posttest context (Z = 2.766; p = 0.006).
- The similarity of the experimental group (with intervention) and control group (without intervention) in the phonologic differentiation and in the auditory distinction of the pupils at the beginning of the diagnostics and intervention activity (table 5). The t-value was 1.025, resp. 0.842. The p-value was 0.310, resp. 0.401.
- The differences of the experimental group (with intervention) and control group (without intervention) in the phonologic differentiation and in the auditory distinction of the pupils at the end of the diagnostics and intervention activity (table 5). The t-value was 4.581, resp. 3.992. The p-value was <0.001.

CONCLUSIONS

Comparison of language skills of pupils before and after completing the preparatory class (via Phonologic differentiation method by Škodová and Auditory distinction method by Wepman-Matějček) shows a significant increase in the posttest context (except the school year 2013/2014). It means a significant increase in level of language skills at majority of pupils in the preparatory class. In both diagnostic methods a mean score was higher in 2.5 points. After analyzing the effect of passing a preparatory class for pupils with speech disability in a particular school year 2013/2014, we wonder whether this effect is comparable with the interventions in previous school years (previous analysis showed increase of communication skills). We found that all groups (pretest and posttest) diagnosed by the method of phonologic differentiation by Škodová and method of auditory distinction of

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Wepman-Matejček are equivalent. We may conclude that children with speech disability are a relatively homogeneous group, which in the case of goal-directed interventions show the progress. Specifically, it is a difference in mean score at 3-5 points (method of phonologic differentiation by Škodová), or 2-4 points (method of auditory distinction of Wepman-Matejček). The maximum of the mean difference in the control group (group without the intervention) was 0.6 of point.

The results of our research have confirmed that it is possible to identify preschoolers with problematic development using adequate diagnostic procedures in sufficient time, to eliminate symptoms of speech disorders and the possible manifestations of specific developmental learning disorders and thus to minimize their negative impact on the school performance of pupils.

We have identified several of their positive attributes:

- improvement of language skills, or speech of pupils,
- support of inclusive education of learners who suffered from specific learning disorders,
- connection of the preparatory class with the first year in case that a child keeps attending the same school (special teacher hands in information about individual children to teachers teaching in the first year and thus they have a possibility to discuss learning method/techniques with a special teacher),
- improved adaptation of the child to the school environment (compared to the kindergarten or special school) - the child gets used to the school system (lessons, breaks, canteen, school club, etc.); this may be, in case of exceptional children, more important than in case of intact children,
- respecting of the modern theoretical assumption – development of specific learning disorders may be caused by speech disabilities.

We also consider that the preparatory class for pupils with speech disability in an ordinary primary school is an effective inclusive form, which has a preventive importance in the fields of speech disorders, specific developmental learning disorders, behavioral problems and adaptation of preschoolers to the school environment.

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DEVELOPMENT OF MELODIC PROGRESSION SKILLS IN TEACHING OF TURKISH MUSIC MAQAMS

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ABSTRACT
Turkish music maqams are differentiated from each other due to the note and melodic progressions, they are named and classified according to them. Maqams are divided into three classes according to their structure, including simple, şed (forced to immigrate) and compound. Maqams are diffrentiated mainly according to the note and the melodic progression. In this context, The note and the melodic progression are offered a different importance on the stage of teaching to students. The notes are sounds including the character of maqams. however, the melodic progression is the notes communities that display the identity of maqam, so the student's musical ability is understood from his/her melodic progression skill. Therefore, making the melodic progression occurs a disciplined maqam education, music listening and musical ability. In my study, Music listening and playing works of the students will be presented to be developed melodic progression skills of the students in maqam.

INTRODUCTION

Deriving from the word "*kıyam*" in Turkish, *maqam* means "the place in which one is located," "a privileged place" or "a place which is distinguished from other places by its properties" (Kutluğ, 2000, p. 73). This concept constitutes the fundamental property of the sound systems found in Turkish music and in geographies which were influenced by this music. Traditionally, two important elements of Turkish music are *maqam* and *usûl.* The concept of *maqam* constitutes the basis of the Turkish music since *usûl* does not exist in the free forms of Turkish music such as *taksim*, *mevlid, gazel* and *kaside.* The concept of *maqam* may be expressed by different terms depending on the geography, culture and time in question. The concept of "raga" in Indian music, the term "destgâh" in Persian music and such terms as "edvâr", "terkîb", "şed", "perde", "âvâze" and "şu'be" in the middle ages of the Ottoman Empire were used from time to time as equivalents of the concept of *maqam* (Özkan, 2003, p.410).

We encounter the term *maqam* firstly in the works of Abd al-Qadir Maraghi on musical theories (Sezikli, 2007, p. 68). Before that usage, Safiyuddin Abdülmü'min Urmevi (d. 1294) used the concepts of *daire*, *devir* and *edvâr* in his epistles titled *Kitâbü'l-Edvâr* and *Şerefiyye* (Uygun, 1999, p.168). When we analyze the manuscripts of Abd al-Qadir Maraghi and his son Abdulaziz, we see that they named *maqam* the most harmonious twelve *daire*s out of the ninety one *daires,* which are constituted by joining fifth or fourth intervals together (Koç, 2010, p.51).

Safiyüddin's work *Kitâbü Al-Edvârı* defined twelve *daires,* six *âvâzes* and four *şube*s based on eighteen pitches (*perdes*) and seventeen intervals within an octave. Abd al-Qadir Maraghi defined twelve *daires*, six âvâzes and twenty four *şu'be*s based on ninety one *daire*s. Although there is an unproductive period in Turkish music theory between the 15th and 17th centuries, The Moldovian Prince Cantemir ended this period with his works in the 17th century. In his work titled *Kitâbü'l-Mûsikî alâ Vechi'l-Hurûfat*, he described and classified the variety of *maqam*s. In this work, Cantermir defined seven *âvâzes,* twelve *maqams,* four *şu'bes* and twenty seven *terkîbs*. Cantemir analyzed *maqams* in two ways. In the first one, he only gives the description of a *maqam* while in the second one, he elaborates on its properties such as *seyir* (melodic progression), *çeşni* and *geçki* (modulation) (Kantemiroğlu, 2001 (edited by: Yalçın Tura)).

After these works of Cantemir, not much work on *maqam* was conducted in the 18th century until the period of Selim III. In the period of Selim III, Abdulbaki Nasir Dede added another dimension to the concept of *maqam* with his works*Tedkîk u Tahkîk* ("Examination and Verification") and *Tahririyye*. The *maqams* which were defined by such terms as *maqam, şu'be* and *âvâze* until this period came to be described and classified in two ways as *maqams* and *terkibs* (compounds) (Başer, 2013).In the 20th century, the attempts to systematize the Turkish music theory initiated by such musicologists as Rauf Yekta, Zekâi-zâde Ahmed Irsoy and Ali Rıfat Çağatay began to give results with the Turkish music theory of Hüseyin Saadettin Arel ve Suphi Ezgi. Today, this theoretical system of *maqam* is in use.

1. MAQAM IN TURKISH MUSIC AND THE ELEMENTS OF MAQAM

1.1. MAQAM IN TURKISH MUSIC

Maqams are the patterns of melody which are constituted by certain tunes (*nağme*) and intervals, beginning with certain tetrachords and pentachords, continuing with certain tunes and resolving into suspended candences at certain pitches (*perdes)* (Tura, 1988, p. 141).On the other hand, *maqam* is the formation style of melodies. The special musical progression which indicates its quality by its arrangement by various rates and intervals is called

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maqam. (Kutluğ, 2000, p. 75). In Arel-Ezgi sound system, *maqam* is defined as the special relation of sounds between the tonic and strong sounds (Ezgi, 1932, v. 1, p. 48). On the other hand, Abdülkadir Töre defines *maqam* as the structure in which music sentences constituted by a special *seyir* rule and comprised of sounds harmonious with each other at certain intervals within a scale (Karadeniz, 1965, p. 64). Mesud Cemil defines *maqam* as the special character constituted by the melodic move played in compliance with the particular rules and restrictions of a scale (Kutluğ, 2000, p.77). Having summarized the different definitions of *maqam* provided by various musicologists, we may define it as the musical structure which constitute a scale out of a variety of high and low sounds in harmony with each other in compliance with certain rules such as *perde*, *asma karar* (suspended cadence), *karar* (cadence), *seyir* (melodic progression) and *çeşni* (modulation). *Maqam*s were classified based on their structure of scales, *perdes* and *seyirs* in accordance with the Arel-Ezgi system. It is classified under three headings. These are the following: 1. Simple,2. Transposition (Şed, Transposed) and3. Combined (mürekkep).

Simple *maqams*: Simple *maqams have* one octave interval constituting a scale out of tetrachords and pentachords.
Transposed (*Şed*) *maqams:* These *maqams* are constituted by the transposition of a simple *maqam* of one octave interval onto another *perde,* leading it to gain different *seyir* properties.
Combined *(mürekkep*) *maqams:* These are *maqam*s which are comprised of full or missing tetrachords and pentachords exceeding an octave or and octave interval and which have different properties in terms of *perde* and *seyir.*
While the concepts of tone and mode in Western music are similar to the concept of *maqam,* they are not capable of conveying the same meaning (Özkan, 2003, p. 412).

1.2. ELEMENTS CONSTITUTING THE MAQAMS IN TURKISH MUSIC

1.2.1. PERDES

Perde is the musical term which has been in use since it was used by Abd al-Qadir Maraghi in the 15th century. It was used as an equivalent of *maqam, devir* or *daire* from time to time as well. Basically, these are the tender sounds which determined the intervals constituting the *maqam* reflecting the character of the *maqam* in Turkish music. *Perdes* play an important part in the execution of a certain *maqam*. *Perdes* may be classified in the following way depending on their function: *Karar* (Cadence, the Tonic) *perde,* Strong (1st Degree Suspended Cadence), High-Pitched (High Tonic), Yeden *perde.*

Karar (Cadence, the Tonic): This is the *perde* in which *seyir* and *çeşni* of the *maqam* ends and the melody comes to a halt. This *perde* is called the Tonic (*durak*) as well.
Strong (1st Degree Suspended Cadence): This is the name of the *perde* in which the tetrachord and pentachord of the *maqam* is joined, constituting the frame of the *maqam.* In other words, it is the *perde* of 1st degree suspended candence. The tonic and strong *perdes* constitute the basis of the *maqam.* The *perdes* in which *çeşnis* (modulation) and *seyir* (melodic progression) are used as *karars* in a *maqam* are called suspended *karars*, half *karars* or temporary *karars* (cadences) (Özkan, 2003, p. 411). Strong *perdes* are the points where tetrachords and pentachords are joined; but this is different in certain *maqams.* For example, in *muhayyer maqam*, there is strong *hüseyni* (e) *perdesi* in theory and *muhayyer* in practice.
High-Pitched Cadence (High-Pitched Tonic): It is the name of the *perde* at the high-pitched point of a tetrachord or pentachord or of an octave in a candence *perde.* Musicologist Rauf Yekta indicates that high-pitched tonic pitches (*durak perdesi)* are more important in combined *maqams (*Kutluğ, 2000, p.85). High-pitched tonic pitches (*durak perdesi)* are important since they function as bridges for *geçkis* (modulation) at high-pitched points of *mürekkep* (combined) maqams.
Yeden: *Yeden perdesi* is the name of the *perde* which gives the feeling that we reach the *karar perdesi* (cadence pitch) before we stop at *karar* or *asma karar (*suspended cadence). Generally, this *perde* is away from the low-pitched part of the karar *perdesi* (cadence pitch) and this distance *bakiyye* or *tanini* interval.

1.2.2. EQUIPMENT

It is the indication of changes in small intervals, which constitute the character of the *maqam* and which are located at the different intervals of the scales of the *maqam* as flat or sharp. They are located just after the treble clef in the stave.

1.2.3. WIDTH

The *maqam* scales have been illustrated with sound intervals of an octave since Safiyüddin Urmevî (d.1294), the founder of the systematizer school. The *maqam* is widened by using the sounds below or above the octave interval depending on the character of the *maqam.* It may be illustrated in a *seyir* besides the character of the *maqam* in the widening of the *maqam.* The low-pitched or high-pitched parts of the *maqam* may be widened as

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required by the *maqam* or to improve the work in question.

1.2.4. *ÇEŞNİ*

Çeşnis are the small melodic structures which emphasizes the character of the *maqam* (Bozkurt; Ayangil; Holzapfel, 2014, p. 5).It highlights the fundamental characters of the *maqam*. They are also small melodic touches within the scope of a *maqam.* It is the *çeşni* composition which expresses, illustrates and distinguishes the *maqam* (Kutluğ, 2000, p.92).More *çeşni* is used for combined maqams due to their structure.

1.2.5. SEYİR (MELODIC PROGRESSION)

It is a travel across different sounds within the scale of a *maqam* in compliance with certain rules in Turkish music (Özkan, 2003, p.411). The concept of *seyir* has an important role in distinguishing *maqams* from each other. The *seyir* of a maqam is improvised. The flow of a *seyir* must include the parts of *zemin, meyan* and *karar* (cadence). Although *seyirs* may change depending on the character of the *maqam,* they may be grouped as descending, ascending and descending-ascending *seyirs*. In all of these kinds of *seyir*s, the *seyir* must end at *karar perde (cadence pitch*) no matter the *perde* from which the *maqam* begins (Kutluğ, 2000, p.91).

Descending seyir: The *seyir* begins with the sounds around the high-pitched *karar* of the *maqam* and at the end of the *seyir,* we reach the sounds near the *karar (*cadence) and the *maqam* is concluded with the *karar perdesi* (cadence pitch).
Ascending seyir: The *maqam* begins with the sounds around the *karar* (cadence) in the low-pitched part. The high-pitched sounds from the strong *perde* are not much used. The *seyir* is concluded in the *karar perdesi* (cadence pitch) after crossing over the sounds between the *karar* and the strong pitch.
Descending-ascending seyir: In this kind of *seyir,* the *maqam* begins around the strong *perde* in general and both the high-pitched and low-pitched sounds of the *maqam* scale are used intensively.
To give an example to this kind of *seyir;* the *rast maqam,* which has an ascending *seyir,* uses the interval between *rast* and *neva perdesi.* The *mahur maqamı,* which has a descending *seyir,* becomes intense around the *gerdaniye perdesi,* which has a high-pitched *karar perdesi (*cadence pitch) and uses the low-pitched area as it reached the *karar perdesi.* The *bayati maqamı,* which has a descending-ascending *seyir* begins with the strong pitch and uses both the low-pitched and high-pitched area intensively.
The *seyir* is the most important thing determining the character of a *maqam.* Otherwise, it would not be possible to distinguish such *maqams* as *bayati, uşşak; muhayyer, hüseyni; neva, tahir; gülizar, karcığar* from each other since they have the same scale.

2. DEVELOPING THE SKILL OF SEYİR (MELODIC PROGRESSION) IN TEACHING TURKISH MAQAM MUSIC

2.1. THE IMPORTANCE OF SEYİR IN TEACHING THE MAQAMS OF TURKISH MUSIC

In Turkish musics, the *maqams* may illustrate their distinctive character mostly based on the *seyir* they make. In this regard, Cinuçen Tanrıkorur claimed that the scale has an effect of 20% while the *seyir* has an effect of 80% in constituting the character of a *maqam* (Karaosmanoğlu, 2010). Each *maqam* has a distinctive *seyir* flow (melodic progression). This is explained in a number of books on musical theory. Preparing the *seyir* based on these books may make it difficult to perceive the essence of the *maqam.* To understand the *seyir* which constitutes the character of the *maqams,* we need to analyze the *maqams* of the periods in question, to investigate the repertoire of the *maqams* in question and practice them. This is important for the musician to learn the *seyir* of the *maqams.*
When we analyze the books on the history of Turkish music, we could see that music lovers gave information about the *seyir* of the *maqams* especially in edvârs and epistles. For example, we encounter the first explanations of *seyir* in "el-Matla", which is a work of Seydî who lived in the 15th century. For instance, Seydî describes the *seyir* of the *maqam* named *sabâ* as follows: "*Saba* is a thing that one plays *nevruz,* has cadence at *avaz* and continues at the *maqam* of *segah* (Arısoy, 1988, p.47). The musician Cantemir, who lived in the 17th century, says the following about the same *maqam* of *saba* in his *edvar:* "The *maqam* of *saba* is a nice and pleasant *maqam.* The *perde* of saba is the half *perde* between the *çargah* and *neva.* In this *maqam,* the musician starts from the *perde* named *dügah,* ascends to *segah* and *çargah,* and stays here for some time and finally stops by the *perde* named *saba* in a smooth way. If one descends from the high-pitched sound to the low-pitched one, it will illustrate itself with three *perdes* and is concluded at the *perde* named *dügah.* As I mentioned in *maqam* named *saba,* the musician starts from the *perde* of *dügah,* ascends to *segah* and *çargah* and steps on its own *perde* and without complicating it, she goes over the *perde* named *neva* to reach the *perde* of hüseyni. After completing it, she may ascend to the high-pitched *perde* which is named *hüseyni.* Then, she may leave this path and she may leap to the *perde* of *neva* from the *perde* of *hüseyni* and step on its own *perde.* After completing it, she has *karar* at the *perde* of *dügah"* (Tura, 1976, p.72).The 18th century musicologist Abdulbaki Nasir Dede talks about the maqam of saba as follows: "In *saba,* [the musician] starts from the *perde* of *çargah, moves* to *saba and* then to

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çargah, segah and *dügah;* she may has *seyir* up to the *hüseyni, acem* and *muhayyer* from the *hüseyni* and down to the *perdes* of *dügah* and *rast.* In this *maqam,* there are the *maqams* named *kûçek* and *zirefkend* in the same scale" (Aksu, 1988, p.162). Haşim Bey, a musician who lived in the 19th century, says the following about the *maqam* of *saba:* "[The musician] starts with the *perdes* of *segah, çargah, uzzal* and then ascends up to the *perdes* of *acem, gerdaniye* and *şehnaz* and having descended to the *perde* of *çargah,* she moves to *segah* and concludes with the *perde* of *dügah"* (Haşim Bey, 1865, p.28)

Following these descriptions of the *seyirs of* maqams in the Ottoman Empire, Rauf Yekta was the first person to write them in Western notes in an article that he wrote for Lavignac. In this article, he gave the examples for the *seyir* of thirty waltzes composed of the most common *maqams.* Following Rauf Yekta, examples of *seyir* were given by Muallim İsmail Hakkı Bey in his book titled *Tekamül Dersleri* and by Şefik Gürmeriç in his notes which he prepared for his students in the conservatory (Signell, 1986, p.61-62).

It is not possible to lay out the *maqams* in Turkish music without analyzing *seyirs.* The scales does not suffice to define a *maqam. Maqams* such as *uşşak-bayati, hüseyni-muhayyer, neva-tahir* and *saba-dügah* are distinguished by their *seyir* properties. Without the *seyir,* a scale cannot give a sufficient definition of the *maqam.* Some *maqams* such as *uşşak-bayati, hüseyni-muhayyer* use the same scale and can only be distinguished based on their different *seyirs.*

All *maqams* have a particular sound field. For example, the *maqam* of *uşşak* extends to the *perde* of *yegah* at low-pitches and does not ascend above the *perde* of *neva* at high pitches. The *maqam* of *bayati,* which is of the same scale, may ascend to *hüseyni aşiran* at low pitches and ascend beyond the *perde* of *muhayyer* at high pitches. In the *maqam* of *hüseyni,* a *seyir* which includes ascending and descending is possible and the sounds between *muhayyer* and *rast* are used while in *muhayyer,* which is of the same scale, the sounds between *dügah* and the high-pitched *neva* are used. The *maqam* of *neva* involves descend and ascend as well, and moves over the sounds between *dügah* and *muhayyer* while *tahir* illustrates a descending sound and then ascends up to very high-pitches *perdes* till the *perde* of *neva.*

Up to this point, I have explained the importance of *seyir* through examples in consideration of the scales of the *maqams.*

To make *seyir* in consideration of *çeşnis* inside the *maqams* constitutes another dimension of the issues.

This issue is encountered generally in the *seyirs* of the combined (*mürekkep*) and transposed (*şed*) *maqams*. Up to this point, the fact that we analyzed *maqams* with simple and plain scale, having no complex structure and *çeşnis* enabled us to illustrate the importance of *seyir* based on maqams with simple *scales* and *perdes.* However, there is another reality: Especially in transposed and combined *maqams*, *çeşnis* and *geçkis* (modulation) constitute the frame of the *maqam.*

If we start our examples regarding the importance of *seyir* with combined *maqams,* we see that the scale of *çargah* is at the same time the scale of *mahur* at the *perde* of *rast* and of the *maqam* named *acemaşiran* at the perde of *acemaşiran.* The *maqams* of *çargah, acemaşiran* and *mahur* are distinguished by their *çeşni* and *perde.* The *maqam* of the *çargah* has *karar* at the *perde* of *çargah* and has a *seyir* of descend and ascend, which is monotonous and simple. The *maqam* of *mahur* has a *seyir* which is played at high-pitches and has its *karar* with the *perde* of *rast.* It has a bright structure. When we look at the traditional *mahur* works in our repertoire, the small interval of *mücennep hüseyni mahur* which is to have five commas in theory is played with nearly six commas. *Kürdili* cadences are used on the *perde* of *hüseyni* and cadences with *çargah* are used on the *perde* of *çargah* before the *karar* is concluded by a sudden move to low-pitched sounds. In the *maqam* of a*cemaşiran,* the musician begins with high-pitched sounds and reaches the *karar perdesi* (cadence pitch) at the last moment and resolves the melody at the *perde* of *acemaşiran.* The most important aspect of this *maqam* is that it must be audible that the *perde* intervals of *hüseyni-acem* and *muhayyer-sünbüle* are nearly one comma closer to the *bakiye* interval. In addition, the strong *acem* is stressed in this *maqam* a lot and the bridge of *acem-çargah* is played a lot.

When we look at the mathematical intervals between such transposed *maqams* as *uzinak, hicazkâr, zirgüleli hicaz* and *şedaraban,* we see that their scales are the same. These *maqams* are distinguished by their *seyir, çeşni* and *perde.* These *maqams* are of *zirgüleli hicaz* scale in essence. First of all, when we look at the *maqam* of zirgüleli hicaz, we see that the *maqam* is like an ordinary *hicaz* and uses *perdes* of *zirgüle* and *simetriği şehnaz.* Its most important property is that the *yeden* of *zirgüle* is stressed and *karar* is made at the *perde* of *dügah.* In the *maqam* of *hicazkâr,* on the other hand, the *maqam* starts at high pitches as descendant and does not digress from the sounds at the scale. Sometimes *geçkis* of *uşşak* may be played at the *perde* of *neva* (see the *hicazkâr saz semâî* of Tanburi Cemil Bey). The most important property of this *maqam* is that as it enters *karar perdesi* (cadence pitch), the *perde* of *nim hicaz* (do#) may be played with glissando. Although *şedaraban* is similar to the *maqam* of hicazkar in terms of its structure, it has the *çeşni* of *nihavend* at the *perde* of *rast.* The *karar* of the *maqam* is made with the scale of *zirgüleli hicaz* at *yegah.* Therefore, the *perde* of *nim hicaz* does not be used as is the cased with the *maqam* of *hicazkâr.*

When we analyze t*he muhayyer-kürdi, acem-kürdi and kürdi maqams* as examples to combined (mürekkep) *maqams* with regard to their *seyir (progression),* we see that they are completely the same in scale. The *maqam*

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of kürdi progresses at low pitches as an ascending *maqam* and has *karar* at the *perde* of *dügah.* The *maqam* of *muhayyer-kürdi* has two types. In the first type, the *maqam* of *muhayyer* is played firstly and then the *karar* is concluded after a *çeşni* of *kürdi* while in the second one, only the sounds at the scale of *kürdi* are played. This *maqam* has a descending quality; it progresses at high pitches and uses the low-pitched region only towards *karar*. Its *güçlü* (strong) is not the *perde* of *neva,* but of *muhayyer*. The *acem-kürdi* is of two types as well. The first type progresses at the *maqam* of *acem* and has *çeşni* of *kürdi* at the *karar* while the second one plays the scale of *kürdi* and uses the *perde* of *acem* as its *güçlü* (strong). As is seen, although these three *maqams* are of the same scale, there have little similarity. Therefore, in the performance of *maqams,* teaching of *seyir* (progression) is very important.

To give further examples from the combined *maqams*, we may argue that the *maqam* scales of *saba, dügah* and *muhayyer-sünbüle* are the same according to the musical theory of Arel-Ezgi. The scales of these *maqams* use the *perde* of *uşşak* (si comma flat) and the *perde* of *saba* (re four comma flat) as accidental sounds in their equipments. These *maqams* are distinguished by the *çeşnis* and *perdes* found in their *seyirs.* For instance, the *maqam* of *saba* is an ascending *maqam* and progresses at the low-pitches. On the other hand, the *maqam* of *dügah* is played like the *maqam* of *saba* and uses the *çeşni* of *segah* over *dügah* towards *karar* or it concludes with a *çeşni* of *zirgüleli hicaz* at the *perde* of *dügah*. The *maqam* of *muhayyer-sünbüle* progresses like *muhayyer kürdi* and uses the *çeşni* of *saba* over *dügah* and has *karar* over *dügah.* As is seen, these *maqam*s are distinguished in performance by their different *seyir* and including different *çeşni*s and *perde*s although they are of the same scale.

Another importance of the *seyir* for the performance of *maqams* in Turkish music is that the fact that with the impact of the Western music, in *maqams* which are similar to major and minor blocks chromatic variations are used with duet or small duet intervals. In addition, the use of arpeggio with the trio and fifth intervals gives the feeling of Western music during the *seyir.* These arrangements illustrate the importance of *seyir*.

Perdes are the fundamental aspect for the *seyir* of *maqams.* In other words, the Turkish music is comprised of *perdes* and proper playing of the *perdes* is as much important as *seyirs.* To give an example, the special *perde* of *hüzzam* which gives the *maqam* of *hüzzam* its name has a sliding sound and it requires glissando in each performance. When this is not played, the special interval in the *maqam* sounds like *hicaz* at the *perde* of *neva* and the sound of the *maqam* can not be properly conveyed. To give another example, in the *maqam* of *saba,* the sound which is known as *hicaz* in theory and is played as four comma re flat is actually *saba* and the spirit of the *maqam* and *seyir* cannot be given without glissando.

Therefore, the performance of the sounds in the *seyir* in accordance with their original version, their spirit and the essence of the *maqam* improves the performance of the *maqam.*

2.2. DEVELOPING THE SKILL OF SEYİR (MELODIC PROGRESSION) IN TEACHING TURKISH MAQAM MUSIC

Up to this point, the structure, the *seyir* and the importance of *maqams* in Turkish music have been examined. Now, we will look into certain points regarding the development of *seyir* skills in teaching *maqams* of Turkish music, which is the actual subject matter of this study.

The student of music must have the following qualities for the development of her *seyir* skills during the training she would receive on *maqams:*

1. Good knowledge of *maqams*
2. Listening to the works of Turkish music from artists who are master of their domain
3. Exercising Turkish musical works
4. Competence of the instructor

1. Good knowledge of maqams: Having an advanced level of technical knowledge of *maqams* is one of the most important factors for students to develop their *seyir* skills in Turkish music. Here, the student needs to know about tetrachords and pentachords and scale structures, *güçlü* (strong), *karar,* high-pitched *karar, asma karar* (suspended cadence), *yeden* sound, *çeşni, geçki* (modulation), *genişleme* (development), special *perde* and ascending-descending qualities so that he/she may illustrate the properties of the *maqam* during the *seyir.* In this regard, the cadences at *perdes* and *geçkis* are of high importance depending on the character of the *maqam.* For example, the *maqam* called *bayati-araban* and the *maqam* called *karcığar* are of the same scale and may be distinguished only based on their *geçki* and cadences at *perde.* In the *maqam* of *karcığar*, the musician needs to play the *perde* of *hisar* with a glissando from a high note (*perde*) of *hisar* towards *hisar. Bayati-araban* does not have that property. On the contrary, it is played with a *geçki of zirgüleli hicaz* by using the *hicaz* and the *perde* of *nim hicaz* on the *perde* of *neva.* In addition, *bayati-araban* has a descending *seyir* and it is used a *karar* like *uşşak* (by using the *perdes* of *acem* and *hüseyni).* As in the example, having a good knowledge of the *maqam* is the key to begin with a good *seyir.*

2. Listening to the works of Turkish music from artists who are master of their domain: As you know, the

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Turkish music was not officially taught in conservatories for centuries. It was taught especially in Mevlevî lodges and then in *tekkes* (Sufi lodges) and *Enderûn*, which was the Ottoman educational institution. Therefore, the education was based on exercise (master-apprentice relationship). The student would listen to the Turkish musical works from their teachers and people who sing them well and this would enable the student to strengthen his/her memory as to the *perde* intonation and to develop his/her *seyir* skills, contributing to his/her skill to play melodies. With the development of voice recording technologies in the 20th century, voice records of teachers and performers coming from age-old traditions could be preserved and this field is still being developed. This has simplified the training of students. For example, students who listen to the records of Tanburî Cemil Bey, Hafız Sami or Münir Nureddin Selçuk will learn the *perdes* of Turkish music very well and will develop their *seyir* skills.

3. Exercising Turkish musical works: This would increase the students' grasp of *perdes* and contribute to their knowledge of melodies, improving their *seyir* skills. The more the students exercise with their teachers, the more they will learn about melodies. If they have weak *perde* intonation and have not exercised with the teacher very much, they cannot develop their *seyir* skills and cannot have a grasp of the *maqam.* The problem of today's students of Turkish music with regard to *maqam seyirs* is that they have little knowledge of melodies. That is the reason why they cannot perform *seyirs.* In addition, duration for performing the *seyir* in a *maqam* is shortened and the student is obliged to do *geçki.* The real skill is being able to play a long *seyir* with melodic sentences which are not similar to each other. Therefore, if students can exercise on many works with the teacher, they may develop their *seyir* skills.

4. Competence of the instructor: The instructor is the most important factor since he/she is the one who will convey the information in music training. The reason is that he/she will raise the students with musical skills who are submitted to his/her with his/her own *usul.* Therefore an instructor, who comes from such an ancient tradition as that of the Turkish music and who has absorbed that culture very well and was raised well, will ensure that his/her students learn the *maqams* well and develop their *seyir* skills. The instructor who will give training for *maqam* and *seyir* in Turkish music needs to have a good grasp of *maqams,* repertoire and *seyir* besides having good competence in singing and playing musical instruments. For example, his/her performance of *perdes* in such difficult *maqams* as *saba* and *hüzzam* and the richness of the melodies he/she could perform in the *seyirs* of such well known *maqams* as *buselik, nihavend* and *hicaz* may give an idea about the competence of the instructor.

CONCLUSION

In this study, it has been given that an account of and shared experiences with regard to the ways in which *seyir* skills may be developed while teaching *maqams* of Turkish music. Basically, it was argued in detail and with examples that the students may develop advanced *seyir* skills only if they have an advanced technical knowledge of *maqams,* have listened to Turkish music from successful artists, have a competent teacher and could exercise with their teachers. Even though the Turkish music is known as a *maqam* music, it is also the music of *perdes* which are in relation with each other. Therefore, the students must receive a good musical education so that they have an advanced competence with these *perdes*. The *seyir* and the skill of *seyir* constituted by *perdes* may be developed through a master-apprentice relationship, involving a serious regime of exercising, and listening to music.

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DEVELOPMENT OF SCIENCE-PSEUDOSCIENCE SCALE FOR ELEMENTARY STUDENTS: WIDELY ACCEPTED OPINIONS SCALE

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ABSTRACT
Although all kinds of knowledge is valuable, some non-scientific knowledge can cause confusion on students' minds. Science-pseudoscience distinction should be taught in all levels of education to protect especially young age students from this confusion. It is hard to change gained beliefs so giving importance to demarcation from elementary to university levels needs to be the noticed. In this study it is aimed to develop a scale for science-pseudoscience distinction for elementary school students. For this purpose data was collected from 717 students who were attending 5th, 6th, 7th and 8th grades. 20 items scale was created by structural equation modeling. Lisrel 8.7 programme was used for analyze. The observed fit indexes were χ 2 /sd 3.21, RMSEA 0.056, RMR 0.0077, SRMR 0.048, GFI 0.93, AGFI 0.9, CFI 0.95, NNFI 0.94. All values were found acceptable according to literature. KR-20 internal consistency coefficient for the test was calculated and found as .836. Therefore according to findings, the scale which was named as "Widely Accepted Opinions Scale" and was developed by this study is a valid and reliable data collection tool for elementary school students.

Key words: Science- pseudoscience distinction, elementary school students, structural equation modeling.

INTRODUCTION

One of the main goals of science education is to have scientifically literate society. Scientific literacy has been defined over a five decades in literature. One of the definitions of the scientific literacy is to have an ability to distinguish science from non-science which is called problem of demarcation and understanding its limitations (Lii, Hand & Prain, 2002). However, Today's society is increasingly exposed to pseudo-scientific and paranormal claims. To achieve scientific literacy, teachers should aware of these New Age beliefs (Hobson, 2008).

The majority of individuals viewed science as leading certain truth, objectivity, and includes step by step process doing research. Many students have difficulty understanding of scientific knowledge is tentative, product of human creativity, construct subjectively and socio-culturally. Researchers argued the role of teachers and effects of instruction on students' views of science and non-science (Cobern and Loving, 2000).

Educators aimed to teach not only scientific facts, theories and laws to individuals but also they need to teach value of scientific knowledge, power, validity and limitations of science (Turgut el at., 2010). The nature of science is a dynamic structure, brings ongoing development and change together. The perceptions about science can be differentiated in this process. Scientists don't use a single method in scientific studies because scientific problem solving ways have differences based on the problem (Çetinkaya et al., 2013).A scientific problem solving way has many characteristics like as being logical, has to be based on accurate and reliable observation and experiment.

Lederman and Zeidler (1987) explained nature of science as values and assumptions inherent to the development of scientific knowledge. Questions concerning the nature of science such as what science is and what distinguishes it from `pseudoscience'? What is the scientific method? If there is any, how scientific claim can ensure the objectivity of scientific results? How does science explain our observations and experiences? These questions concerning the nature of science need to be discussing in science classrooms for helping students to distinguish science from pseudoscience (Sönmez, 2008).

The disciplines of science which doesn't meet these features together are called pseudoscience. Teaching nature of science is important for solving this distinction (Turgut at al., 2010). Pseudosciences do not value debate and

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criticism and rarely show intellectual development and genuine progress (Beyerstein, 1995). Students need to be provided with opportunities to apply the scientific method (or hypotheticodeductive approach) during science classes. In this process they will likely be asked to suggest one or more hypotheses (i.e., proposed explanations) for an observed phenomenon and test it or them (Eastwell, 2011). It is conscious forward would be possible the recognition of pseudo-scientific claims, the separation of wrong and right, to ensure the correct knowledge a more active role in life and to evaluate different knowing forms in their own contexts (Turgut, 2009). Open and reflective discussions are effective on students' awareness (Lederman, 2007). If this distinction is being reached in young ages, students can be grown as individuals who make the separation between science and pseudoscience.

Even after acquiring a conclusion in the face of evidence, people tend to hold on beliefs that they believe (Wynn & Wiggins, 2002). Therefore it is needed to define the distinction between science and pseudoscience to prevent their superstitions get ahead of scientific truths. This distinction issue has been a debated case for scientists and philosophers. Especially in the early 20th century, the philosophy schools that were founded in several countries aimed to put a line between science and pseudoscience (Çetinkaya et al., 2013). This issue can be called as demarcation and there is not a clear distinction. Also this distinction was determined by different ways by scientists. For example Feyerbend discussed that all kinds of knowledge is valuable and necessary for scientific development (Feyerabend, 1999; Wynn & Wiggins, 2002).

When the studies about science-pseudoscience distinction scale are examined, there is a study found about scale adaptation on university level. The study was carried out by Çetinkaya et al. (2013) and it was seen that the adapted scale from Oothoudt (2008) was included three subscales as "science as a process of inquiry", "belief in pseudoscientific beliefs" and "applying the parameters of science to pseudoscience". In another study, Çetinkaya (2012) was designed science-pseudoscience distinction scale for middle school students. This scale was designed entirely by the context. It is quite necessary to give attention to science-pseudeoscience distinction in elementary school level for protecting students from non scientific beliefs. Therefore, there is a need for a valid and reliable data collection tool for elementary school students on science-pseudeoscience demarcation.

METHOD

This study was designed as a scale development work in order to determine whether the students can make the separation of science-pseudoscience and to establish a valid and reliable data collection tool. The study was conducted with 717 elementary school students who are attending 5th, 6th, 7th and 8th grades. According to Kline (2011), for structural equation modeling analysis it is needed 10 times more sample size of variable amount join to research. Therefore it can be seen that the study's sample size is convenient for the analysis.

A 52-question survey was created for getting the students' opinions on science and scientific studies. There were two choices; "Yes, I believe" and "No, I don't believe". The scoring was 1 for "Yes, I believe" answer and 2 for "No, I don't believe". Confirmatory factor analysis (analyzed by LISREL 8,7 programme) and Kuder Richardson-20 formula was used for data analysis and validity and reliability (Ada et al., 2012).

To develop a reliable and valid instrument five steps were used. These were doing national and international literature review on the subject, developing an item pool based on literature search and the data were collected from 250 elementary students' answers to open-ended questions about the subject, asking expert opinion about the items for content validity and refinement of items after expert opinions, pilot study and refinement of items after pilot study and finally statistically analysis for final version of the instrument.

After doing literature review, the items in the instrument were generated by using W.W. Cobern (2000)'s "The Thinking About Science Survey Instrument (TSSI)", and P.F.W. Preece and J. H. Baxter (2000)'s paper called "Skepticism and gullibility: the superstitious and pseudo-scientific beliefs of secondary school students". In addition 250 elementary students were asked to answer open-ended questions about science-pseudoscience distinction.

The goodness-of-fit tests about data-model correlation can be handled at the same time as a valid indicator of the model parameters (Aşkar & Yurdugül, 2009). The most common statistics that are using for model-data fit calculation by taking advantage of the confirmatory factor analysis are the chi-square ($\chi 2$), $\chi 2$ / sd and RMSEA. In this study first of all, it was analyzed by chi-square ratio between the degrees of freedom. This rate is expected to be up to 3-4. Being smaller than 5 of calculated $\chi 2$ / df ratio and RMSEA's decrease value from 0.055 indicate model-data compliance (Jöreskog & Sorbom, 1993). The other criterias are RMSEA (Root Mean Square of Approximation), GFI (Goodness of fit index), AGFI (Adjusted goodness of fit), CFI (Comparative fit index), IFI (Incremental fit index) and standardized RMR (SRMR/ The square root of the average standardized error). It is acceptable that RMSEA and SMRS should be below than 0.08 or even below 0.05 are considered more as a good

compatibility index. It is expected that CFI, GFI and AGFI values are ≥ 0.90 (Şimşek, 2007). Also Sümer (2000) points out GFI and AGFI from the absolute fit index value 0.95 and higher mean very good fit, between 0,90-0,95 mean the satisfactory compliance. Similar, when the incremental fit indexes CFI and NNFI are 0.95, it is a very good fit, and when they are between 0.90-0.95, it is acceptable fit (Olpak & Kılıç Çakmak, 2009).

FINDINGS

Validity

First, 52 questions had been created for scale development process. Survey questions were decreased from 52 to 46 by expert opinions. After the pilot study, it was decided to use 31of these questions. By the way overall the questions were mostly turned to "opinions which are widely accepted" more than science-pseudoscience distinction. More total grade that students get from the scale means the student have less superstition; less grade means more superstition. The items which were created according "Widely Accepted Opinions Scale" were assumed in one factor and confirmatory factor analysis were started depending on one factor (Kline, 2010; Şahin & Gizir, 2013). First, all 31 questions were analyzed and the fit indexes are shown in Table 1.

Table 1: The Fit Indexes of 31 questions after eliminating from 46 questions

Fit indexes	χ 2 /sd	RMSEA	RMR	SRMR	GFI	AGFI	CFI	NNFI
Observed	3.69	0.061	0.011	0.058	0.87	0.86	0.90	0.89
Limit	≤ 5	≤ 0.08	≤ 0.10	≤ 0.10	≥ 0.85	≥ 0.80	≥ 0.80	≥ 0.80

After getting the fit indexes, standardized Lambda (λ), t and R^2 values were investigated. According to confirmatory factor analysis results, for item elimination factor load values (lambda) were searched by 0.30 and upper values. The standardized values were examined previously in the diagram. Şimşek (2007) emphasize that for t value there shouldn't be any red arrows because red arrow means the item is not statistiscal meaningful on 0.05 level. High multi-frame correlation (R^2) which can be used as the validity index is also need to have value ≥.30. These items were priorly preferred according to Kline (2010).

Table 2: Standardized Lambda (λ), t and R^2 Values

First Items	Lambda	t	R^2	First Items	Lambda	t	R^2
1	**0.29**	7.45	0.91	**32**	0.45	11.77	0.80
2	**0.30**	7.58	0.91	**33**	0.59	16.26	0.65
15	**0.08**	**1.91**	0.99	**34**	0.41	10.67	0.83
16	**0.01**	**0.26**	1.00	**35**	0.49	13.00	0.76
20	**0.26**	6.58	0.93	**36**	**0.29**	7.26	0.92
21	**0.22**	5.61	0.95	**37**	0.44	11.52	0.81
22	0.32	8.17	0.90	**38**	0.40	10.37	0.84
23	**0.16**	4.09	0.97	**39**	0.53	14.21	0.72
24	0.39	10.21	0.85	**40**	0.49	12.98	0.76
25	**0.27**	6.88	0.93	**41**	**0.10**	10.28	0.84
26	0.31	7.94	0.90	**42**	0.47	12.43	0.78
27	**0.22**	5.58	0.95	**43**	0.57	15.45	0.68
28	0.33	8.32	0.89	**44**	0.52	14.08	0.73
29	0.55	14.94	0.70	**45**	0.46	12.26	0.78
30	0.51	13.65	0.74	**46**	0.52	7.78	0.91
31	0.49	12.90	0.76				

As seen from Table 2; the items 1, 2, 15, 16, 20, 21, 23, 25, 27, 36 and 41 from 31 questions were removed because of low factor load values. Also, 15th and 16th items were removed because of not being statistically meaningful (red arrows) on 0.05 level. By the way 11 questions were eliminated and 20 questions were analyzed

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again. The new questions' fit indexes can be seen from Table 3.

Table 3: The Fit Indexes of the last 20 questions

Fit indexes	χ 2 /sd	RMSEA	RMR	SRMR	GFI	AGFI	CFI	NNFI
Observed	3.21	0.056	0.0077	0.048	0.93	0.91	0.95	0.94
Limit	≤ 5	≤ 0.08	≤ 0.10	≤ 0.10	≥ 0.85	≥ 0.80	≥ 0.80	≥ 0.80

As seen from Table 3, the new model's fit indexes according to structural equation modeling were χ 2/sd 3.21, RMSEA 0.056, RMR 0.0077, SRMR 0.048, GFI 0.93, AGFI 0.9, CFI 0.95, NNFI 0.94. It can be said that one factor depending scale model's fit indexes are acceptable. The 20 questions model's path diagram can be seen from Figure 1.

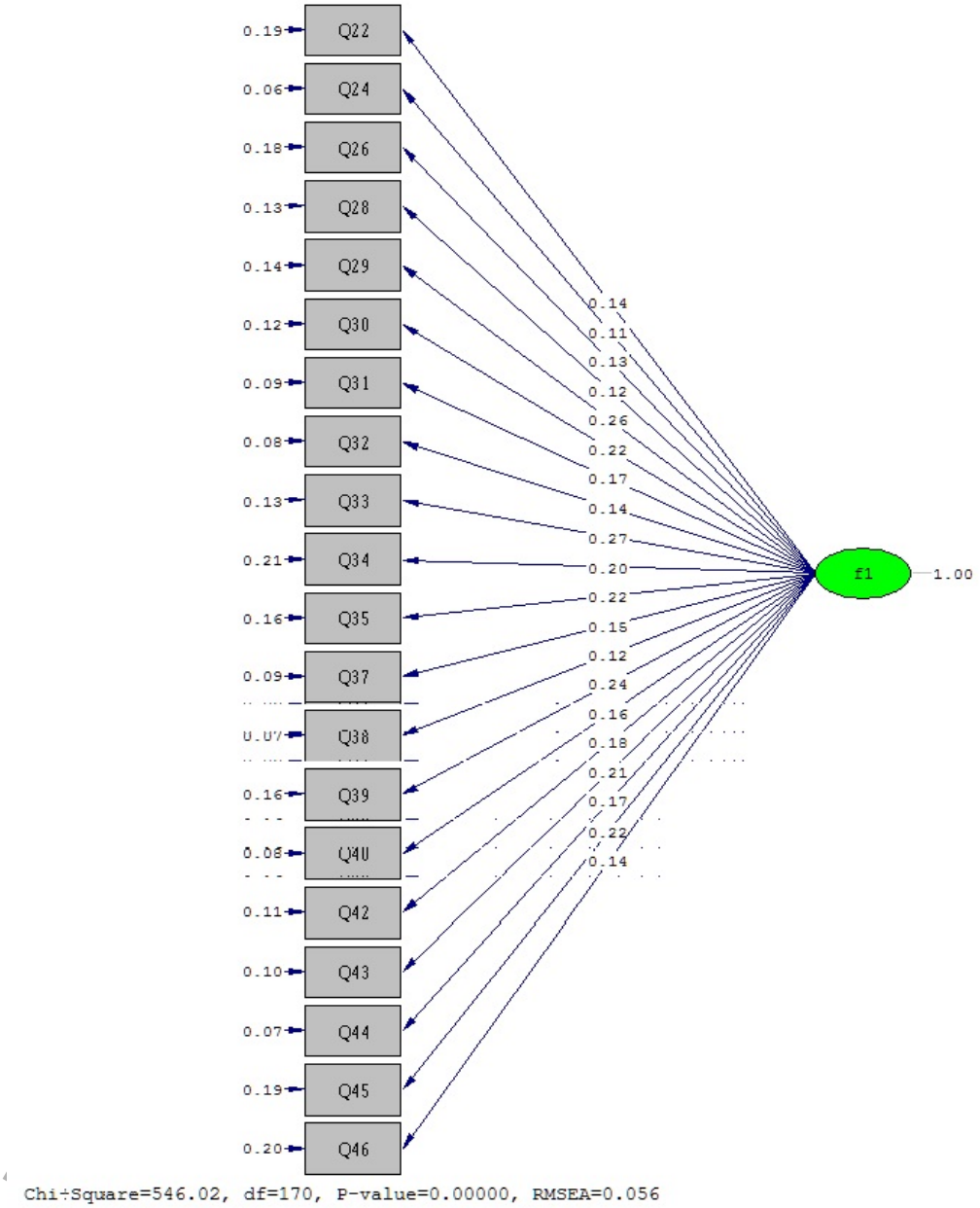


Figure 1: Path Diagram of the Model

Reliability

In this study, because of working with a nominal scale (there were two choices for the answer of the questions), the KR-20 internal consistency coefficient for the test was calculated. Reliability factor was found as .836. This finding shows that the scale is a reliable measurement tool for elementary school students**.**

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CONCLUSIONS

In this study according to findings, a "Widely Accepted Opinions Scale" was developed. The scale has one factor and 20 questions that aimed to figure out elementary school students' superstitions. The amount of questions were decreased by expert opinions and pilot study. There are two answers of the questions. The students get 1 point for "Yes, I believe" answer and 2 point for "No, I don't believe" answer. The lower grade is 20, the highest grade is 40 that can be taken from the scale. There is no reverse items. The lower score means student has high superstitions, the higher score means student has low superstitions. This scores also can give an idea about students' science- pseudoscience distinctions. Having superstitions can be correlated with demarcation. Students may not make science- pseudosience distinction if they get lower grade from the scale because of having more superstitions. The scale was analyzed by confirmatory factor analysis and the model showed acceptable fit indexes. The indexes are χ 2/sd 3.21, RMSEA 0.056, RMR 0.0077, SRMR 0.048, GFI 0.93, AGFI 0.9, CFI 0.95, NNFI 0.94. At the end of the study KR-20 was found as .836. As a result, it can be seen that the researchers who aim to determine elementary school students' science-pseuduscience distinction can use this scale as a valid and reliable measurement tool.

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Yaygın Olarak Kabul Edilen Görüşler Ölçeği

Eski no	**Yeni no**	**Yaygın Görüşler**	**Evet İnanıyorum**	**Hayır İnanmıyorum**
22	1	Bazı taşlardan yapılan takıları takmak, sağlıklı olmanızı sağlar. Örneğin Zümrüt taşı sindirim sistemini düzenler.	☐	☐
24	2	Bir ipin ucuna metal bir cisim bağlayıp el üzerinde sallayarak ileride olacak çocukların cinsiyeti belirlenir.	☐	☐
26	3	Geçmiş yıllarda, başka gezegenlerden uzaylılar dünyaya gelmiştir.	☐	☐
28	4	Hava karardıktan sonra dışarıya sıcak su dökmek uğursuzluk getirir.	☐	☐
29	5	Üzerine kuş pislerse, şansın açık olur.	☐	☐
30	6	Tahtaya vurmak uğursuzluğu önler.	☐	☐
31	7	'Y' harfi şeklindeki ağaç çubuklar iki ucundan tutulursa, hazineye yaklaştıkça ağaç çatal titremeye ve aşağıya, hazinenin bulunduğu yere doğru dönmeye başlar.	☐	☐
32	8	Merdiven altından geçmek uğursuzluk getirir.	☐	☐
33	9	Kara kedi görmek uğursuzluktur.	☐	☐
34	10	Mavi renkli nazar boncukları insanları nazardan korur.	☐	☐
35	11	Kurşun dökmek nazara karşı korur.	☐	☐
37	12	Avucunuzdaki çizgilerden gelecekte başınıza neler geleceğini tahmin etmek mümkündür.	☐	☐
38	13	Kızlar kapı eşiğinde otururlarsa çocukları olmaz.	☐	☐
39	14	Sağ el kaşınması, para geleceğine işarettir.	☐	☐
40	15	Sarımsakları evin duvarına asmak evi uğursuzluklardan korur.	☐	☐
42	16	13 uğursuz bir sayıdır.	☐	☐
43	17	Ayna kırmak uğursuzluk getirir	☐	☐
44	18	At nalını kapı üstüne takmak uğur getirir	☐	☐
45	19	Köpeğin gece havlaması kötü şeylere işarettir.	☐	☐
46	20	Gece tırnak kesmek günahtır.	☐	☐

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DIDACTIC MATERIAL TO SUPPORT TEACHERS IN TEACHING CHEMISTRY. SECONDARY EDUCATION.

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In this paper a didactic material was presented as a work proposal in the teaching of chemistry in secondary education. In which a group of teachers of the Faculty of Chemistry, UNAM, are collaborating and whose fundamental purpose is to support teachers in the teaching of science, promoting significant learnings in students that start in the study of chemistry by providing activities through digital resources. The structure of activities will enable students to reflect and develop their analytical skills, enabling them to make inferences, conjectures and conclusions communicate verbally and in writing.

Keywords: Chemistry education

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DIFFERENT APPROACHES TO SOLVE PROBLEMS INVOLVING BOUNDARY AND INITIAL CONDITIONS USING FREE SOFTWARE

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ABSTRACT

In this paper the solution of problems involving partial differential equations are found both in analytical and approximate ways. The ones considered here are the Laplace and the diffusion equations.
First the analytical solution is obtained with Fourier series. The software GeoGebra is used to show the representation of a function by a Fourier series, considering different expansions. Then, the solution is approximated by finite differences methods. For this purpose, Scilab is the selected software. Different apps were developed to show the results. Finally, the different approaches are discussed and compared.
The mentioned tools were designed for different courses of the Facultad Regional San Nicolás from the Universidad Tecnológica Nacional of Argentina.

INTRODUCTION

Most physical processes are governed by partial differential equations (PDEs). A PDE is an equation that relates a function of several independent variables with their partial derivatives with respect to these variables. The dependent variable depends on the physical problem being modeled. In most physical problems, the independent variables are spatial (x, y, z) or space and time (x, y, z, t) coordinates. The solution of a PDE is a particular function that satisfies both the equation in the domain of interest and the conditions imposed.

Numerical methods are mathematical techniques which allow to obtain approximate solutions of problems. "Numerical solution" is a complete different concept from "exact solution": while the latter is generally an expression that satisfies the problem, the first is a set of numbers or a function that approximates the exact solution. Let´s consider the behavior of a physical system. This kind of systems satisfies general laws of mathematics, called government equations. The analytical solution is a mathematical expression that gives all data about the system's behavior, for any variable or parameter included in the government equations. Instead, the numerical solution expresses the system´s behavior based on numbers obtained solving the government equations for particular values of the variables and parameters of the system (Oñate, 2000a). Of course, from an analytical solution it is possible to obtain numerical values, but it is impossible to reach the analytical solution of a problem from the numerical one.

Every problem, so as to be solved in a numerical or analytical way, must be posed in a mathematical way. Thanks to Newton and Leibnitz, among other mathematics, not only the behavior of any physical system was possible to be described by differential or integral equations, but also solving techniques were discovered, although for simplified problems.

The scientific community´s optimism from the first achievements of infinitesimal calculus, was overshadowed by the evidence that even if every problem could be stated in a mathematical way by differential equations, the analytical solution of those equations was only possible for some particular cases, which were in general gross oversimplifications of reality. Difficulties that arose when finding universal formulas to obtain the solution of practical problems of science, gave place to the finding of alternative ways for solving differential equations. Therefore, at the beginning of the last century, many scientists observed that if differential equations from a particular problem were discretized, numerical values for the unknowns could be obtained: the numerical methods were born (Oñate, 2000b). The common strategy of the numerical methods for solving differential equations is the transformation of the differential equations governing the problem in a system of algebraic equations that depend on a finite number of unknowns. As this number is generally significant, the final system can only be solved with the help of a computer. This fact explains why, despite of numerical methods were known form XIX century, their development and popularity happened parallel to the rise of computers.

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This paper is intended to show the tools designed for different courses of the Facultad Regional San Nicolás from the Universidad Tecnológica Nacional of Argentina: an app designed with GeoGebra to obtain the different expansions of a function by Fourier series and two different personalized windows designed in Scilab to approximate the solution of Laplace equation and the diffusion equation with finite differences. The tools, presented in this work, were developed in Spanish and were translated into English.

PROPOSED PROBLEMS

Two problems involving differential partial equations will be analyzed, showing both analytical and numerical solutions. These problems are:

- A square plate of side L and unit thickness is insulated in both faces so that no heat flows in the direction of the thickness. The right and left edges are also insulated. The temperature on the bottom edge of the plate is held at T = 0 ºC and the temperature at the top edge is held at T = x (L – x). The temperature distribution in the plate is required.

- An aluminum rod of length L, is laterally insulated so the heat flows in the x-direction only. The ends of the rod are held at T = 0 ºC, and the initial temperature is T(x, 0) = x (L – x). The temperature distribution in the rod is required.

The PDEs to be solved are, respectively, the Laplace equation and the diffusion equation, with the corresponding conditions:

$$\frac{\partial^2 T(x,y)}{\partial x^2}+\frac{\partial^2 T(x,y)}{\partial y^2}=0, \text{ with } \begin{cases} T(x,0)=0, T(x,L)=f(x)=x\,(L-x) \\ T_x(0,y)=T_x(L,y)=0 \end{cases} \quad (1)$$

and

$$\frac{\partial T(x,t)}{\partial t}=0.86\,\frac{\partial^2 T(x,t)}{\partial x^2}, \text{ with } \begin{cases} T(0,t)=0, T(L,t)=0 & t>0 \\ T(x,0)=f(x)=x\,(L-x) & 0\le x\le L \end{cases} \quad (2)$$

EXISTING TOOLS

Wolfram Demonstrations Project (http://demonstrations.wolfram.com) is an open-code resource that uses dynamic computation to display, among other things, concepts usually very abstract. These tools are CDF files created using MATHEMATICA that can be run in any computer. It is only needed the CDF player, which is freely available on Internet. Different tools analyze problems like the ones proposed in this work, using Fourier series. For example:

- http://demonstrations.wolfram.com/GibbsPhenomenonInLaplacesEquationForHeatTransfer/
  Here the solution to Laplace's equation for a square plate is obtained. In this demonstration only the temperature along the left edge can be varied; the other edges are held at T = 0 (Wilkerson).

- http://demonstrations.wolfram.com/LaplacesEquationOnASquare/.
  Given Dirichlet boundary conditions on the perimeter of a square, Laplace's equation can be solved to give the surface height over the entire square as a series solution (von Seggern).

- http://demonstrations.wolfram.com/SteadyStateTemperatureDistributionInConductingSquare/
  Laplace PDE is solved in a square region. Uniform and controllable boundary conditions along the edges (excepting the corners) are considered, in a temperature range of -300 °C to 300 °C. The resulting isotherms are plotted (Vivas).

- http://demonstrations.wolfram.com/HeatTransferAlongARod/
  The solution to the heat equation for a one-dimensional rod is shown here. The rod is initially submerged in a bath at 100 ºC and is perfectly insulated except at the ends, which are then held at 0 ºC. This is a Sturm–Liouville boundary value problem for the one-dimensional heat equation (Wilkerson).

- http://demonstrations.wolfram.com/HeatConductionInARod/
  This demonstration considers the problem of unsteady-state heat conduction in a rod. This demonstration compares the numerical solution obtained using Chebyshev orthogonal collocation and the analytical

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solution (Binous & Higgins, 2013).

Each of the links above was last visited on June 2015. None of these examples uses the condition on the derivative of the function at the boundaries, which is needed in problem (1) shown here.

FOURIER SERIES

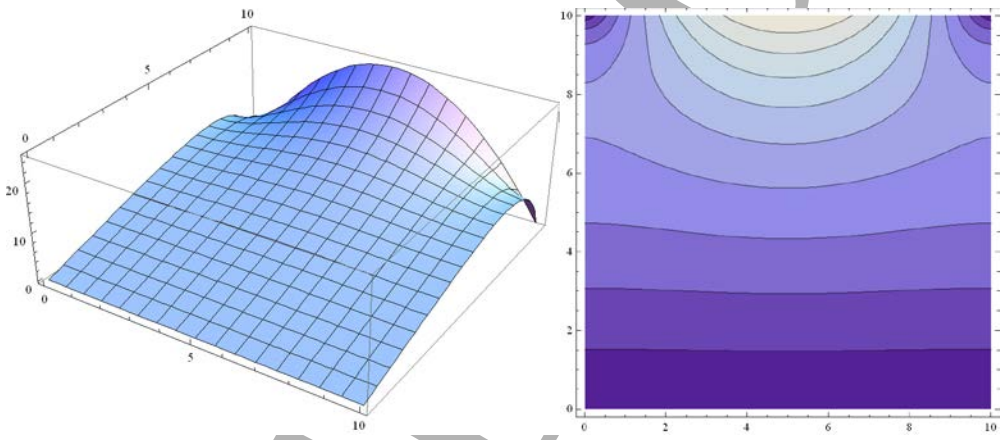
Fourier series arise from the practical task of representing a given periodic function f(x) in terms of cosine and sine functions. Fourier series have important applications in differential equations. They will be used here to solve the proposed problems. The solution of the first problem is:

$$T(x, y) = \frac{1}{L^2}\int_0^L f(x)\,dx\; y + \sum_{n=1}^{\infty} A_n \sinh\frac{n\pi y}{L}\cos\frac{n\pi x}{L} \tag{3}$$

with:

$$A_n = \frac{2}{L\sinh(n\pi)}\int_0^L f(x)\cos\frac{n\pi x}{L}\,dx \tag{4}$$

Figure 1(a) shows the function T(x, y) given in (3) and Figure 1(b) the corresponding contour plot, as is usual to display the solution of problems like this one: graphing the plate.



(a) **(b)**

Figure 1. The solution of the first problem using Fourier series

The solution of the second problem is:

$$T(x, t) = \sum_{n=1}^{\infty} B_n\, e^{-\alpha\frac{n^2\pi^2}{L^2}t}\sin\frac{n\pi x}{L} \tag{5}$$

with $\alpha = 0.86$ and:

$$B_n = \frac{2}{L}\int_0^L f(x)\sin\frac{n\pi x}{L}\,dx \tag{6}$$

Figure 2(a) shows the function T(x, t) given in (5) and Figure 2(b) the solution of the problem for determined values in time.

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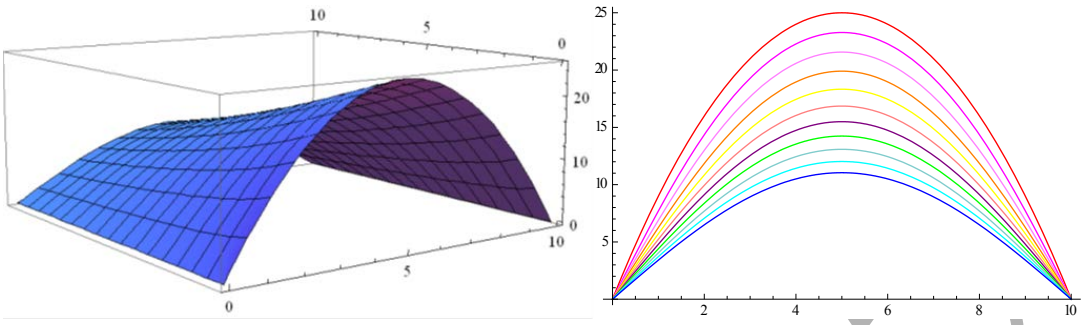


Figure 2. The solution of the second problem using Fourier series

Further details are not presented because these are typical problems for the topic (Churchill, 1941; Kreyszig, 1993; Zill & Cullen, 2009).
When solving these problems, half range expansions of f(x) = x (L – x) were needed. For the first problem a cosine series was obtained first expanding f(x) from $0 \leq x \leq L$ as an even function on the interval $-L \leq x \leq L$ and then extending this new function as a periodic function of period 2L. For the second problem a sine series was obtained first expanding f(x) from $0 \leq x \leq L$ as an odd function on the interval $-L \leq x \leq L$ and then extending this new function as a periodic function of period 2L.

Considering L = 10, half range expansions are, respectively:

$$f(x) = x\,(10 - x) = \frac{50}{3} - 100 \sum_{n=1}^{\infty} \frac{1}{n^2 \pi^2} \cos\left(\frac{2n\pi}{10} x\right) \tag{7}$$

$$f(x) = x\,(10 - x) = \frac{800}{\pi^3} \sum_{n=1}^{\infty} \frac{1}{(2n-1)^3} \operatorname{sen}\left(\frac{(2n-1)\pi}{10} x\right) \tag{8}$$

Figure 3 presents the app designed with GeoGebra to obtain the three possible expansions of a function in a Fourier series: even expansion, odd expansion and periodic expansion. To enter a piecewise function, in the boxes r(x) and s(x) users should change only the ends of the intervals and laws, preserving the conditional structure. Then, the upper ends of the ranges must be written in the boxes on the right. If the function is given by a single law, s(x) should be written as the null function and the upper end of r(x) must be considered in all ends.

In the app, the number of terms to be drawn can be selected with the slipper on the right. In Figure 3, the odd expansion of f(x) = x (10 – x) defined in $0 \leq x \leq 10$ is shown.

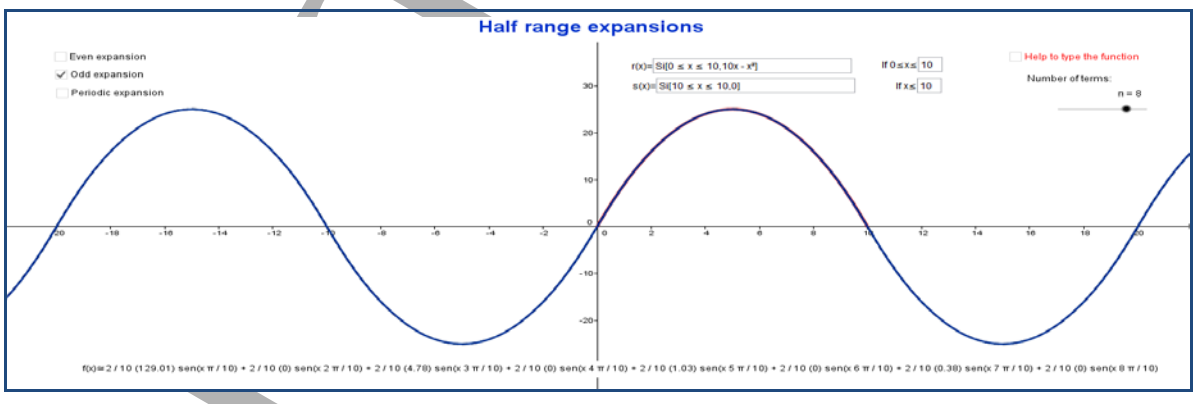


Figure 3. App designed in GeoGebra to obtain different expansions of a function.

FINITE DIFFERENCES METHODS

Finite difference methods are very popular due to its simplicity, and are widely used within the numerical methods for PDEs. The application of these methods is carried out in three stages: first, the discretization of the continuous solution domain by the construction of a mesh in a structured way where the nodes, in an n-dimensional space, are located at the intersections of n families of straight lines; then the replacement of the

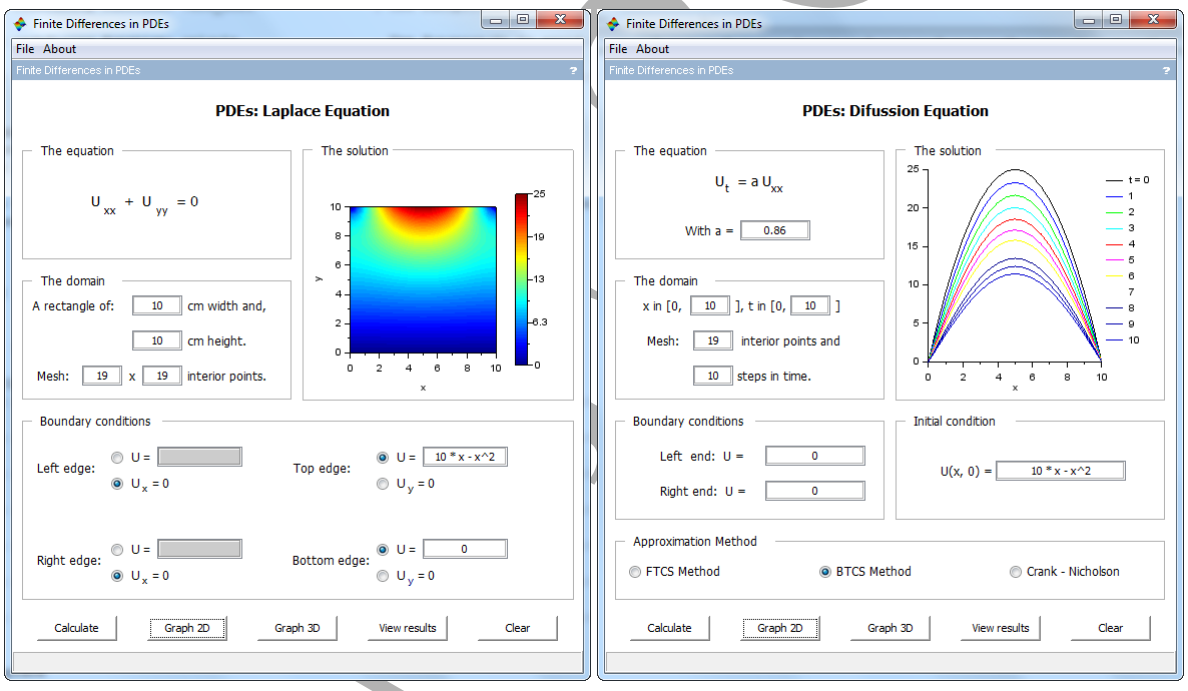
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derivatives appearing in the differential equation by algebraic finite differences, and finally the solution of the obtained system of equations. One of the biggest disadvantages of these methods is their inability to deal effectively with problems on irregular shapes (Hoffman, 1992).

To solve problems such as those proposed in this work in a numerical way using finite differences methods, different personalized windows were designed in Scilab. In Figure 4(a) the app that allows solving problems described by the Laplace equation in a rectangular domain is shown. To use it, the size of the domain under study, the number of interior points to be taken in each direction and the boundary conditions, whether Dirichlet or Neumann, must be loaded. Then the **Calculate** button must be clicked and then the type of graphical output, two or three dimensional graphics, must be selected. It is also possible to obtain a table of numerical values calculated at different points of the spatial domain. For this it is necessary to press the button **View results**.

Figure 4(b) shows the app that approximates the solution of the diffusion equation (Caligaris, Rodriguez & Laugero, 2011). In this case, the equation's coefficient and the domain data and its discretization must be loaded. This tool provides three of the finite difference methods that can be used to solve the diffusion equation: forward-time centered-space method (FTCS), backward-time centered-space method (BTCS) and Crank-Nicholson method. One of them must be selected to get the corresponding approximation, and then do calculations.

As in the app of the Laplace equation, it is possible to plot the numerical solution obtained in two or three dimensions, and to show the solution in tabular form. In both cases continuous functions were displayed despite the solutions obtained by finite differences are always discrete.



(a) **(b)**

Figure 4. Apps designed in Scilab to approximate solutions of PDEs.

The numerical solution can be compared with the analytical one, because it was possible to find the latter. The graphs were obtained with different methods. The analytical solutions (Figures 1 and 2) were plotted from the Fourier series expressions while the numerical solutions (Figure 4) were obtained and plotted with Scilab.

CONCLUSIONS

Solving problems involving differential equations is not a simple task, both in numerical or analytical way. When teaching methods for solving this issue, in particular, practical exercises must be solved to fix learning, and generally too much time is wasted making boring operations. The tools developed with Scilab help students to visualize what is meant to be obtained, and let them analyze the solution obtained, so as to develop the abilities to recognize when a numerical solution is a good one or a bad one.

On the other side, finding Fourier expansion of functions is a mechanical task, and by simple obtaining the

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formulas students cannot imagine properly their graphical representation. Here is where the tools developed with GeoGebra take a relevant place, so as students can change between different representations of the same object, in order to understand the concept.

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DIGITAL GAMES AS A TOOL FOR INCLUSIVE EDUCATION: A CASE OF STUDY REPORT

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This paper presents an ongoing research project whose main goal is to propose and to develop accessible educational digital games. Participatory Design is the approach we use to involve students – with and without cognitive disabilities - and their teachers during game design and prototyping phases. During the game design phase, we proposed workshops to observe students' behavior while playing existing digital games in order to understand their level of interest and engagement. Workshops' results were registered through forms adapted from *The Leuven Involviment Scale for Young Children (LIS – YC)* which allowed us to analyze students' concentration, persistency, memory, facial expressions and reasoning level. The study involved 48 students in second grade from two public elementary schools in Santa Catarina, Brazil, including 2 disabled children. Results' analysis have shown high level of children's involvement during the interaction with the digital games and the inclusive potential by using this technology as an educational tool. It also pointed out difficulties encountered during gameplay.

Keywords: inclusive education, digital games, case study

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DIGITAL LANGUAGE LEARNING PLATFORMS FROM THE PERSPECTIVES OF PREPARATORY CLASS TEACHERS AND STUDENTS

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ABSTRACT
With the emergence of new technologies, materials in language curricula have begun to be built upon digital platforms, which offer variety and provide enrichment in teaching-learning process. Among these materials, e-texts and online components of course-books, separate digital platforms constructed to improve writing, reading, vocabulary, grammar can be counted as the mostly used ones. While some are designed for classroom use to foster teachers' teaching via visual support and richer content, some are intended to be used by learners outside the class, offering more opportunities for language exposure and promoting learner autonomy as well. These innovative tools have brought about new requirements such as teachers' and students' having digital literacy skills. However, before that, teachers' and students' beliefs, attitudes and readiness considering technology-integrated language learning should be investigated to successfully implement it into the curriculum. Within this framework, this study aims to find out teachers' and students' way of access to the Internet, their frequency of using the digital platforms they are required to use and their attitudes and perceptions in relation to using digital platforms in language teaching-learning process. With this goal in mind, research was carried out with 252 students and 40 teachers in the Department of Foreign Languages at Istanbul University in the academic year of 2014-2015. The findings of the research provided implications for institutions and teachers to make more research-based decisions in the process of selecting technology-based materials for their language curricula and revealed differences at several points between the perceptions and attitudes of teachers and students concerning technology-integrated language teaching-learning process.

Keywords: CALL, digital literacy, digital language learning platforms, language teaching in higher education.

INTRODUCTION

Technology has had a great impact on many people's lives in various ways all over the world. Among the main reasons for using technology in language teaching, the way it has transformed our lives and the need for acquiring a new skill called 'digital literacy' can be considered to be the heading factor (Hockly, 2012). The world-wide and nation-wide standards also require institutions and individuals to integrate technology into language teaching. Turkey as a country in the Bologna Process is to adopt the principles stated as part of the studies of European Higher Education Area. For instance, a learner at an undergraduate level is expected to

> monitor the developments in the field and communicate with peers by using a foreign language at least at a level of European Language Portfolio B1 General Level. …
> use informatics and communication technologies with at least a minimum level of European Computer Driving License Advanced Level software knowledge. (NQF-HETR, 2010)

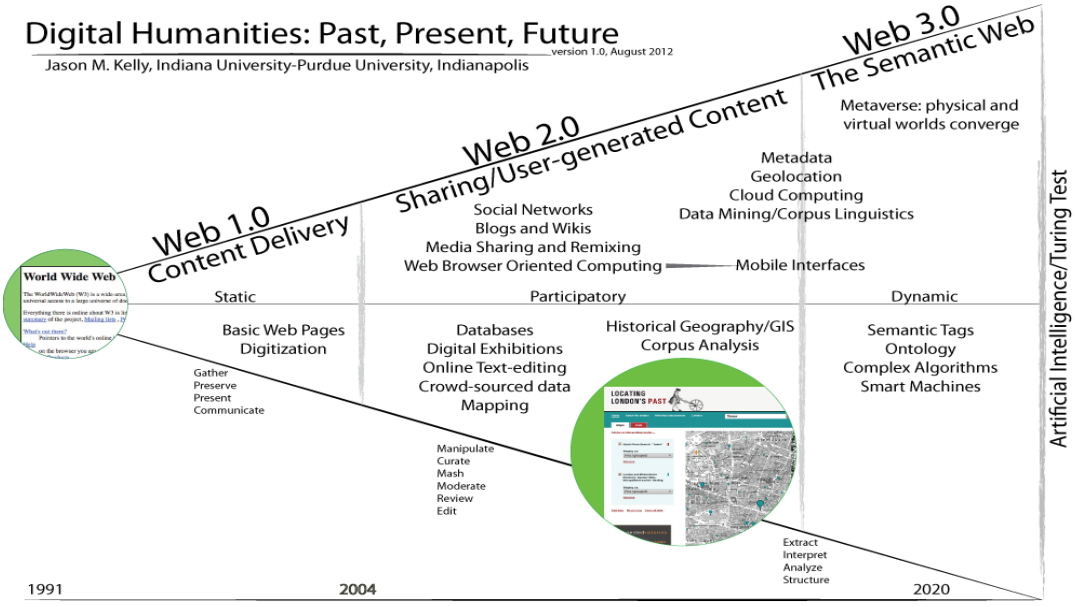
Another factor justifying the use of technology in education is that technology-integrated language teaching exemplifies the gains of the powers of two different systems, studies; to Motteram (2013, p.182), "... it is between the boundaries of two or more activity systems where we find new developments occurring. ... CALL and ELT ... applied linguistics and ELT, and applied linguistics and CALL."

As to what is meant by technology in language teaching, addressing the history of CALL will be a sound starting point; CALL "refers to a variety of technology uses for language learning including CD-ROMs containing interactive multimedia and other language exercises, electronic reference materials such as online dictionaries and grammar checkers, and electronic communication in the target language through email, blogs, and wikis" (Chapelle, 2010, p.66). While in the past language was taught through textbooks or hard-copy materials prepared by teachers, today ELL website materials (Shen et al. 2014), CD-ROMs, companion websites of textbooks and/or learning management systems (Yu, 2010) offered by the publishers or the institutions themselves enrich language teaching-learning process. In addition, the number of communication channels has increased through the spread of using email, Skype, blogs (Murray & Hourigan, 2008; Rivens Mompean, 2010; Bhattacharya & Chauhan, 2010; Trajtemberg & Yiakoumetti, 2011), virtual learning environments (Peterson, 2012) which might also support the learning process by enabling student-student, student-teacher, teacher-teacher meetings. One more alternative is distance-learning programs, which offer individuals educational opportunities despite their being in different parts of the world (Chapelle, 2010; Dudeney & Hockly, 2012; White, 2006; White, 2014).

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In terms of the phases technology-integrated language teaching has taken, three main periods, named differently by different scholars, play a significant role. One of the classification is by Warschauer and Healey (1998) as "behavioural (later changed to structural) (Warschauer, 2000), communicative, interactive"; Bax (2003) categorizes the process as "restricted, open, integrated" (Warschauer and Healey, 1998, Warschauer, 2000, Bax, 2003, cited in Motteram, 2013, p.182). In another type of division, the stages are named as Web 1.0, Web 2.0, Web 3.0; among the ones preferring this type of division, Kelly's (2012) definitions and examples can be seen in Figure 1.

Figure 1. The Phases of Digital Technologies



The figure signifies that the use of digital technologies, mainly Internet, has started in the 1990s with the web pages which do not allow the audience to make any comments or contributions; their main function is to share the content. Web 2.0. phase, however, has enabled people to participate in the platforms. Web 3.0. has introduced people the virtual learning environments and is going on offering more opportunities each coming day.

While the field of technology-integrated language teaching advances, the practice might not proceed in parallel with the opportunities offered, or the facilities are not at the same level everywhere. At this point, Hockly (2014) foregrounds the reality of 'digital divide' in access to technology

> between developed countries (who have technology) and developing countries (who do not), … within individual countries (for example between urban and rural areas), and even within individual classrooms (for example between learners who have access to technology at home and those who do not)… 'effective' and 'ineffective' uses of technology for language learning (Yang and Egbert 2004), regardless of the technology available and … those who have the necessary 'skills' to use technology effectively and those who do not (Warschauer 2011). (p.79)

'Digital divide' points to the probable imbalance between what is intended to be achieved and what is being achieved considering technology-integrated language education. It necessitates institutions to make an attempt on raising students' and teachers' awareness of new opportunities technology can offer to improve language teaching-learning process. Institutions should also consider if their existing context is available to implement the new system and envisage whether they can improve the physical facilities and make any changes to adapt to that intended innovation. In this process, it is the responsibility of institutions to offer trainings for the staff and the students to make the changeover easier and to reach long-term success.

RESEARCH METHODOLOGY

Based on this theoretical framework, research was carried out to investigate students' and teachers' preferences, attitudes and perceptions regarding technology-integrated language teaching-learning process. As a data collection instrument, a questionnaire was developed. The research was conducted with the participation of

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English preparatory class students and teachers in the Department of Foreign Languages at Istanbul University in the academic year of 2014-2015. The participating group is composed of teachers who are expected to use the e-texts of the course-book and the online writing platform in the class and students who are responsible for using the online component of the course-book, online writing platform and online Readers' platform as homework/ self-study. The questionnaire designed aimed to collect data about teachers' and students'

- ways of access to the Internet,
- perceptions of the frequency of teachers' using digital platforms inside the class,
- perceptions of the frequency of students' using digital platforms outside the class,
- preferences, beliefs and perceptions of using technology in language learning process.

After consulting to several scholars who are experts and/or experienced in the subject-matter being explored, the designing process of the questionnaire was completed. The questionnaires were filled and submitted in paper form; the reason why online questionnaire was not preferred is that the research aimed to get data from all the participants regardless of their having access to the Internet. If it had been given online, it would not have been possible to get data from the participants who do not have access to the Internet or who are not capable of using it. Here, it should be highlighted that the purpose of the study is to see the big picture, trying to capture the reality of technology in education.

Although the target group of participants might include all the teachers and students using digital platforms in teaching-learning process, sampling method was used and the research was conducted in the Department of a university. First of all, the target group was limited to the preparatory classes in higher education because the research would end up with different results with different age groups; their expectations, interests, preferences might be different from the generation's at university. The reason why it was conducted in one university is the practicality of reaching the target group face-to-face because this questionnaire had to be completed in paper from, not online, to reveal the profile objectively. In addition, although the participating group of teachers used some online platforms before, it was not that rich and diverse and one of the goals of this research was to reveal whether what was planned is in parallel with what is being preferred and what is being done. Sampling method was used to collect data from all three levels of classes (A, B, C) in the English Division; 252 English preparatory class students -out of 1700- and 40 English preparatory class teachers voluntarily participated in the survey.

SPSS programme was used in the statistical analysis of the data. Chi-square test technique was applied to calculate whether there is statistically meaningful difference between the perceptions, preferences and attitudes of teachers and students. The tables represent the frequencies, percentages, mean scores (except for the chi-square tables) and chi-square test results.

RESEARCH FINDINGS

Through the quantitative data obtained, the findings of the research help to reveal how the teachers and students have access to the Internet, how often the participating teachers use digital platforms inside the class, how often the students use digital platforms outside the class, the teachers and students' preferences, beliefs and perceptions of using technology in language teaching-learning process.

To start with the participants' way of access to the Internet, as shown in Table 1, both the teachers and students mostly use their laptops/PCs and smart phones; however, while the teachers use their laptops/PCs more, the students use their smart phones more in access to the Internet. In addition, using tablets are more popular among the teachers than the students.

Table 1. Frequencies and percentages showing the participants' ways of access to the Internet

Access to the Internet via … .	Students		Teachers	
	f	%	f	%
their laptop/PC	201	79,8	37	92,5
their smart phone	223	88,5	30	75
their tablet	45	17,9	14	35
computers in the dormitory	5	2		
computers at school	13	5,2		

While most of the participating teachers are familiar with the system of following students' studies from an online component of the course-book for about 9 years and they have been projecting the book pages on the

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board for about 4 years, the systems used in 2014-2015 necessitated for the institution to give training mainly because the number and the variety of digital platforms increased this year; moreover, each year a novice teacher joins the institution, which calls for the institution's holding a training session. In the case of students' training, it is also compulsory because of the diverse profile of the students, some of whom are familiar with technology and using technology in language teaching and some of whom are not. As a response to the statement intended to reveal whether the participants have been offered with the necessary training; while three quarters of students responded that they did not get training, this percentage decreases to 32,5% for the teachers (Table 2).

Table 2. Frequencies and percentages showing whether the participants have the necessary training before using the technology-based materials

	Students		Teachers	
	f	%	f	%
No	191	**75,8**	13	32,5
Yes	61	24,2	27	**67,5**
Total	252	100	40	100

As to the help the participating students and teachers get when they have a problem with using technology, as seen in Table 3, while almost all the teachers responded that they could get such kind of help, more than three quarters of the participating students stated that they are not provided with such a support when they have a problem with using technology.

Table 3. Frequencies and percentages showing the participants' perception of the possible help they get when they have a problem using technology

	Students		Teachers	
	f	%	f	%
No	197	**78,2**	3	7,5
Yes	55	21,8	37	**92,5**
Total	252	100,0	40	100

Among the digital platforms the participant teachers expected to use, some of them are supplementary and some are designed as main reference materials. The teachers are expected to use the e-texts of the course-books and online writing platform in their lessons. They could also refer to the online component of the course-book to encourage students to use these components. Table 4 represents students' perceptions regarding the frequency of their teachers' using these platforms and other technology-based materials in the class.

Table 4. Frequencies, percentages, mean scores showing students' perception regarding the frequency of their teachers' use of technology-integrated language teaching materials

Teachers use … in class.	Never		Rarely		Sometimes		Often		Always		N	Mean	SD
	f	%	f	%	f	%	f	%	f	%			
e-texts of the course-book projecting the book pages on the board	3	1,2	9	3,6	9	3,6	53	21	178	70,6	252	4,56	0,823
online component of the course-book	6	2,4	12	4,8	28	11,2	91	36,4	113	45,2	250	4,17	0,973
online writing platform	33	13,5	45	18,4	62	25,4	64	26,2	40	16,4	244	3,14	1,277
online supplementary materials	10	4	21	8,4	77	30,9	91	36,5	50	20,1	249	3,6	1,027
power-point presentations	41	16,5	46	18,5	101	40,6	42	16,9	19	7,6	249	2,81	1,134
videos	11	4,4	23	9,3	96	**38,7**	82	**33,1**	36	14,5	248	3,44	0,996

The results demonstrate that great majority of the teachers almost always use e-texts of the course-book in class as perceived by the participating students. They also use online component of the course-book although they do not have to; however, the teachers do not prefer much to use online writing platform although it is the main reference of the writing lessons as stated in the syllabus. On the contrary, the participating group of teachers does

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not have to use online supplementary materials, power-point presentations and videos in the class, but the results show that they sometimes use them in their classes, which indicates that the teachers voluntarily prefer to utilize from technology in their classes. The table below represents the teachers' own perceptions as regards the frequency of their using digital platforms.

Table 5. Frequencies, percentages, mean scores showing teachers' perception regarding the frequency of their use of technology-integrated language teaching materials

I use … in class.	Never		Rarely		Sometimes		Often		Always		N	Mean	SD
	F	%	f	%	f	%	f	%	f	%			
e-texts of the course-book projecting the book pages on the board	0	0	0	0	4	10	5	12,5	31	**77,5**	40	4,68	0,656
online component of the course-book	3	7,5	1	2,5	5	12,5	10	**25**	21	**52,5**	40	4,13	1,202
online writing platform	8	20,5	5	12,8	9	23,1	8	20,5	9	23,1	39	3,13	1,454
online supplementary materials	1	2,5	5	12,5	10	25	14	35	10	25	40	3,68	1,071
power-point presentations	8	20	3	7,5	11	**27,5**	12	**30**	6	15	40	3,13	1,343
videos	2	5	5	12,5	17	**42,5**	10	**25**	6	15	40	3,33	1,047

The findings in pertinent to the teachers' perceptions show parallelism with the ones obtained from the students; the teachers use e-texts of the course-book and online component of the course-book in the class more frequently than they use writing platform or any other online supplementary materials. They sometimes use power-point presentations and videos, but no remarkable result is observed except for their degree of using e-texts and online component of the course-book.

When we look into the results obtained through the chi-square test conducted to see whether there is statistically meaningful difference between the perceptions of teachers and students regarding teachers' using digital platforms in class, except for teachers' degree of using 'power point presentations' (X^2=9564; p‹0,05), no meaningful difference is spotted (Table 6). Comparing the mean scores of the teachers' and the students' responses confirms this finding.

Table 6. Chi-square test results showing the difference between the perceptions of teachers and students of the frequency of teachers' using digital platforms in class

Teachers' using … in class.	X^2	Sd	P
e-texts of the course-book projecting the book pages on the board	6,602(a)	4	0,159
online component of the course-book	5,033(a)	4	0,284
online writing platform	3,107(a)	4	0,54
online supplementary materials	1,668(a)	4	0,797
power-point presentations	9,564(a)	4	**0,048**
Videos	1,226(a)	4	0,874

Another element investigated through the research is to see how often the participating group of students uses the digital platforms they are responsible for using outside the class as supplementary studies. The online component of the course-book serves as the workbook of the course-book, so the students are to do the exercises assigned in that platform. Online writing platform is the main reference of the writing classes; therefore, the students are responsible for completing the assignment parts outside the class. From the Readers' platform, the students are due to choose and read at least two books each month. Table 7 summarizes the perceptions of the participating group of students in relation to the frequency of their using these digital platforms.

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Table 7. Frequencies, percentages, mean scores showing students' perception regarding the frequency of their using technology-integrated language materials as homework/self-study

I use … as homework/self-	Never		Rarely		Sometimes		Often		Always		N	Mean	SD
	f	%	f	%	f	%	f	%	f	%			
online component of the course-book	105	**42,3**	28	11,3	64	25,8	29	11,7	22	8,9	248	2,33	1,358
online Readers' platform	130	**52,6**	43	17,4	47	19	21	8,5	6	2,4	247	1,91	1,128
online writing platform	104	**42,1**	47	19	66	26,7	18	7,3	12	4,9	247	2,14	1,185

As seen in the table, the frequency of the participating students' using digital platforms outside the class is not high as perceived from their own perceptions. The table below shows teachers' perceptions regarding how often their students use the digital platforms.

Hata! Bağlantı geçersiz.

Students use … as homework/self-study.	Never		Rarely		Sometimes		Often		Always		N	Mean	SD
	f	%	f	%	f	%	f	%	f	%			
online component of the course-book	4	10,3	15	**38,5**	9	**23,1**	9	**23,1**	2	5,1	39	2,74	1,093
online Readers' platform	8	21,6	16	**43,2**	8	**21,6**	4	10,8	1	2,7	37	2,3	1,024
online writing platform	9	**24,3**	11	**29,7**	11	**29,7**	4	10,8	2	5,4	37	2,43	1,144

The perceptions of the teachers also verify that the students do not frequently use online platforms outside the class. As to the chi-square test results showing whether there is difference between the perceptions of teachers and students related to the frequency of the students' using digital platforms as homework/self-study; both in terms of their using online component of the course-book and online Readers' platform, they have different perceptions; however, there is no significantly meaningful difference in their view of students' using online writing platform (Table 9). Neither the students nor the teachers respond in the way that students use online writing platforms.

Hata! geçersiz. **Bağlantı**

Students' using … as homework/self-study.	X^2	Sd	P
online component of the course-book	29,701(a)	4	**0,000**
online Readers' platform	17,023(a)	4	**0,002**
online writing platform	5,004(a)	4	0,287

Hata! geçersiz. **Bağlantı**

In addition to comparing the perceptions of teachers and students in relation to the frequency of their using digital platforms, the research aimed to find out the differences between their attitudes, beliefs and perceptions of technology-integrated language learning-teaching process via likert-type agreement scale (SD=Strongly disagree, D=Disagree, UD=Undecided, A=Agree, SA=Strongly agree).

Table 10. Frequencies, percentages and chi-square test results showing the difference between the attitudes of teachers and students towards using technology in class

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	0	1	3	18	18	40	9,538(a)	4	**0,049**
	%	0,00%	2,50%	7,50%	45,00%	**45,00%**	100,00%			
Ss	f	16	14	46	105	67	248			
	%	6,50%	5,60%	18,50%	42,30%	**27,00%**	100,00%			
Total	f	16	15	49	123	85	288			
	%	5,60%	5,20%	17,00%	42,70%	29,50%	100,00%			

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The results in the table show that there is a meaningful difference between the attitudes of teachers and students towards technology-integrated language teaching in class (X^2=9538; p‹0,05). Looking into the percentages, while 45% of the teachers strongly agreed that they prefer using technology in class, among the students 27% strongly agreed. However, it can be inferred that both teachers and students prefer using technology in class because in both groups the great majority strongly/agreed to the statements.

Hata! Bağlantı geçersiz.

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	0	2	6	23	9	40	10,901(a)	4	**0,028**
	%	0,00%	5,00%	15,00%	**57,50%**	**22,50%**	100,00%			
Ss	f	7	11	22	92	117	249			
	%	2,80%	4,40%	8,80%	**36,90%**	**47,00%**	100,00%			
Total	f	7	13	28	115	126	289			
	%	2,40%	4,50%	9,70%	39,80%	43,60%	100,00%			

As seen in Table 11, there is statistically meaningful difference between the attitudes of teachers and students towards using hard copy materials in class (X^2=10,901; p‹0,05). While the percentage of teachers who agreed is higher than those who strongly disagreed, the percentage of students who strongly agreed is higher than those who agreed. When we also check the results in relation to the participants' preference for using technology-integrated materials in class, the percentage of teachers who strongly agreed to the use of technology in class is more than the percentage of teachers who strongly agreed to the use of hard copy materials in class.

Table 12. Frequencies, percentages and chi-square test results showing the difference between the teachers' and students' beliefs regarding the need for students to study outside the class using online supplementary materials

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	0	0	6	20	14	40	15,582(a)	4	**0,004**
	%	0,00%	0,00%	15,00%	50,00%	35,00%	100,00%			
Ss	f	14	30	67	92	44	247			
	%	5,70%	12,10%	27,10%	37,20%	17,80%	100,00%			
Total	f	14	30	73	112	58	287			
	%	4,90%	10,50%	25,40%	39,00%	20,20%	100,00%			

The results signify meaningful difference (X^2=15,582; p‹0,05) between the participants' responses. While 50% of teachers agreed and 35% strongly agreed to the statement that students need to study outside the class using online supplementary materials, 37,2% agreed and 17,8% strongly agreed among the participating students as a response to the statement as, "I believe I need to study outside the class using online supplementary materials".

Hata! Bağlantı geçersiz.

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	5	18	10	5	2	40	12,218(a)	4	**0,016**
	%	**12,50%**	**45,00%**	25,00%	12,50%	5,00%	100,00%			
Ss	f	99	69	40	24	12	244			
	%	**40,60%**	**28,30%**	16,40%	9,80%	4,90%	100,00%			
Total	f	104	87	50	29	14	284			
	%	36,60%	30,60%	17,60%	10,20%	4,90%	100,00%			

While the distribution of the responses between the teachers and the students shows parallelism on the grounds that both groups stated that they themselves do not prefer reading books from an online platform, the results signify statistically meaningful difference (X^2=12,218; p‹0,05). 12,5% of the teachers but 40,6% of the students strongly disagreed to the statement as, "I prefer reading books from an online platform".

Table 14. Frequencies, percentages and chi-square test results showing the difference between the attitudes of teachers and students towards doing/preparing exercises from an online platform

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		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	0	6	7	22	5	40	20,005(a)	4	**0,00**
	%	0,00%	15,00%	17,50%	**55,00%**	12,50%	100,00%			
Ss	f	45	55	58	60	27	245			
	%	18,40%	22,40%	23,70%	**24,50%**	11,00%	100,00%			
Total	f	45	61	65	82	32	285			
	%	15,80%	21,40%	22,80%	28,80%	11,20%	100,00%			

The results show that there is statistically meaningful difference between the attitudes of teachers and students towards doing exercises from an online platform -for students- and preparing exercises from an online platform-for teachers (X^2=20,005; p‹0,05). The percentages show that the participating teachers tend to utilize from online platforms more while studying. On the contrary, the students do not prefer studying via doing exercises from an online platform. This also strengthens the finding revealed through the responses students gave to the statement aimed to find out whether students feel that they need to study from online platforms.

Table 15. Frequencies, percentages and chi-square test results showing the difference between the attitudes of teachers and students towards reading a hard copy book

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	0	2	2	17	17	38	9,114(a)	4	**0,058**
	%	0,00%	5,30%	5,30%	**44,70%**	**44,70%**	100,00%			
Ss	f	6	12	15	56	157	246			
	%	2,40%	4,90%	6,10%	**22,80%**	**63,80%**	100,00%			
Total	f	6	14	17	73	174	284			
	%	2,10%	4,90%	6,00%	25,70%	61,30%	100,00%			

Nearly 90% of the teachers and students strongly/agreed (in total) that they prefer reading a hard copy book. While the results do not reveal statistically meaningful difference (p=0,058), it might be considered to be on the threshold; 44,7% of the teachers but 63,8% of the students strongly agreed and 44,7% of the teachers but 22,8% of the students agreed to the statement.

Table 16. Frequencies, percentages and chi-square test results showing the difference between the attitudes of teachers and students towards studying pen and paper

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	4	11	8	13	4	40	51,485(a)	4	**0,00**
	%	10,00%	27,50%	20,00%	32,50%	10,00%	100,00%			
Ss	f	11	6	38	68	123	246			
	%	4,50%	2,40%	15,40%	27,60%	50,00%	100,00%			
Total	f	15	17	46	81	127	286			
	%	5,20%	5,90%	16,10%	28,30%	44,40%	100,00%			

With statistically meaningful difference (X^2=51,485; p‹0,05), students prefer to study pen and paper. These findings also show parallelism with the other statements revealing personal preferences in self-studies. Students tend to study pen and paper while the participating group of teachers compared to the participating group of students prefers utilizing from digital platforms in their studies.

Hata! Bağlantı geçersiz.

		SD	D	UD	A	SA	Total	X^2	df	P
Ts	f	0	0	3	22	15	40	10,673(a)	4	0,03
	%	0,00%	0,00%	7,50%	**55,00%**	**37,50%**	100,00%			
Ss	f	5	17	52	121	54	249			
	%	2,00%	6,80%	20,90%	**48,60%**	**21,70%**	100,00%			
Total	f	5	17	55	143	69	289			
	%	1,70%	5,90%	19,00%	49,50%	23,90%	100,00%			

Although more than 70% of both students and teachers strongly/agreed (in total) that teachers encourage students to use online materials, the statistical results still show a meaningful difference (X^2=10673; p‹0,05); while 37,5% of the participating teachers strongly agreed, the percentage decreases to 21,7% in the students' responses.

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Hata! Bağlantı geçersiz.

		SD	D	UD	A	SA	Total	X^2	df	p
Ts	f	1	6	14	14	3	38	4,687(a)	4	0,321
	%	2,60%	15,80%	**36,80%**	36,80%	7,90%	100,00%			
Ss	f	29	29	70	82	33	243			
	%	11,90%	11,90%	**28,80%**	33,70%	13,60%	100,00%			
Total	f	30	35	84	96	36	281			
%		10,70%	12,50%	29,90%	34,20%	12,80%	100,00%			

The statistical results showing whether the students find online components easy to use or not do not signify meaningful difference between the teachers' and the students' perceptions (p=0,321). As the number of participants who are undecided is high and the number of participants who agreed is not remarkably high, we cannot come to a clear conclusion. However, as the number of participants who agreed is higher than those who disagreed, we might infer that not many students find online components difficult to use.

Hata! Bağlantı geçersiz.

		SD	D	UD	A	SA	Total	X^2	Df	p
Ts	f	21	11	1	5	2	40	5,397(a)	4	0,249
	%	**52,50%**	**27,50%**	2,50%	12,50%	5,00%	100,00%			
Ss	f	101	75	35	22	10	243			
	%	**41,60%**	**30,90%**	14,40%	9,10%	4,10%	100,00%			
Total	f	122	86	36	27	12	283			
%		43,10%	30,40%	12,70%	9,50%	4,20%	100,00%			

No statistically meaningful difference is observed between the perceptions of students and teachers regarding their personal awareness of their computer knowledge and its being a probable effect on their preferring/not preferring technology-integrated language teaching. Both groups strongly/disagreed to the statement that they don't prefer using technology because they are not good at using computers.

Table 20. Frequencies, percentages and chi-square test results showing the difference between the perceptions of teachers and students as to whether students find it useful to study from uploaded materials on LMS

		SD	D	UD	A	SA	Total	X^2	Df	P
Ts	f	3	4	15	13	4	39	2,083(a)	4	0,721
	%	7,70%	10,30%	**38,50%**	33,30%	10,30%	100,00%			
Ss	f	29	32	95	58	30	244			
	%	11,90%	13,10%	**38,90%**	23,80%	12,30%	100,00%			
Total	f	32	36	110	71	34	283			
%		11,30%	12,70%	38,90%	25,10%	12,00%	100,00%			

There is no statistically meaningful difference observed between the perceptions of the two groups of participants as to whether the students find it useful to study from the uploaded materials on LMS they are expected to use outside the class both to communicate and to further their studies. The participants who are undecided outnumber those who agreed or disagreed; the number of participants who strongly/agreed is more than those who strongly/disagreed, so we cannot conclude that they do not find LMS useful.

Apart from the quantitative data reached through the statistical analysis, looking at the participants' responses to an open-ended question asking them to express their opinions related to technology-integrated language teaching-learning process, it is realized that most of the students do not prefer digital platforms much but some believe in the need for implementing it into the process. Here are some of the responses received from the students:

> "I suppose it isn't necessary. I prefer learning English with books and concrete materials. But sometimes we can use technology."
> "I find it quite useful but sometimes unnecessary exercises in online platforms bother me. Except for that, I think videos and listening exercises must be supported and their amount should be increased."

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What students have in common in their expressions is that they do not prefer doing exercises, reading books, or writing from online platforms in their self-studies, but they believe it can be used in the class. When it comes to the teachers' voices, most of them expressed that technology is useful, adding their suggestions:

> "Technology is a very useful tool in the classroom. It often helps to engage students and can save teachers time. However, there is a danger of becoming too dependent on technology because there are always time that it fails, and then you need a backup plan."
> "If both we and students have more technological equipment and facilities, use of technology will be more useful in language teaching."
> "I think using technology in today's classes is a must. But I sometimes find using hard copy materials more practical and useful."
> "I totally agree that using online materials in language teaching is a must. I also think that there should be guidance. So students should be guided to choose/use the right materials and to make a good combination of the online data."
> "I think using technology in language teaching is a need in today's world, but I also believe that hard copy materials are still necessary as well. Students need to take notes, write down something and do an exercise from a handout. I observe that both ways should be used and applied together in language teaching."

Both the participating teachers and students came up with suggestions and solutions to overcome the difficulties they have faced during the process of implementing technology into language class. Most of them hold the view that it is not an end but a means; it should be supplementary without eliminating hard-copy materials; facilities should be provided and trainings should be offered to maximize the benefits of integrating technology into a language class.

CONCLUSION AND SUGGESTIONS

The research enabled to ponder on the efforts for integrating technology into language teaching and provided implications for the coming year's decisions. The findings helped to reach the following results:

1. Most of the participants do not have a problem in access to the Internet. Teachers use their laptops/PCs more; students use their smart phones more.

2. While most of the participating teachers reported that they took trainings to learn how to use technology-integrated materials, a great many of the students stated that they did not have any trainings before they met technology-integrated language teaching-learning materials. Similarly, almost all the teachers responded that they can get help when they have a problem with using technology in class, significant number of students expressed that they do not have support when they face a problem with using technology-integrated language learning materials. Actually, the teachers- both before they started to use the materials and just after they started to use the platforms- were offered with the trainings as a guide to using the platforms. Likewise, the students were offered with the trainings at the beginning of the year when they first started to use the digital platforms; however, just a small number of students participated in the trainings. Here, the reasons can be investigated to see if it is because of their resistance, reluctance, not being announced, or else.

3. In terms of the perceptions of teachers and students regarding teachers' using digital platforms in class, except for teachers' degree of using 'power point presentations' in class, no meaningful difference is spotted. Teachers were reported to be almost always using e-texts, projecting the book pages in class. More than half were reported to be using online supplementary materials platform. Actually, the students are to complete the exercises on the online component of the course-book. The reasons can be explored to see why the teachers use the online component of the course-book more than the students do despite the fact that students have the primary responsibility for studying from the online component of the course-book. The teachers might feel the need to support the lesson by using the online component of the course-book because there is no hard-copy workbook to supplement the course-book; the online component of the course-book is designed to serve this purpose.

4. As to the perceptions of teachers and students related to the frequency of the students' using digital platforms as homework/self-study; both in terms of their using online component of the course-book and online Readers' platform, they have different perceptions; as to the writing platform, there is no significantly meaningful difference in their perceptions. For all these three platforms, while the students

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selected 'never', the teachers chose 'rarely' or 'sometimes' more as a response; nevertheless, the common point is that the students do not tend to use digital platforms.

5. Online writing platform is not among the ones which are preferred much; the teachers mentioned that it is not practical to teach writing course by projecting the material on the board; they expressed that both the teachers themselves and the students want to write pen and paper, underline the model paragraphs, essays, etc. Based on this feedback, all the underlying reasons for the writing platform's not being popular should be investigated.

6. The research also helped to investigate the participants' preferences for technology in language learning-teaching process and to find out whether there is statistically meaningful difference between the teachers' and the students' attitudes. To start with, meaningful difference is spotted between the attitudes of teachers and students towards technology-integrated language teaching in class (X^2=9538; p‹0,05) and towards using hard copy materials in class (X^2=10,901; p‹0,05); the percentage of teachers who strongly agreed to the statement aiming to identify the ones who prefer using technology in class is higher than those of students. Accordingly, more students strongly agreed to the statement asking for the participants' preference for using hard-copy materials in class. In parallel with these two results, there is statistically meaningful difference (X^2=15,582; p‹0,05) between the participants' responses to the statement that students need to study outside the class using online supplementary materials; the number of teachers who believe that students need to study outside the class using the online components is higher than the participating group of students who hold the same view.

7. Going on with the participants' personal preferences, it is observed that with significantly meaningful difference (X^2=12,218; p‹0,05) fewer teachers strongly disagreed to the statement as, "I prefer reading books from an online platform." Nearly 90% of the teachers and students strongly/agreed (in total) that they prefer reading a hard copy book; the results do not reveal statistically meaningful difference. Thus, while the teachers are trying to keep up with the technological changes, they do not give up reading hard copy books.

8. Most of the students prefer to study pen and paper with statistically meaningful difference (X^2=51,485; p‹0,05). Accordingly, there is statistically meaningful difference between the attitudes of teachers and students towards doing exercises from an online platform -for students- and preparing exercises from an online platform-for teachers (X^2=20,005; p‹0,05). The percentages show that teachers tend to utilize from online platforms more while studying. On the contrary, the students do not prefer studying via doing exercises from an online platform. This also strengthens the finding revealed through the responses students gave to the statement aimed to find out whether students feel that they need to study from online platforms.

9. In terms of teachers' encouraging students to use online materials; there is a meaningful difference (X^2=10673; p‹0,05); while 37,5% of the participating teachers strongly agreed, the percentage decreases to 21,7% in the students' responses. Yet, a great majority of the students and teachers hold the view that the teachers encourage the students to use online materials (55% of the teachers and 48,6% of the students agreed).

10. No significance difference is spotted between the two groups' perceptions as regards the students' finding LMS useful. As the number of the participants who is undecided is high and there is no considerably high percentage for the rest of the choices, particularly for 'strongly/disagree', we cannot draw a conclusion that they do not find LMS useful.

11. The feedback the participants gave via the open-ended question asking them to express their opinion of technology-integrated language teaching revealed that many of the participants prefer using technology to support teaching, underlying that it should not be overused. Therefore, the main role of technology in language teaching can be described to "assist and enhance language learning", with one important note that "[t]he use of technology should never be the goal in and of itself, but rather one tool for helping language learners to use the target language in culturally appropriate ways to accomplish authentic tasks." (ACTFL)

The results of the research helped to provide insight for the discussion of technology-integrated language teaching-learning process in the sense that several factors should be taken into account before adopting and implementing new technology-based material into an existing program:

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1. Local factors should be taken into account; the facilities provided by the institutions and students' profile (e.g. socio-economic condition, previous learning experiences) play an important role in the decision-making process of following technology-integrated language teaching.

2. Needs-analysis process should be employed to find out students' know-how needed to use technology-based materials, preferences and beliefs so as to successfully implement technology into language teaching-learning process.

3. What 'digital literacy' means and how it is important in the 21st. century should be explained to teachers and students. If it is at national level, nation-wide, if it is at institutional level, institution-wide research must be conducted to see whether they have the required skill or not.

4. Both teachers and students must be provided with the necessary trainings (Felix, 2008). Although individuals are responsible for their own learning and development, institutions have the utmost responsibility to offer the trainings if their educational program involves new features. To Jung (2005, p.15), "[i]nformation technology may provide us with the means of overstepping the boundaries between classroom and real life, making experiential learning a possibility. … we need teachers who can adapt or modify their students' language acquisition devices when necessary." To do this, teachers need continual trainings.

5. Especially in the contexts where the technology is not equally accessible, the other factors should be investigated further. "[E]ducational beliefs, access to resources, student motivation, teacher training, class size, limited class time,, ... will determine how to work most effectively with digital technologies." (Hockly, 2014, p.82) Unless teachers believe the need for any innovations, the probability of reaching success is not at all available; teachers need to see sound reasons for making changes such as integrating technology into language teaching. The reluctance to adopt technology may depend on "incompatibility between the goals of education and interactions between teachers, students, educational and informational resources, and curricular goals and materials" (Levin & Wadmany, 2008, p.235, cited in Hong, 2010, p.64) or teachers might resist due to the "workload and/or change." (Hedayati & Marandi, 2014, p.308)

6. Both teachers and students need time to get used to the innovations. The research may be repeated three years later with the preparatory class students – if they still go on studying via online platforms.

7. In the institution the research was carried out, the purpose for integrating technology into language teaching was to increase students' motivation and participation by offering diversity, thinking that the generation is fond of technology. The main focus was on learning although they use LMS as a communication channel as well. That the students are not very willing to use digital platforms, but still prefer using technology in class and the fact that almost all of them have access to the Internet through their smart phones raise the question of 'what is the place and function of technology in this generation's life?' Therefore, "how students are actually using technologies" can be researched (Conole, 2008, p.124).

8. Similar research can be conducted comparing the public and private university students to see if the underlying reason is socio-economic conditions or the facilities provided.

9. The correlation between the preferences and perceptions of the participants should be investigated in order to see what they believe in doing and what they are actually doing.

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THE IMPLEMENTATION OF SCHOOL BULLYING POLICIES FROM ADMINISTRATORS' PERSPECTIVES

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ABSTRACT
School bullying is a problematical issue that has gained international attention over the last several decades. Numerous governing bodies across the globe have adopted bullying prevention and intervention measures in schools in an attempt to neutralize bullying in schools and create safer learning environments for students. This paper presents results of an impact study of school climate and bullying in Ontario, Canada, following the adoption of Bill 13 – The Accepting Schools Act. Qualitative interviews were conducted amongst 39 school administrators in the Canadian provinces of Ontario and Saskatchewan in order to examine how bullying policies are implemented and carried out in their schools. The results present the following: the data collection process that precedes and follows policy implementation, the perceived effects of policy implementation, as well as administrators' perceptions of their roles in countering school bullying.

INTRODUCTION

Every child has the fundamental right to feel safe at home, at school, and in the community (United Nations, 1990). Experiencing bullying is not a necessary rite of passage during the course of a child's life. Research has shown that bullying behaviors are not typically resolved on their own and could even exacerbate if they are left untreated (Coloroso, 2015; Rigby, 2012). Accordingly, bullying must be targeted directly. Common bullying prevention and intervention approaches consider that adults and other members of the school and community should support the child who is being bullied, the person who is perpetrating the bullying, as well the bystanders who are uninvolved in bullying incidents (Coloroso, 2015). Mishna (2012) further indicates that bullying prevention and intervention measures should target the ecological system surrounding the individuals involved in bullying behaviors. While varied elements are identified by scholars as being conducive to countering school bullying, research supports that bullying intervention is more efficient when undertaken from a holistic perspective, namely by members of the school community and of the community as a whole (Guerra, Williams & Sadek, 2011; Mishna, 2012; Olweus & Limber, 2010). The first step towards addressing school bullying is therefore to endorse a positive and systemic change in the school community. In recent years, in fact, numerous governing bodies around the globe have adopted legislation which mandate bullying prevention and intervention endeavors in schools through an ecological framework.

BACKGROUND

The current study follows a widespread initiative undertaken in 2010 to review initiatives, action plans or official anti-bullying policies in all Canadian provinces and territories. The authors initially compared these initiatives to practices commonly recognised by researchers as contributing positively to reducing bullying in schools. The conclusions of the first stage of the study uncovered the determination of Canadian ministries of education in sustaining and supporting school networks in their bullying prevention and intervention efforts. The results revealed elevated levels of conformity between the initiatives developed by Canadian provinces and territories and promising anti-bullying practises (Beaudoin & Roberge, 2013).

For the second phase of the project, two school boards in Ontario provided the research team with data relating to school climate surveys conducted amongst 3073 students representing 32 elementary schools and 8 secondary schools. Student participants were invited to complete surveys regarding bullying behaviors to which they may have been exposed throughout the year as well as general questions relating to the school climate. Results from this second phase reflected student perceptions of their lived experiences at school, including whether they had been victims of bullying, perpetrators of bullying, or whether they had witnessed bullying without intervening.

Next, the research team analysed the extent of the application of the official Canadian policies, as perceived by members of the school community who are responsible for interventions amongst students. In this fourth phase, an impact study of the action plans implemented by schools in response to Bill 13 was conducted. The objective was not to assess or to make a judgement on the value of the initiatives, but rather to document the changes that

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were determined to be significant by the individuals responsible for the operation of the anti-bullying policies in Ontario schools. The research team also interpreted their perception in regards to the development and implementation process of their school anti-bullying action plans and their roles as agents of change in countering bullying. Their perception of their role in countering school bullying, promoting social justice and pedagogical equity in the classroom and appreciating the short-term educational implications of these factors was also undertaken during this phase of the study. The results allowed the research team to determine that individuals who are responsible for students recognize the importance of involving the broader community in anti-bullying endeavors. They also mention that schools must be aware and must welcome input from the broader community, should target long-term objectives and should nurture positive relationships with community partners in bullying prevention and intervention initiatives.

The purpose of the current study was to further explore the accounts of the same participants who were interviewed in the preceding stage of the study. The objective was to examine the educational methods that were put in place to create and maintain a positive school climate, as well as the strategies employed to prevent and manage student bullying behaviors. More specifically, the research team explored: the participants' definition of bullying behaviors; their strategies to report and react to bullying; ways to support victims of bullying, perpetrators of bullying, and bystanders who witness bullying behaviors, and; the documentation of bullying behaviors in their schools. As a reminder, these reports were collected from individuals who sit on committees responsible for student safety through semi-structured qualitative interviews.

THEORETICAL FRAMEWORK

Ontario Bullying Prevention and Intervention Legislation

The current study was conducted in the province of Ontario, in Canada, and entails an impact study of Bill 13 – The Accepting Schools Act (2012). This legislation contains numerous anti-bullying elements such as the addition of mental health workers in all schools, the inclusion of equity and inclusive education curriculum, an action plan representing the roles and responsibilities of all members of the school community when bullying occurs, as well as the creation of a school committee responsible for student safety (OME, 2012a). Another notable section of Bill 13 is that schools must adopt bullying prevention and intervention strategies, while encouraging a safe and positive learning environment contributing to student learning and achieving their full academic potential. New revisions to Bill 13 by the Ontario Ministry of Education specify that members of the school community must report all behaviors that could provoke a suspension or expulsion to school principals, who are then required to communicate with parents of the students involved. Administrators who are made aware of bullying have an obligation to act on the report by enlisting the assistance of personnel to support victims of bullying, perpetrators of bullying and uninvolved witnesses. All incidents that could have a negative impact on the school climate must be acted upon. The goal is to help students develop caring interpersonal relationships with their peers.

The Accepting Schools Act (2012) has further adopted Policy/Program 144 (OME, 2012b), which stipulates that school administrators should promote and actively reinforce positive student behaviors through character education programs. They must also ensure that parents and members of the community are participating in the school life so that they may support students who are directly or indirectly involved in bullying. In support of these stipulations, Swearer et al. (2009) mention that a comprehensive anti-bullying policy must be accompanied by a number of elements of implementation in order to be successful. Some of these elements could include the identification of values that promote student well-being, the development of anti-bullying endeavors that contain support from the school community, parents and community partners, as well as anti-bullying training for all individuals who interact with students in the school setting, as well as the evaluation of the effectiveness of the policy. By all evidence, developing a bullying prevention and intervention policy will not automatically reduce school bullying. An impact study of the implementation of the policy from the perspective of the administrators who operationalize its guiding principles in schools would further clarify optimal bullying prevention and intervention practices. As such, given that the Accepting Schools Act (2012) has been implemented and put into practice, the Ontario context is ideal for the study of the practical application of anti-bullying endeavors in schools.

Bullying Prevention and Intervention Research

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With the widespread recognition of the detrimental impacts of involvement in bullying, there is now an extensive body of research on its' prevalence, concomitant factors, as well as information pertaining to successful education, prevention and intervention programs (Mishna, 2012). The theoretical framework of the current study is grounded in the pervasive bullying literature pertaining to how it appears to have been interpreted and put into practice by Ontario schools. More specifically, the authors of the current paper address how bullying is defined in the literature, how bullying should be reported and documented, as well as action plans to counter bullying and intervene amongst individuals involved in bullying incidents. The themes developed in a later section reflect these areas of interest.

First, it is important to mention that, while there is no research unanimity on a precise definition of bullying, certain elements are widely reported as being common elements of bullying. In a general sense, Rigby (2008, p. 21) defines bullying as the "systemic abuse of power in interpersonal relationships". Other researchers note that bullying is an aggressive behavior that is carried out recurrently and represents an imbalance of power, where the perpetrator (or perpetrators) has/have an advantage of power (Craig, Pepler & Cummings, 2013). Researchers mostly agree that bullying involve an aggressive behavior in which harm was caused, or for which there should be reasonable recognition that the behavior would be harmful (Rigby, Smith & Pepler, 2004). There is also increasing agreement in the research community that bullying is a relationship problem (Swearer, Espelage & Napolitano, 2009; Craig et al., 2013). Different types of bullying are also identified in the research literature, namely: physical bullying, verbal bullying, social bullying, cyberbullying, and bullying based on a variety of real or perceived differences between individuals (ex. gender, race, religion, socioeconomic status, sexual orientation, etc.).

Reporting bullying is an important consideration where efforts are undertaken to address this issue (Swearer et al, 2009). A common challenge associated with bullying intervention is that students who are victimized by bullying are reluctant to report it due to a fear of reprisal or of the resultant consequences (Coloroso, 2015; COPA & OTF, 2012; Swearer et al., 2009). Where students are equipped to safely report bullying within their school community, there is an increasing likelihood that successive interventions will take place, as administrators may otherwise be unaware of the occurrence of bullying. The documentation and follow-up on bullying appears to ensue from the reporting, and some researchers even caution that reporting alone is weak in the absence of a subsequent action plan to address bullying.

In terms of averting aggressive behaviors, research proposes that interventions should first be preventative and based on educational strategies that are embedded in daily routines (Coloroso, 2015; Debarbieux & Fotinos, 2012) within a positive global approach (Olweus, 1993). Some studies advocate for educational methods that target relationship behaviors between students that imply that decisions taken in regards to these behaviors take into account what is already expected of them in other contexts (Craig, Pepler & Cummings, 2013; Steinberg, Allensworth & Johnson, 2011). There is also consensus in bullying prevention studies in terms of the most effective ways to avoid and react to bullying in schools, which is based on an approach that is more educational than punitive (Craig et al., 2013; Coloroso, 2015). This approach proposes that students must learn to live together and should be guided and encouraged to develop prosocial behaviors (ex. mutual assistance, empathy, altruism, etc.). Moreover, students should learn to resolve conflicts constructively and to repair the harm they have caused where it applies, as well as learn to accept and respect diversity. It is also important for students to learn to adequately express negative emotion, given the fact that these emotions could explain why some students bully others (Dixon, 2011). Many researchers also support the notion that bullying prevention and intervention programs should extend beyond the individuals involved to include members of the broader community (Coloroso, 2015; Rigby, 2008; Swearer et al., 2009). Furthermore, these programs should be based on an evaluation of the needs of the school, on the perceived benefits to the school population, on comprehensive anti-bullying policies that aim to create a positive and caring school culture and on a clear definition of the roles and responsibilities for all who are involved in countering school bullying (Dixon, 2011).

RESEARCH DESIGN AND METHODS

Purpose of the Study

The purpose of the current study was to gather statements from school administrators and members of teams responsible for student safety in Ontario in regards to the strategies and measures employed to create and maintain a positive school climate, as well as their approaches when addressing bullying behaviors. More particularly, the authors of the current paper have studied how school administrators define bullying behaviors, how these behaviors are reported and treated, and how schools are helping victims of bullying, perpetrators of

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bullying and witnesses to bullying incidents, as per their anti-bullying policies. Individual administrator viewpoints were collected during semi-structured qualitative interviews.

Design

The research design utilized to study the nature and content of anti-bullying strategies in schools was inspired by Checkland & Scholes' (2007) Soft Systems Methodology, as applied to problematic educational situations undertaken by several authors (Donnadieu & Karrsky, 2002; Lapointe, 1996; Morin, 2005). This analytical method is grounded on the dynamic of human activity systems. For the current study, the implementation of an anti-bullying action plan is considered to be a soft system, given the fact that individuals on the front lines of bullying prevention and intervention strategies are best equipped to represent the opinions, perceptions, and values applied in the system (Lapointe, 1996).

Sampling and Procedure

The investigative approach utilized in this paper was summative and considered the interpretations of participants in terms of the impact of initiatives undertaken in their schools to counter bullying following the implementation of their action plan. Ontario's twelve French language school boards were contacted to solicit their participation in the current study. Five boards, who oversee the administration of numerous schools in different geographical areas, consented to participate by referring to school administrators who were also members of their school team responsible for student safety. As such, 39 school administrators, including principals, vice-principals, social workers or teachers in charge of bullying endeavors participated in semi-structured qualitative interviews. These interviews had an approximate duration of one hour and were recorded via Skype or a telephone recording device. Ethical norms in terms of informed consent of participants, in terms of respecting their anonymity and the confidentiality of their individual responses were respected. The authors of the current paper also obtained their consent to cite specific passages from the interviews, yet interview data was considered from a holistic perspective in keeping with the analytical strategy.

The themes presented for categorization of interview responses are as follows:

a) How bullying is defined, and to what extent bullying is differentiated from other aggressive behaviors
b) How bullying behaviors are reported (by victims of bullying, witnesses to bullying and by other members of the school community)
c) The consequences of bullying, including an action plan in the event that bullying persists
d) Strategies to support victims of bullying, perpetrators of bullying, and bystanders
e) How bullying behaviors are documented and who is responsible for the updating of documentations strategies

Data Analysis

Data in this study was analyzed utilizing a thematic content analysis characterized by the grouping of information into categories predetermined by the authors as being representative of significant bullying prevention and intervention elements stemming from the operationalization of policies in schools. First, the interview responses were categorized according to the interview questions/themes by outlining the questions where there was consensus by the respondents and instances where minority opinions were emitted. Varied perceptions were also represented in order to assure an even and complete representation of the colligated information. The objective was not to quantify the different types of responses, but rather to register trends. The results therefore indicate whether trends in participant responses were shared by "a few" (approximately 10%), "a minority" (up to 25%), "a large minority" (25-40%), "approximately half" (40%-60%), "the majority" (60-75%) and "a large majority" (more than 75%). It is also noteworthy to mention that other subjects were broached by the participants and could become the object of further study.

FINDINGS

The interpretation of data is represented from a holistic perspective by considering what is perceived, felt, lived by participants as being important and revealing in determining the value of a bullying prevention and intervention approach. The conclusions stemming from the elaboration of a complete anti-bullying strategy contributed to the reflection of the discussion in this impact study of school bullying in the five boards consulted in the current study (Beaudoin & Roberge, 2015). Table 1 (below) represents the interview themes and the corresponding participant responses in terms of the implementation of bullying prevention and intervention policy components, namely how school administrators define bullying and related behaviors, how bullying is reported and treated, and how schools are supporting victims, perpetrators and witnesses to bullying incidents, as per their anti-bullying policies.

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Table 1

Interview Themes and Corresponding Participant Responses in Administrator Bullying Prevention and Intervention Endeavors

Theme	Characteristic Participant Responses
How bullying is defined, and to what extent bullying is differentiated from other aggressive behaviors	Numerous educational opportunities are offered to teachers and parents, in which bullying is clearly defined. Different types of bullying identified include physical bullying (hitting, kicking, etc.), direct verbal bullying (threats, insults, mean-spirited teasing, etc.), social bullying (spreading rumors, exclusion from a peer group, etc.), cyber-bullying (by e-mail, text message, social media, etc.), homophobic bullying (due to real or perceived sexual orientation, etc.), racial bullying, sexual bullying (unwanted groping or advances, etc.), religion-based bullying and bullying due to physical or intellectual disabilities. There appears to be an over-utilization of the term "bullying" by parents, who often misperceive bullying in disagreements between peers.
How bullying behaviors are reported (by victims of bullying, witnesses to bullying and by other members of the school community)	Students are made aware of the fact that adult members of the school community are concerned with their well-being and will respond to reports of bullying. Reporting of bullying depends on where and how the bullying occurs. A minority of schools have anonymous reporting protocols and strategies in place. These could include a generic e-mail account or a bullying box where students fill out a form describing the date and how the bullying occurred. Some participants question the effectiveness of anonymous reporting strategies and consider that students would prefer to speak to someone directly about their experience. Victims of bullying should report it immediately and refrain from engaging with the perpetrator of bullying. Witnesses of bullying should report the incident to an adult member of the school community, otherwise could exacerbate the situation. Some students are reluctant to report bullying because they fear negative perception of their action by their peers.

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Table 1 (continued)

Theme	Characteristic Participant Responses
How bullying behaviors are reported (by victims of bullying, witnesses to bullying and by other members of the school community)	Teachers or other members of the school community who receive a report of bullying should react immediately. For some cases of bullying, incident reports are completed and filed.
The consequences of bullying, including an action plan in the event that bullying persists	Schools should employ a wide variety of intervention strategies to deal with bullying, which promote positive student behaviors while helping students make good choices. Interventions should vary in accordance to the nature and severity of incidents, as per the provincial progressive discipline policy. The process for carrying out consequences of bullying often occurs as follows: students are made aware of the consequence of their actions, parents are contacted, a written reflection by the student is signed by parents and a restorative measure is assigned. Suspension or expulsion are last resorts for bullying incidents, and are only utilized in cases where student safety is compromised, where a student was seriously hurt, or in cases of persistent bullying. School principals are often responsible for follow-ups to determine if consequences ascribed in bullying incidents were effective. Students, parents, teachers and other members of the school or broader community are often involved in the monitoring process. In cases of extreme bullying, schools sometimes involve local police services to assist in interventions.
Strategies to support victims of bullying, perpetrators of bullying, and bystanders	Members of the broader community, such as social workers, often support students who have been victims of bullying or who are chronic perpetrators of bullying. A variety of strategies to support victims are presented, namely: identifying individuals with which they are comfortable to help them; contacting parents and making them aware of the situation; providing students with strategies to react to bullying (ex. confide in a person with whom they feel comfortable, avoid areas where bullying commonly occurs, avoid retaliation or revenge on the perpetrator, etc.); encouraging participation in activities that could rebuild their self-esteem; recommending that the student refer to outside assistance, such as counselling services.

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Table 1 (continued)

Theme	Characteristic Participant Responses
Strategies to support victims of bullying, perpetrators of bullying, and bystanders	A variety of strategies to support perpetrators of bullying are also identified, namely: involving parents in all stages of the intervention process; utilizing services offered by social workers, educators, and other specialized interveners; presenting potential serious consequences if their behavior persists; teaching social skills.
How bullying behaviors are documented and who is responsible for the updating of documentations strategies	School principals must be informed of all bullying incidents before the end of the school day during which the bullying occurred. Principals are typically responsible for the implementation of a documentation strategy for bullying incidents, and for maintaining the documentation of bullying. Incident reports should be filled out by the individual who has responded when bullying occurred. Principals conduct investigations of all incident reports received. When students receive suspensions or serious sanctions, these are placed into their school record.

DISCUSSION

The first theme addressed the definition of bullying and how it is distinguished from other aggressive behaviors. The reported definitions by the participants are closely linked to bullying typologies identified in the bullying literature. Participants identified a number of common types of bullying as supported by the literature. Establishing parameters of what constitutes bullying is important. Rigby (2008, p. 21) highlights several issues associated with defining bullying "to everyone's satisfaction". Most of these issues revolve around the perception of individuals who are involved in or who witness bullying. For one who is targeted by a perceived aggressive behavior, for example, it may appear to be evident that the behavior constitutes bullying, while the perpetrator of bullying may be apologetic or may not share this perception. In the current study, in fact, many participants specified that there appears to be an overuse of the term bullying, that this term is often utilized as an umbrella for all conflicts between peers in schools. This could be attributed to the fact that bullying is now widely conveyed in the media and there is awareness of the importance of countering it in schools due to the reporting of serious consequences that have arisen from a number of momentous incidents. This finding suggests that discussing what constitutes bullying, and making this definition widely available to all members of the school community is often paramount in schools, as appears to have been the case for the administrators who participated in the study. Some participants note that the issue lies in the fact that bullying information sessions are often poorly attended by parents, for a variety of reasons (ex. personal reasons, unavailability, busy work schedules of parents, lack of parent interest, etc.).

For clarity and succinctness, the second and fifth themes will be addressed jointly. These themes pertained to the reporting and documentation of bullying behaviors. The current study uncovered the fact that reporting and documenting bullying were, in fact, frequently joined. It is important to mention, however, that safe reporting protocols in isolation are insufficient (COPA & OTF, 2012; Swearer et al., 2009). Research has shown that strong reporting procedures should be developed and implemented in schools (Swearer et al., 2009) and that intervention is more likely to occur and be successful where safe reporting protocols are accompanied by clear documentation and follow-up action plans (COPA & OTF, 2012; OME, 2012b). Participants in this study adopted a number of

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creative ways to report and document bullying. The digital orientation of current societal trends appears to be reflected in bullying reporting and documentation strategies. Electronic forums appear to have replaced the traditional "bullying boxes" in which, for example, students would place paper slips of their reports of bullying. Some of the identified reporting and documentation strategies include creating applications, anonymous e-mail addresses or social media accounts, electronic tracking systems for bullying, and a variety of other electronic means by which to report and track student discipline issues. Some administrators who previously utilized the bullying boxes noted that some students were reluctant to make use of them because they did not want other students to see them placing their paper slips into the boxes. An interesting finding arose from this portion of the data, where one participant indicated that bullying is not a problem in his school. This is noteworthy, since some degree of bullying has been uncovered in every system in which studies have been conducted. Further probing revealed an absence of reporting protocols in the school (which the participant attributed to the lack of bullying in the school). This appears to support the importance of implementing joint mechanisms to report, document, and follow-up on bullying incidents.

The third and fourth themes addressed the consequences of bullying and follow-up endeavors that are undertaken to ensure that interventions were effective. The school administrators surveyed in the current study mostly subscribe to anti-bullying strategies that are preventative and educative in nature. Almost all participants stated that the intervention once bullying has occurred should be prescribed in accordance to the nature and severity of incidents. These interventions also appear to be mostly restorative in nature, where the intent is for the harm that has been caused to be alleviated, if not repaired. There was a notable absence of reporting of punitive measures ascribed to bullying, with the favored supports appearing to be orientated towards remedial actions, self-esteem development, and strategies to negotiated bullying behaviors to which they may be exposed to or participate in, in the future. The ultimate goal is to make schools safer places to learn. Participants in the current study also reported a wide variety of strategies that are geared towards supporting victims of bullying, perpetrators of bullying, and bystanders who observe bullying, yet are uninvolved. Conversely, the Ontario Ministry of Education's Progressive Discipline policy (OME, 2009) emphasized on the creation of a positive school climate and the promotion of positive student behavior. This policy further enables the principal to select suitable consequences to address inappropriate student behavior, which appears to be strongly reflected in the administrator interventions in the schools surveyed in the current study. Targeting student behavior positively is also identified in the literature as being conducive to creating a positive school climate and effectively countering school bullying (Coloroso, 2015; Dixon, 2011; Mishna, 2012).

CONCLUSIONS

The current study explored administrator accounts of ways that anti-bullying policies are implemented in their schools, in terms of the definition of bullying, the reporting and documentation of bullying, as well as intervention strategies once bullying occurs. The results are promising in the sense that bullying is addressed, to some extent, in all schools considered in the study. New and innovative strategies to report and respond to bullying are emerging in Ontario schools and appear to reflect societal trends on the increased use of technology in the classroom.

It is also noteworthy to mention that language from the provincial policy appears to be widely utilized in schools, and widely adopted to target bullying behaviors. This is reflected in the fact that very few punitive approaches are identified in schools, as these appear to have been replaced by restorative justice measures that promote prosocial behaviors amongst students and positive interactions between students and adults in the schools. All participants recognize that they play an important role, as administrators, in addressing bullying in their respective school. They also recognize that they must act collaboratively with members of the school and broader community in order to render schools safer places to learn.

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DISCIPLINE OF AN INTERNATIONAL TRAINING COURSE PROPOSAL TO PRINTMAKING: SAMPLE OF KARABUK UNIVERSITY

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ABSTRACT
This paper is a report on the findings of a study conducted on a graduate level virtual conference summer school course. Discourse analysis techniques were used to examine the resulting transcript of texts for evidence of a democratic discourse within a community of learners. Findings indicate that gender is not masked in the text driven discussions on the Internet. Distinctive discursive styles are often sex class linked. Like face to face or classroom contexts, status is accorded unequally within discourse communities. Participants are not equal and are not equally attended or responded to. Educators need to take a serious and wary approach to accepting claims of ensured democratic participation in computer mediated communication formatted classe The pictures are called the original print images directly with a variety of tools and materials or through dies paper or on similar material. These are graphical images. The print image provides the artists with the creativity and ability and rich composition. In this context, The assets can not be maintained only within the boundaries of art. The graphical reproduction has many uses by a method.

The Design of Industrial Products have been made in EUT 266 Program by II. Grade students of the The Faculty of Fine Arts and Design in Karabuk Üniversity Safranbolu Fethi Toker during the spring semester of 2014-2015 and the Printmaking in the course of the creativity-enhancing curriculum practices were created. In these applications, at the same time the concept of a particular giftware, decorative items and different decoration items have been presented not just as a picture presentation with the Styrofoam pressure of the original printing techniques; and a new proposal has made to the field.

In this article, the importance and diversity of the new proposals presented has been mentioned with creative applications made in the public courses in the discipline in the close proximity.

Keywords: Printmaking, Styrofoam, Decorative Items, Creative, Practical

INTRODUCTION

Printmaking is the process of making artworks by printing on materials such paper. The opposite surface lines by painting since Paleolithic man who perhaps hard materials such as horn and bone of rock art printing with sharp instruments has also created the first examples (Gabrowski & Fick, 2011:75). Invented the art of printing paper gained importance. In approximately the 15th century began to be used in some countries in Europe. Our country has benefited from the high pressure in the printing of images in the book for the first time in 1830 by İbrahim Müteferrika who founded printing press. In Turkey After 1936, also it has been used in all the painter and art teacher training institutions. The term of Printmaking which was introduced by Mustafa Aslıer in 1972 became popular within short time (Özer, 1995). In the World, that can be shown Andy Warhol and Serigraphic painting art. Andy Warhol, had been working for a long time who benefited from the advertising and printing techniques using the icon again (Fineberg, 2014:244) Arguing that they were produced in famous works of plastic worth taking advantage of the opportunity to replicate the ease of printing techniques. In Karabuk University has an academic who makes printmaking art in different samples. Assistant Proffesor Anıl Ertok Atmaca who worked illustrative and printmaking art. Since 2000s artist has been working on printmaking in digital print. You can see in her print art not like Andy Warhol's but they are special with colors, under digital print discipline and pop art. She touches upon the Eastern of Turkey women violence and marriage in early ages of daughters. In this painting you can also see and understand the violence to women (Figure 1.)

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Figure 1. Anıl Ertok Atmaca, Untitled, Acrylic and Digital Print On canvas, 2014

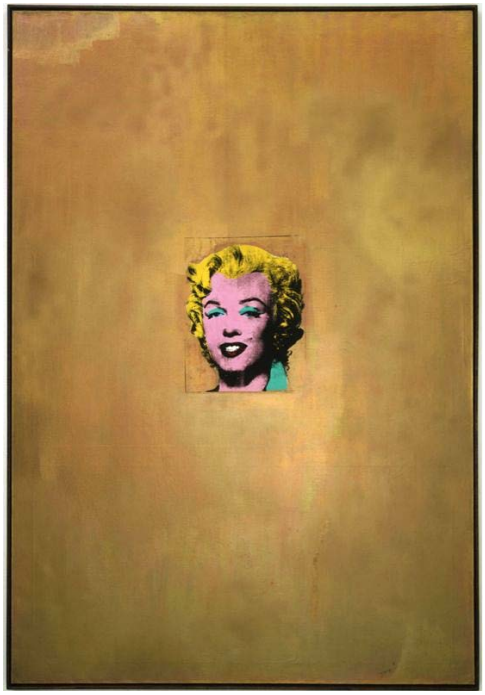


Figure 2. Andy Warhol, Gold Marilyn Monroe, Printmaking and Oil-Acrylic On Canvas, 1962, The Museum Of Modern Art, USA.

Additionally, since printmaking enables the reproduction of a painting, it is an afordable method which makes it easier for people from all ages to produce authentic works of art. Andy Warhol explains why he loves the printmaking: “With little difference in the same picture every time you can renew it.” (Farthing, 2010:489) (Figure 2.).

The printmaking technique which offers various different opportunities is generally divided into the following five basic types: (Chapman, 1994)
1-Monotype Printing
2-Relief Printing

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3-Intaglio Printing
4-Serigraph
The research suggests that just one type of printmaking that should be made use of is relief printing due to the students in fourth term of licence degree in Industrial Product Design in Karabuk University.

RELIEF PRINTING
Used high- pressure section of the high non- carved mold carved with various carving tools watercolor gouache acrylic ink and water-based paints are not part of the engraved printing process is performed by driving the paint. This can be achieved by printing more than one study. Obtaining point to note is inverted onto the mold of the desired image. So that the image is transferred onto a flat material. It has three types of relief printing: (Figure 3.)

a- Linolium Printing
b- Wood Printing
c- Template Printing

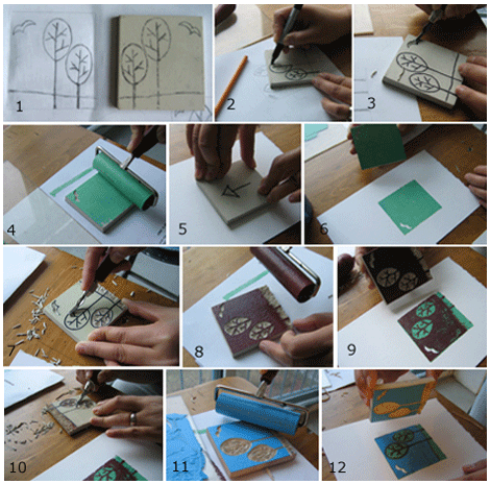


Figure 3. Relief Printing

Template printing technique it is shown in the training program addressed in the article. Tamplate printing , such as paper or cardboard cartons Styrofoam is a high print image processing techniques applied to templates made with suitable plastic based materials. This printing technique can be found in the nature of technical -compatible materials can also be used in different tissues. The appropriate template to design an image to be made in the technical structure of the carved or cut. The design selected should not be too finely detailed. Designed to be used in paper picture pattern is drawn on cardboard or styrofoam. After drawing, It is engraved with knife, spoon etc. The mold should be in just one piece. This technique can be used both negative and positive. The paint is applied to the high part of the place carved outside. Paint can be applied after printing paper and cloth bags to cardboard (Figure 4.)


Figure 4. Styrofoam Printing

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In printmaking course is applied in the training programs conducted at the same time stamp application. Stamp means printing in Latin language. In history, after the caves and rocks carvings are seen as relief printing form of stamp design. This first prints consist entirely of paper recording. In the 7th and 8th centuries of printmaking is beginning to include pictorial features.

INDUSTRIAL DESIGN EDUCATION

At the beginning of the industrial design training covers basic design education. This course is an introduction to the design. Two- and three-dimensional design and composition, color, texture, line work, Exercises such as the conversion is made to the visual composition of the various concepts. Industrial production form the backbone of design education 'project' or 'product design', also called courses however, it is up to the course credit hours and classes. In this course students of different scales,You will be asked to design projects of products from various fields. Students are given based on the project description by making sketches, creating alternatives, detailing, preparing presentation layouts, designs go through steps such as making the model. During these phases, the course instructors, students are evaluated step by making comments about their work. The students, projects After sheets are delivered in the face of a jury consisting of lecturers they do can enter the presentation of the design. Fewer hours outside the course of this course, less credit, theoretical or practical; designs, technical drawings, ergonomics, mechanical computer-aided design, structure, materials, production methods, model building, the historical process of design, product marketing, such as the economy, courses in industrial product design is one of the cornerstones of part of undergraduate education.

TERM INFORMATION

Unlike the fine arts department of industrial design which depends on the applied visual arts department faculty must be people-oriented product design. Bachelor's degree in the article consists of second classes students. Printmaking course is a mandatory course electives. It plays an important role in the interdisciplinary training course. Human -centered design department is able to express himself freely in design and spirit with this course. In this term students who newly concentrate their design culture and find themselves in thier social arena. So in interdisciplinary education, it is important that you should be indirect art samples. You can't paint or make printmaking such as painting studied students. So in this article subject is interdisciplinary printmaking. Under the basic art discipline and printmaking colors levels there can be studied step by step on the book of *"Basic Design by Anıl Ertok Atmaca."*

PROJECT PROCESS

In term Project, it is given to students the concept of their drawing sketch for printmaking. This should be all in one piece and not just so large because this makes it hard to engrave. And the students draw their sketch copy its drawing to the styrafoam and start to engrave by helping spoon, finger, knife and etc. equipments. So it is getting to prepare for dying it. After dyed the styrofoam, it is printed to equipments: paper, fabric, cartoon and the other paper based materials (Figure 5.).



Figure 5. Styrofoam Printmaking Steps

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PROJECT SAMPLES

That can be seen in the below project samples belonged to students (Figure



Figure 6. One of Student Concept is Christmas



Figure 7. One of the Other Student Concept is Spain

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Figure 8. Industrial Product Design Semester Expo Stand

CONCLUSIONS

In this article it can be refered that all people under interdisciplinary or the other can make his art expression. And in the art education, concept, technique tamplates and teaching has a very big influence.

In art education in Karabuk University is upon the other art department disciplines and all together teaching courses has it in. In all over the worl which is accepted style of printmaking style has been changing with this article because printmaking does not only have the classical equipments and process but also it has the new horizons in producing and including the art education.

Printmaking art is not just only engraving and later printing the materials it is also that basic art education discipline in arts and design faculty.

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DISCOVERY YEAR MANAGEMENT: THE FOUR YEARS EXPERIENCE

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ABSTRACT
Our university was first established in 1985. One of its main goals then is to produce local workforce for the nation. Fast-forward 30 years later, the university has evolved to become a research-intensive university with internationalisation at the forefront of its strategic thrust. The transformational journey was timely in order to cater to the ever-changing needs of local and international society and the global market, and to respond to the rapidly changing expectations of higher education. This paper looks at how we evolved on the internationalisation front focusing particularly on outward student mobility. On the outbound front, our innovative curriculum, known as GenNEXT, allows students to leave the university for one year in their third year of studies also known as the discovery year. Various supports and services have been put ranging from academic, financial to welfare support in order to facilitate this outbound mobility.

Keywords: Student mobility, Support and services, Internationalisation

INTRODUCTION

This paper is divided into three parts. The first part focuses on the brief history of Universiti Brunei Darussalam, henceforth referred to in this paper as UBD (UBD, 2013a), its journey of transformation ranging from total overhaul of the curriculum to its internationalisation initiatives. The second part focuses on our innovative curriculum and its mandatory year out also known as the 'Discovery Year' (UBD, 2013b). We discuss the benefits of discovery year to our students as well as the type of supports and services available to our students. These supports come in many forms ranging from academic and administrative supports to financial support. Finally, we share the challenges and issues faced by UBD and how we can overcome it.

JOURNEY OF TRANSFORMATION

UBD was first established in 1985 to cater for the growing demand to produce local workforce for the nation. The first intake of UBD was 176 students. Its curriculum is very major-centric where students would take almost all their modules in their major areas. Outbound mobility was limited only to the best students in each department. On average, outbound student ratio was 1-2%.

In 2009, the university underwent major transformation. Its curriculum was changed to liberal-arts style broad-based curriculum whereby students only spend 50-55% of their modules in their major areas. The remaining 40-45% of the modules have to be taken from outside their major areas, either within their faculty or outside their faculty thus promoting cross- and trans-disciplinary experiences. More importantly, departments were closed down in place of programmes to promote cross- and trans-disciplinary researches. Interestingly, the new four-year curriculum known as GenNEXT (UBD, 2013c) forces the students to leave the university during their third year of study (also known as the 'Discovery Year'). During the discovery year, UBD students have a choice of four activities, namely study abroad, internship, incubation and community outreach programme. During study abroad, our students enroll in partner or non-partner universities and take regular courses or modules from these universities on a credit/grade-bearing basis. Internship involves our students working in local companies, government agencies to multi-national companies both locally and abroad. One of the main purpose of internship is to provide our students real-life working experience and at the same time testing their knowledge in a real working environment. Incubation project is basically working on starts-up, which could originate from business or technological ideas or innovations. For the community outreach programme, our students indulge in giving back to the society through various activities such as teaching English, building 'hut' library and so on.

UBD has also identified internationalisation (Bartell, 2003; Stromquist, 2007) as its key strategic initiatives. This effort ranges from internationalising its curricula, finding more strategic collaborative partners to having joint master

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degree and increasing international student population. Instilling international mindset in our student is also a major internationalisation effort. All these evolutions were timely, as we needed to develop and improve in scale, scope and reputation, and in borrowing the words of Christensen and Eyring (2011), we were and are still committed to changing the DNA of our institution from the inside out.

SUPPORT AND SERVICES FOR OUTBOUND MOBILITY

A good reliable measure of a world-class university lies in the mobility of students (both inbound and outbound). More importantly, the weightage of student mobility in determining university ranking is 7.5% and 5% for the QS Ranking (QS Quacquarelli Symonds Limited, 2014) and the Times Higher Education Ranking (THES) (TES Global Ltd., 2015) respectively. From a student perspective, doing a stint overseas has numerous benefits. Some of the benefits are:

- It increases self-confidence and thus increasing employability of students.
- It forces the students to be independent.
- Appreciation of other cultures and religions.
- Picking up a new language.

According to Finardi and Rojo (2015), "If an institution wishes to become a centre of international excellence, it needs both to attract students and researchers from around the world encouraging student mobility" (p. 20). From the university perspective, student mobility is important as it raises the international profile and the visibility of a university. It is often employed as an effective marketing strategy to recruit more international students. As mentioned earlier, although outbound mobility has always been in place in UBD, it was implemented at a smaller scale. In addition, overseas university partners that waive tuition fees were rather limited as the notion of student mobility was at its infancy stages.

UBD recognised the importance of student mobility particularly in improving our students' soft skills and in building global citizen (Alfred & Guo, 2012). This is very important in today's increasingly competitive and globalised world. Thus, UBD is committed to giving its students international exposure to ensure our students do not miss out. UBD offers supports in many forms ranging from academic advices, finding placements in partner universities to funding. Unlike before, varying degree of funding is available for most students. Top performing students continue to get full funding. This covers airfares, stipends and tuition fees should they choose to enroll in a non-partner university. For the remaining students, stipends will be provided. These students which comprise 60-70% of the entire third year cohort normally enroll in partner universities.

During the inception of the discovery year, 57% of our students left the country for their stint abroad, in comparison to the current data of about 75-80%. These were made possible through UBD's large and extensive network of bilateral and multilateral partnership, which now spans six continents and over 110 partners as well as membership in important consortia. In a relatively short span, UBD has been able to acquire many international collaborators. UBD's dynamic leadership also plays an important role. Our ability to leverage on our research expertise in niche areas and political stability are just some of the major components to the success. Located in the middle of the Borneo Island, which is mega hot spot for bio-diversity, UBD has been successful in attracting prominent researchers in that area which resulted in more strategic partnerships and formation of key research consortia. These collaborations are vital to us as we strive to maintain higher quality and higher standard of research and talent on a global scale (Sarker, Davis & Tiropanis, 2010; Barber, Donnelly & Rizvi, 2013).

Support for outbound mobility comes at three levels, which are faculty, administrative and university levels. At the faculty level, there is a discovery year coordinator whose main duty is to ensure students take the right modules in partner universities and acquire enough credits amongst others. The discovery year coordinator in consultation with his/her respective deputy dean also provide advices to students to ensure he/she generally make the right university choices.

At the university level, the Global Relations office is responsible for ensuring quotas are available at respective Partner universities and any deadlines are met. In fact, the Global Relations office is responsible for all correspondences with partner universities. In addition, Global Relations is also tasked with finding new and potential partners for student mobility. Another important role played by the Global Relations office is to facilitate the negotiation of MOUs and the student exchange agreements that will pave the way for more student mobility.

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Administratively, the Discovery Year Unit (DYU) looks after the welfare and the funding support of the students. Amongst its key role is to provide proof of funding letters, letters to expedite visa application and so on. DYU is also tasked with liaising with our embassies/missions overseas in order to oversee the welfare of our students abroad.

Annually, our outbound mobility spans 6 continents and over 70 universities (refer to Figures 1 & 2). Students do a range of activities from studying abroad in partner universities in Korea, Japan, UK, USA and other Asian and European universities to internship in multi-national companies overseas (Bukaliya, 2012), and substantive community outreach programme in the Philippines, Vietnam, Thailand and Indonesia. Some notable community outreach projects undertaken include teaching English to students in remote villages, instilling entrepreneurship (European Commission, 2008), spirit and mindset in students and so forth.

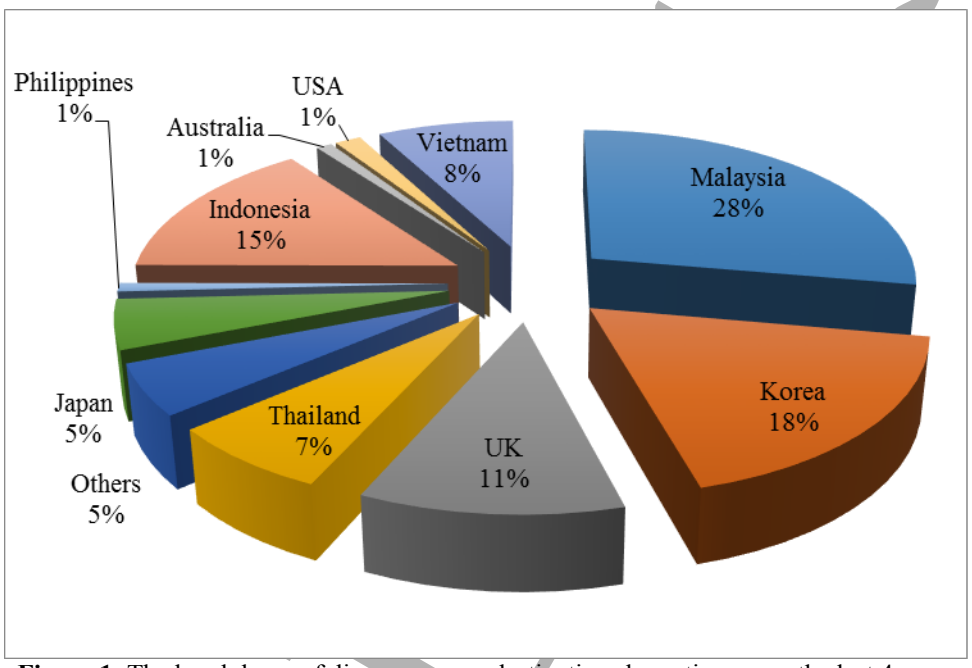


Figure 1: The breakdown of discovery year destinations by nations over the last 4 years

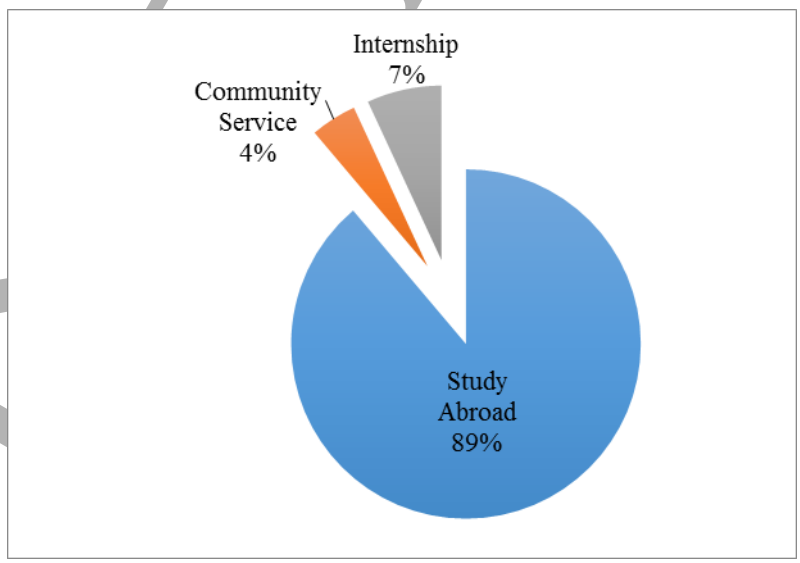


Figure 2: The breakdown of discovery year overseas activities over the last 4 years

So far the outcome of our outbound mobility activities has been very encouraging. And importantly, this was proudly

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reflected in the recently released results of the QS Asian University Rankings for 2015 where UBD was ranked the top university in Asia for student mobility (Kassim, 2015; QS Quacquarelli Symonds Limited, 2015a; UBD, 2015a, 2015b). According to the survey indices provided by QS, UBD ranked number one for outbound student exchange and a number two rank for inbound exchange (QS Quacquarelli Symonds Limited, 2015b).

Accordingly our UBD outbound students get a first-hand feel of life outside their home country and simultaneously, are being pushed out of their comfort zone. Very importantly, they get a more international outlook on life that is critical in today's increasingly globalised world. Below are some testimonials from our students.

"Our internships at Karolinska Institutet were amazing. The internship for us was an opportunity to see the theory that we have learnt everyday came to life."

"The journey going to and being in Galapagos was one chapter of our life that will never escape our memory…it has opened my eyes and will help me in my future career where I could apply my knowledge on marine life in Brunei"

One crucial issue we want to address here is, does doing a stint overseas improve the marketability and employability of our students? Initial studies seemed to support our claims. More than 80% are employed within the first three months. The companies they intern in employed some of our students. In fact, most students are employed by the private sectors, which was not typically the case before. Very encouragingly, more and more students are self-employed. Some set-up their own companies whilst others are involved in their own start-ups.

To conclude, there seems to be a big shift in mindset from being over-reliant in government jobs to being more open to other forms and modes of employment. This is important in helping us realise our national vision, to be a knowledge-based economy (Brunei Economic Development Board, n.d.) from one that is resource-based by 2035.

BARRIERS AND CHALLENGES

Although the numbers for outbound have increased significantly, there were many obstacles or barriers faced. For outbound, the greatest challenge is the transfer of credits or grades from the host to home university. This challenge arises due to the differences in interpretation of contact hours within the modules or courses offered. Other challenges we encountered include, an incompatible academic calendar, and the high cost of living particularly for those doing student exchange in developed cities. Other factors include course mapping, lack of courses taught in English, lack of English proficiency and so on. Difficulty in obtaining visa is still a major obstacle particularly for students opting to do overseas internship. Thus, on our part, we utilise heavily on the ASEAN Credit Transfer System (ACTS), European Credit Transfer System (ECTS) to address these credit transfer issues.

Despite the obstacles faced, UBD managed to send out 57% of its student population during the inception of the discovery year in 2011. The ratio has increased from 70% in 2012, 73% in 2013, and 80% in 2014. As mentioned previously, this increase can be partially attributed to the increase in recognition of UBD as not only a solid teaching university but also an up-and-coming research-intensive university. More notably, the latter attribute has allowed us to amass more quality partners thereby increasing both outbound and student mobility. Despite the significant increase in outbound ratio, UBD's spending on funding outbound students has not increased. This is mainly due to partner universities waiving tuition fees for our students. In recent years, an increasing number of our best students have been granted prestigious scholarships by other countries, such as the Temasek Scholarship offered by the Singapore Government and the Global Korea Scholarship.

CONCLUSION

Student mobility is and will always remain important for UBD. We are continuously striving to provide the best support and services for both our outbound and inbound students. Further in-depth studies will need to be conducted on our outbound students, for example, their discovery year preferences even before entering the second year of candidature. For outbound on the other hand, future efforts include utilising the student barometer. This barometer measures students' feedbacks, expectations and experiences during their stay in the Local and Host University. The result of such exercise will enable UBD to identify weaknesses and thus enables the university to make more informed decisions on how to improve students' experience as well as meet students' expectations.

Another future initiative is the summer undergraduate research programme. Local and international student will get the chance to work with top professors and scientists in the university for periods ranging from few weeks to few

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months on a very specific research area. One of the main objectives of this programme is to cultivate research interests amongst the local and international students at the undergraduate level.

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DISCOVERY YEAR OPTIONS AND STUDENTS' PREFERENCES

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ABSTRACT
In 2009, the Universiti Brunei Darussalam (UBD) made extensive changes to its curriculum from a major-centric to a liberal arts style broad-based degree with emphasis on the soft-skill development. One of the important components of the new curriculum is the mandatory year out also known as the 'Discovery Year'. The objectives of the discovery year is to promote real-world experiential and design-centric learning, and students are given the opportunity to gain community-based or international experience outside of the UBD campus. During the discovery year, students have a choice of four activities namely study abroad, internship, incubation and community outreach programme. Since the inception of the discovery year, study abroad has always been the first choice for most of our students. In 2011, the ratio of UBD students who did the study abroad programme was 4 out of 10. This proportion increased to 7 out of 10 in 2014. More importantly, around 90% of students who left Brunei chose the study abroad option. In this paper, we investigated the reasons behind why study abroad is and has always been the first choice, and also the reasons behind the increasing proportion. We also explored the benefits of study abroad from the perspectives of both the home and host universities. Furthermore, we examined the issues and challenges that hindered the students from taking other activities during discovery year. To conclude, the benefits of study abroad are an all-encompassing one from raising the quality of education, improving the university's ranking to fostering global citizens.

Keywords: Curriculum, Experiential learning, Higher Education, Study Abroad

INTRODUCTION

In this paper we briefly looked at the curriculum changes that were undertaken in a university in Brunei Darussalam. Subsequently, we discussed the activities under the mandatory year out, known as the discovery year. In addition, we present the discovery year options that are available to the university students and their preferences, and the benefits in particular how the discovery year help foster global citizens. We also shared the breakdown of the respective activities under discovery year and gave possible explanation to the trends. The challenges and barriers for the activities are also discussed and we attempt to address these difficulties.

OVERVIEW OF GENNEXT AND DISCOVERY YEAR

In 2009, the premier local university in Brunei Darussalam, Universiti Brunei Darussalam (UBD, 2013a) implemented its new curriculum also known as GenNEXT (UBD, 2013b). GenNEXT is essentially a liberal-arts style education promoting cross- and trans-disciplinarily experiences. This is a major change from its previous curriculum, which is major-centric. One of the reasons for this change is to produce robust and nimble graduates who are able to cope in the ever-changing and highly competitive 21st century work environment, and bearing in mind that most jobs that are available now was not available 10-15 years ago. More interestingly, working professionals go through an average of 3-4 jobs during their working lives. Gone are the days where graduates are attached to just one job. Therefore, a university needs to adopt a more holistic approach to ensure its graduates stay relevant in the 21st century. Taking into account these reasons, it is hoped that through this curriculum changes, UBD can produce graduates equipped with a variety of life-skills. Central to GenNEXT is the discovery year (UBD, 2013c), which is the mandatory year out of the university, which typically happens during the 3rd year of candidature. Under the discovery year, students have a choice of one or two out of the four activities namely, study abroad, internship, incubation and community outreach programme. In the next section, we focus on the technicality of discovery year, the benefits and the crucial role it plays in fostering global citizenship

DISCOVERY YEAR OPTIONS, STUDENTS' PREFERNCES AND ITS ROLES IN FOSTERING GLOBAL CITIZENSHIP

During the discovery year, all third year students must leave the university. During its inception in 2011, around 57% of the third year students left the country. From those that left Brunei, typically 9 out of 10 chose to do study abroad

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in partner universities spanning across 6 continents and over 10 countries (UBD, 2013d). Since then, the proportion leaving the country has increased from 67%, 73% and 80% in subsequent years. The proportion of the students choosing to study abroad stays rather constant at 90%. There is an even split for those doing community outreach programme and internship. It should also be noted that incubation is done locally at the home university. One reason for the increase in those going abroad is due to UBD's increasingly vast network of bilateral and multi-lateral partnerships, which facilitates two-way student mobility. This increase could also be attributed to UBD's rising reputation as a centre of excellence, not just in teaching and learning, but also in research. Notably, in the recent released QS Asian University Rankings for 2015 results, UBD was ranked the top university in Asia for student mobility (Kassim, 2015; QS Quacquarelli Symonds Limited, 2015a; UBD, 2015a, 2015b). Based on the survey indices supplied by QS, UBD obtained the number one rank for outbound student exchange and a number two rank for inbound exchange (QS Quacquarelli Symonds Limited, 2015b).

Previous preliminary studies (Bhandari et al., 2011; Shields, 2012) have suggested that study abroad is the most popular option simply because the notion of taking classes in a foreign country is most appealing to our local students. As mentioned previously, 9 out of 10 of students leaving Brunei chose the study abroad option. Most of our local students aspire to study abroad particularly to developed countries such as the UK, USA, Australia, Japan, and Korea and so forth. The discovery year offers such opportunity. The ratio of students choosing the Community Outreach Programme (or COP) and Internship is rather low with only 5% each. There are several contributory reasons to these relatively low ratios. One notable reason lies in the difficulty in obtaining visa for both these types of activities, as most countries recognise such activities as employment. In particular if these activities are not arranged through Partner University. The lack of proper learning objectives and assessment also contributed to these low ratios. The issues of credit transfer and contact or working hours further complicate matters.

From the experiential point of view, study abroad is perceived by our students to be the most engaging, as they have more interactions with their international counterpart. However, these might not necessarily be true if they chose the other activities. Broadly speaking, discovery year brings about multiple facets of benefits. Students get to learn and experience in how to live abroad and they are forced to be independent. Their self-confidence and in turn, their personal growth may increase as a result (Dyer & Peters, 2004; Hadis, 2005; Bandyopadhyay & Bandyopadhyay, 2015; Kamdar & Lewis, 2015). They also get a first-hand experience of life outside Brunei. More importantly, discovery year instill global citizenship (Cusick, 2009; Kell & Vogl, 2012; Wynveen et al., 2012) in our students.

A global citizen is someone who identifies with being part of an emerging world community and whose actions contribute to building this community's values and practices (Brigham, 2011; Shultz & Jorgenson, 2008). In today's interconnected world of economics, politics, and finance, thanks to the advancement in technology, the role of global citizens cannot be underestimated. In short, the world faces complicated problems whether it is poverty, food security, global warming, energy security or terrorism. Such problem requires concerted and well-coordinated efforts from various parties. Thus, having a global mindset is necessary to ensure effective handling of these global problems. With regards to this matter, we strongly believe that youths play an important role, as our youths today will be the future leaders tomorrow. By bringing a group of youths from various nationalities through the study abroad programme will no doubt promote mutual respect and appreciation of one another's culture. Another advantage in doing stints overseas, often being underestimated, is the benefit in picking up a new language. This not only enables students to have a more immersive experience in their host country but also may increase their employability and marketability in the host country. Being multi-lingual opens up job opportunities in foreign affair ministry, foreign missions, diplomatic services, translation business, and many more.

The Community Outreach Programme (or COP) is about giving back to society and contributing to societal development both locally and globally (UBD, 2013e). Under the COP, UBD students undertake many different projects within the assigned communities, from teaching English Language to building 'hut' library and basic infrastructure. Teaching English Language in remote parts of some of the ASEAN nations is one of the most popular options. Brunei, blessed with the abundant of natural resources and a small population, has one of the highest gross domestic product (GDP) per capita in the Southeast Asia (OECD, 2013). Notably, it has one of the lowest poverty rates. During the COP, our university students get first-hand knowledge of the real poverty suffered by some of their own students. For example, lessons were being conducted in makeshift 'hut' schools, built by the villagers. Their students have very poor command of English and almost no access to the outside world. This is indeed a useful life lesson in poverty, which our university students will not get to experience back home. With limited teaching and learning resources available, our students have to improvise and thus the entrepreneurial (Ediagbonya, 2013) mindset

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will inevitably be instilled in them. In addition, our students' contribution does not end there. Our students also interacted with the villagers, whose main and only source of income rely on agricultural products. As a consequence, the villagers often impart basic marketing skills and knowledge to our students. It should then be stressed here that our students and the villagers co-learn from one another regarding basic survival skills.

Another important component of discovery year is internship. Often, our students do internship locally and it is mostly in the public sectors. Like most oil and gas producing country, there are a limited number of industries other than those related to oil and gas. As a result, internship opportunities are rather limited in the private or multi-national companies based locally in Brunei. Thus, overseas internship offers much appealing ventures and the experience brings about multiple benefits. Most importantly, it enables our own students to experience a different working environment, culture, ethics and ethos, which they might not be able to experience back home. Our students also have opportunity to be involved and experience internship in an economically powerhouse country, which could potentially be our next most important trading partner, and at the same time fostering global networking. Specifically, for our business and economics students, they understand the global credit crunch more as a result of their internship stints.

It must be stressed that the job scopes of our students' internship varies considerably. We have a few students working in a multi-national corporation on environment-related issues such as global warming, coastal preservation and so on. We also have students doing logistical arrangement for massive humanitarian drive in major disaster-hit areas. Despite the varying scope of work, there is one commonality emerging from their stints. And this entails their increased understanding and appreciation on global issues ranging from climate change, financial crisis, and global warming to food and energy securities. Moreover, their knowledge on these issues ate being put to test and horned in a live environment.

Another important activity undertaken during discovery year is the incubation project (Sun et al., 2007). In addition to the conventional teaching and learning, UBD also provide platforms for business and technological ideas and dreams to materialise and flourish through the incubation programme. To date, many technological innovation 'starts-up' (Nabi et al., 2006) have been established. Some have gone on to become very successful with international clientele thanks to the advancement in technology and logistics services. Several successful incubation projects are the building of solar powered and hydrogen-powered cars (UBD, 2013f). The essence of these projects is the cross- and trans-disciplinary collaboration. For example, the engineering and natural sciences group of students are responsible for the actual designing of the car as well as building of the engine, while the social sciences group of students will assess the impact on environment produced by the car. In addition, the business and accounting student groups will work together to ensure the economic viability of the car. It should be noted that one key feature of this car is that it is environmental friendly and thus making multi-disciplinary collaboration necessary. This is aligned with one of the key qualities that GenNEXT hopes to instil in our students, for instance, environmental awareness.

Lastly, our study abroad programme is the most popular programme amongst our university students. The choices and our students' involvement span 6 continents with over 70 partner universities (UBD, 2013d). It brings together a diverse group of students under one campus, and thus creating a vibrant and multi-national campus life. In broader terms, it also allows our students to better understand the cultural, social, financial and political system of the host country. To summarise, the discovery year is crucial in building the global citizens mindset amongst our students. It should also be emphasised that cultivating global citizenship is not just about promoting student mobility. It is about changing the mindset and attitude. A global citizen has many desirable traits such as being very knowledgeable in global issues, and having high self-confidence among the many. More importantly, a global citizen not only appreciates and respects other cultures but also accept diversity and difference that may result from the differences in cultures and beliefs.

AMONG THE MANY CHALLENGES AND BARRIERS ENCOUNTERED

Despite the obvious benefits of discovery year, many challenges still remain. The notion of global citizenship is still very much an alien concept amongst the staff and the university collectively. Traditionally, universities are geared towards preparing students to pass examinations. And the holistic development of a student may still be lacking. A good and forward minded university should and must prepare their students to pass the biggest examination of their life, which is the life examination itself. Thus to produce global citizens, the entire education system may need to be modified so as to make it more relevant to contemporary life and global challenges. And at the same time provoking creative and innovative thinking for both the students and faculty academic staff alike. The faculty academics need to

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be global citizens themselves in order to lead by example. Hence, there is a need for academics to undergo executive professional development training to ensure their teaching methodology and pedagogy continues to stay relevant. They also need to be kept abreast of the latest developments and trends to ensure that they can keep up with our increasingly 'tech-savvy' students.

CONCLUSION

The discovery year is an integral part, not just for the student's time in the university but also for their life journey. Students learn life-lessons, which they will not be able to learn in the classrooms. Overall, the discovery year has achieved its main objectives in broadening our students' perspectives and in increasing their employability. From the university's point of view, the discovery year has significantly raised our university's visibility and our international profile. In moving forward, the learning objectives of the discovery year need to be improved and revised accordingly in order to formally inculcate global citizen-ness. If possible, the way our students are assessed during the discovery year needs to be re-thought and revamped drastically. More importantly, the mindset that the discovery year is merely about going overseas and getting the credit or grade transfer needs to be eliminated. In the long run, the discovery year should be viewed as foundation to cultivate and intensify students' interests in global issues. Through this, hopefully a generation of thinkers can be created in order to align with our national vision that is to be a knowledge-based economy.

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DISCUSSING SUSTAINABLE URBAN DEVELOPMENT WITHIN ARCHITECTURAL EDUCATION

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ABSTRACT
The concepts of "sustainability" and "sustainable urban development" have been at the top stages in the world agenda since 1990s. Architecture as a discipline is strictly concerned with urban development in the globalization process, thus sustainability is a crucial issue throughout architectural education. Being conscious about the priority of these facts the authors discuss the importance of these concepts and the ways of achieving sustainable urban development in the architectural studios they supervise. This paper presents the aim and scope of these studios together with the sample projects developed by undergraduate students of architecture in Uludag University, Bursa/Turkey.

Keywords: sustainability, architectural education, design studio, traditional environment

INTRODUCTION

"Sustainable Development" has become most popularly understood from its definition in the report by Brundtland Commission as "*development, which meets the needs of the present without compromising the ability of future generations to meet their own needs and aspirations,* " (WCED, 1987). In the 20th UIA Congress in Beijing, some alternative approaches have been proposed instead of this minimalist, consensus definition, which proposes sustainability as; "*a local, informed, participatory, balance-seeking process, operating within an equitable ecological region, exporting no problems beyond its territory or into the future*". After the UIA Congress, sustainability defined as; " *a dynamic process which enables all people to realize their potential, and to improve their quality of life, in ways which simultaneously protect and enhance the Earth's life support systems*" in the report of the Forum for the Future Annual 2000. As it is understood from the definitions of 'sustainability' and 'sustainable urban development' these concepts are closely related to the concept of "human development" which is defined as " a process of enlarging people's choices" and which have the goals of " leading a long and healthy life, acquiring knowledge and having access to resources needed for a decent standard of living". Today, the authorities have come to recognize the importance of participatory and integrated approach to the incremental implementation of sustainability. Also, all the parties have found that, it is necessary not to take it only in environmental, but also in social, economic, psychological and cultural terms, and their interrelations.

The real question, which is discussed in the scope of this paper via students' proposals, is; *how societies can shape their modes of change in such a way so as to ensure the preconditions of development for future generations and the concept of sustainability?* [1] As Becker et.al.,(1999), indicate the main objective is to renegotiate the goals of future societal development and to establish a system of governance that is able to implement policies moving towards sustainability on international, regional, national, local levels. Architecture is a discipline that combines the physical, socio-cultural and economic compounds of sustainability in each of these levels in order to design and develop spaces that offers high quality of life to people. In the last decades the question of *How should a good architecture be?* takes place in different architectural debate platforms including academia.

Rogers (2011) indicates; "Good architecture has always been partly about change, but it is also about continuity. With hindsight, the architecture of the past always looks appropriate and doesn't challenge the viewer, but then the past is safe because we are no longer engaged with its particular artistic, social or technological problems even if at the time it was regarded as cutting edge. Returning to cities, the compact, well-connected city encourages a good social mix, walking, cycling and use of public transport. It is the only environmentally sustainable form of urban building. Suburbs use around three times as much energy as compact cities so we need to 're-fit' the suburbs and this starts by building more compact town centers." Keitsch (2012) indicates, the main criteria of sustainable architecture can be determined as; minimizing the negative environmental impact of

[1] This is asked by Becker,et.al., 1999. From their point of view, sustainability refers to the viability of socially shaped relationships between society and nature over long periods of time.

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buildings by enhancing efficiency and moderating the use of materials, energy and development space, developing measures to relate form and adapt the design to the site, the region and the climate and as the last one; establishing a harmonious, long lasting relationship between the inhabitants and their surroundings by addressing the essence of good form-giving (Abidin, et. al,2008).

There are so many definitions of sustainable city and sustainable architecture dealing with these concepts with variety of approaches. There is no doubt that sustainable architecture challenges new and ingenious architectural design at various levels. However, as Sir Richard Rogers (2011) expresses, the historic city and its traditional building culture set a precedent for sustainable city and architecture. On the other hand, Urry (1995) emphasized that in an increasingly competitive global market where spatial and temporal barriers are diminishing, the specificity of a city - its character, history, buildings, culture and distinctiveness - becomes more important. The architectural and cultural heritages of cities together with their historical characteristics become dynamic values, which combine local and global. Sustainability and sustainable development policies are seen as key factors for the planning and development process in historic cities (Strange,1997) .

Being conscious about the responsibilities of architects in the way of achieving sustainable urban development, the authors put stress on the necessities of sustainability throughout architectural design studios they supervise. In the context of this paper, the process and final products of these design studios undertaken in undergraduate program of architecture in the Faculty of Architecture, Uludag University are discussed via some examples of student projects. First of all, the way of discussing the concept of "sustainability" in architectural studios will be summarized in the following section.

THE CONCEPT OF SUSTAINABILITY IN ARCHITECTURAL EDUCATION

Amos Rapoport who is a famous anthropolog and the leading founder of the field of Environment-Behavior Studies (EBS), put stress on that the purpose of design should be to provide settings appropriate to the bio-social, psychological, cultural and other characteristics and needs of the different people for whom design is done. He summarizes his thoughts as; the most important decision is what to do and why to do it rather than how it is to be done (Rapoport, 2000). Another anthropology and at the same time psychologist Setha M.Low defines designers as culture-makers because they give form to our cultural ideals, beliefs, and norms. She thinks that designers are responsible for understanding the complex relationship of culture and place and culture and built form. She argues that teaching about culture and place in an effective and useful way is one avenue for integrating this understanding into design practice and education. The teaching strategies of fieldwork, personal experience and self-reflection, and cross-cultural comparison provide a link between theory and practice which encourages students to discover the relationship of culture and place and its importance in the built environment (M.Low 1986).

These thoughts strictly points out the importance of the concept of *"sustainability"* in design education and light a way to the question of *"how should sustainability be handled throughout architectural design education?"*
The argument lies beyond this assumption is that designing for sustainability is a more complex process that requires a horizontal multidisciplinary interventions from the outset of a given project (Fleming, 2002: 147). Douvlou (2006) suggests a problem-based learning as an approach in the teaching of sustainable design. Boyer and Mitgang (1996) assert this vision; "Sustainable architecture suggests a curriculum built around collaboration and team work, not only with other architects but with other disciplines" (cited by Al-Hagla, 2012) .
In fact, not only the other disciplines but also all the actors who are involved in the design process like users, builders, local institutions, etc. should be taken into consideration in order to make the architectural students to be aware of the importance of the term of sustainability. In the light of these thoughts the authors adopt an integrative approach when discussing sustainability throughout architectural design process. In the following section the aim and scope of the architectural design studios, which the authors supervise will be explained.

THE CONCEPT OF SUSTAINABILITY IN DESIGN STUDIOS

In Uludag University, the Department of Architecture is subject to the first cycle degree system of higher education in the field of Architecture science that has 240 ECTS credits. The aim of the program is to bring up architects who have professional knowledge and capability for taking an effective role in the formation and transformation of the physical environment, can work in collaboration with the other disciplines, have the ability of making analysis, synthesis and interpretation, have awareness on the necessity of lifetime learning and have architectural professional responsibility and ethical values.

The design studio is the backbone of the architectural education in the Faculty of Architecture and the design studio approach is; to take into account the multidimensional structure of sustainability with a holistic and integrated approach including human factor. In the scope of this study, the aim and content of studios supervised

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in the fifth, sixth and seventh semesters will be described briefly.

The main aim is to achieve sustainable urban development of the city of Bursa, in which the project area locates. Being the first capital city of the Ottoman Empire Bursa is one of the most important historical cities of Turkey. It is an important focus point in social and historical aspects due to its location's being suitable for settlement; natural structure's favouring agriculture and military strategic importance (photo 1). The project area, Hisar has a special identity with its traditional urban fabric. It is located to the west of the city center on a hill overseeing the city and surrounded by the historic city walls. It includes traditional housing pattern preserved till our days, however, unfortunately a wide motorway has been constructed through the settlement in order to support the increasing traffic (photo 2).



Photo 1: Bursa in Turkey



Photo 2: Hisar Region

The main problematic of the studios was that; " How can we protect the unique image of historic cities and how can we use it in our own time?" In the other words, "how can we obtain sustainability in historic cities? " The answer of these questions were given in various theoretical and practical studies in the related literature as *"increasing quality of life"* and the students were asked to find ways of increasing urban quality of life in Hisar. In order to answer these questions via architectural and urban design proposals the students were directed to find out the physical and socio-cultural requirements of sustainability.

For the preliminary work of the design studio students undertook observations and archive analysis at the end of which they find out data related with physical environment, history and social demography of the settlement. They also conducted a survey to the residents of the settlement in order to understand socio-cultural and psychological characteristics of the inhabitants of the neighbourhood, and satisfaction and expectations of the inhabitants about their neighbourhood. The results they obtained helped them to understand that a mixed used residential environment is the key solution for achieving quality of life in Hisar.

Some examples of student projects developed for the aims which are achieving urban sustainability in Hisar, sustaining the image of this historic neighboourhood and raising the quality of life are as follows;

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Figure 1: An example for 7th. Semester project (2010-2011 Spring)

Figure 1 shows the project of Tugce Uyulgan who offered a mixed used residential area together with shopping possibilities and a museum for recycling in order to raise the sustainability awareness of the residents. Accessibility and continuity were the supporting keywords of this project. Figure 2 shows the project of Onon Bibaatar, an Erasmus student who also offered a mixed used residential area with a city museum and a social center not only for the inhabitants but also for all of the residents of Bursa.



Figure 2: An example for 7th. Semester project (2010-2011 Spring)

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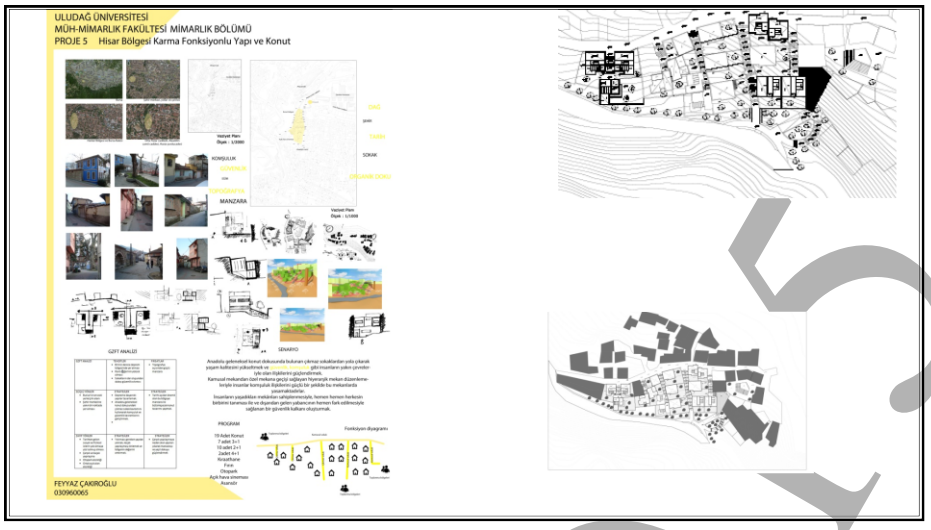


Figure 3: An example for 5th. Semester project (2011-2012 Spring)

Figure 3 shows 5th. Semester student Feyyaz Cakıroglu's project offering a mixed used residential environment composed of semidetached houses together with an education center for the retired and housewife residents of the area. Figure 4 shows the project of Yasemin Cay whose proposal is to revitalize the environment with the help of a fashion road including a silk factory introducing the production of silk textile which is traditional and unique for Bursa. This road also contains tailors, silk stores, boutique fashion stores and pensions for touristic accommodation.

Figure 5 shows a 6th. year student Bilge Sen's project who offered a library, a children's playhouse, an exhibition space together with the residential units. Figure 6 shows Zulal Sardag's project offering a socio-cultural complex including educational units, a performance hall, a multipurpose hall serving the whole city.



Figure 4: An example for 5th. Semester project (2011-2012 Spring)

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Figure 5: An example for 6th. Semester project (2012-2013 Fall)

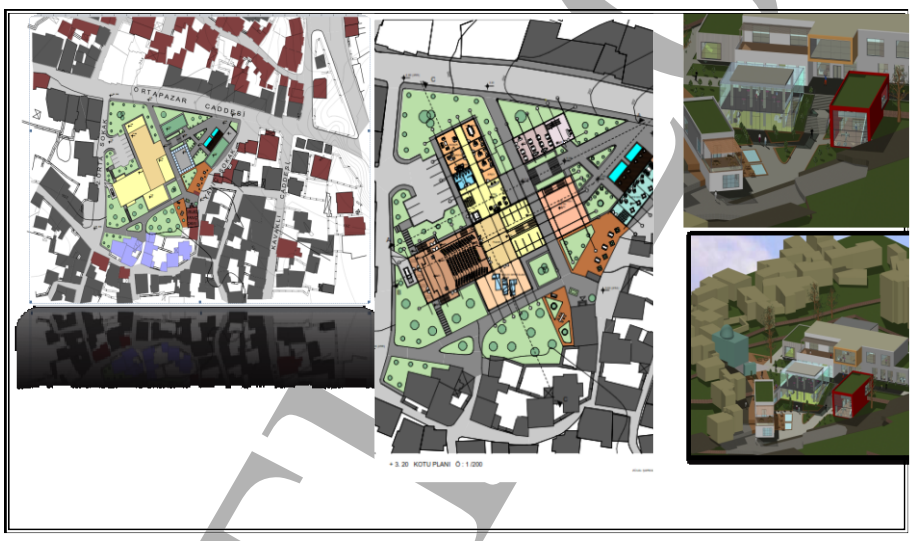


Figure 6: An example for 6th. Semester project (2012-2013 Fall)

CONCLUSIONS

Throughout these semesters in 14 weeks studio developing time give a chance to the students of architecture, in the other words the architects of the future, to understand how essential is to have an integrated and holistic approach in order to achieve sustainable urban development especially in a historic city. They also understand the links between all the physical, social, cultural and economic aspects of complicated architectural and urban design projects. At the end of their initial physical and socio-cultural analysis they reached to a conclusion that a mixed used development would be suitable for the area. Their proposals were including the buildings or building groups like socio-cultural complex, library, local education center, nursery school, sports hall, multi-purpose hall which were required by the local inhabitants of the settlement. Together with these social buildings residential units surrounded by quality public spaces were also designed. Throughout the process the most discussed concepts were sustainability requirements, cultural and architectural heritage, urban identity and contemporary architectural approaches. The expectation of the supervisors from the students was to develop architectural and urban design projects, which are not only in harmony with the heritage values of the environment and reflecting the identity of the city, but also include the contemporary and modern construction techniques and materials as much as possible. One of the most important aims of the studios was to strike a balance between the conservation activities and contemporary user requirements.

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DISCUSSION ON COGNITIVE TOOLS OF LANGUAGE AN IMAGINATIVE APPROACH TO TEACHING AND LEARNING

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This study is to focus on the specific information of the cognitive tools of language suggested by Kieran Egan, Canadian educational philosopher. Engaging student's imaginations in learning is one key to successful teaching and learning. Egan provides the cognitive tools of understanding how students' imaginations work in learning. Thus, Egan insists that education is a process to maximize the cognitive tool kits.

The main purpose of this study is to explore the cognitive tools of language, to examine the two aspects of acceptance and criticism for successful learning and teaching. Also discuss its implications for future education.

Keywords: cognitive tools, Kieran Egan, Language, Teaching, Learning

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DISTANCE EDUCATION OF SOCIAL WORK: A CRITICAL ANALYSIS

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ABSTRACT
Social work in the most general terms is an applied science and profession through which a range of services organized in order to provide the individual, family, group and community to meet their needs and to resolve the problems by creating laws and regulations for the benefit of client systems. The social work education, forming, supporting and enhancing the science and profession direction of social work, has the purpose of raising professional staff and scientists through undergraduate and postgraduate training. This process, in general, has a structure based on quoted and developed skills, and values, theory and practice of communication and interaction between the parts participating in the raining of social work. The practice of education offers students of social work gaining experience in the field and improving themselves.

Especially in the last five years the need for the profession of social work has increased in Turkey; the lack of professional staff, who will meet the needs, has revived opening of social work departments at the universities. In the "Workshop on Development of National Standards for Social Work Education (2012)", it was stated that opening new departments without adequate infrastructure (teaching staff, building, class, etc.) is a significant problem for social work education. As a way to resolve this problem and needs a group of academicians have been raised that distance education can be created and generalized by taking into account the educational opportunities because of a variety of lack of infrastructure, can be achieved by means of this method which is may be more suitable in terms of time and cost. On the other hand, some of them are against to this approach because of the qualifications of social work education and different advantages of training at university.
The aim of this study is to analyze components of social work education and distance education of social work.

Key Words: Social work education, distance education, online learning, distance education of social work.

INTRODUCTION

According to IFSW (2014)'s global definition of social work; *"Social work is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective responsibility and respect for diversities are central to social work. Underpinned by theories of social work, social sciences, humanities and indigenous knowledge, social work engages people and structures to address life challenges and enhance wellbeing"* (http://ifsw.org/policies/ definition-of-social-work/:17.06.2015). The need of social work is increasing day by day because of the changing conditions of the era, increased needs and human problems. Training of professionals to meet the need of social work is also becoming increasingly important.

The first school of social work was opened in 1961 at the University of Hacettepe in Turkey. Another department was opened in 2002 in Baskent University and the number of social work bachelor degree program is raised after that. The reason of this increase is to need of social workers to cover the deficit of professional and to increase service delivery quality. However, it was observed that new bachelor degree programs experienced some difficulties related to the numbers of academician and being academicians from outside the social work. To eliminate this, some academicians have gone to part-time courses in these programs or through a student exchange program students were able to take courses from other social service programs. Last point of the current debate in social work education in Turkey is that distance education of social work is possible or not. In this study, for this purpose, the basic components of social work education, the contents of distance education/online education and applicability of distance education of social work in Turkey is made a critical analysis.

The Basic Components of Social Work Education

Social work education is an active process. Basic knowledge of theory application integrity, skills and values, is transferred through mutual communication and interaction between the parties participating in the training (Çelik, 2011: 220). In this case East and Chambers (2007) define social work education as *"social work education is a science, an art form and a passion"*. The nature of social work education arises from the mutual communication and interaction via active discussion and application of scientific and dealt with in a creative background. Education parties who are involved in investigation of knowledge, production, development, sharing and application, accept mutual learning, development and changing mission and use within certain values in the area of democratic interaction.

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In the social work education process, at the side of theory courses there is also application courses. For this reason, students can find a great opportunity to observe social workers in institutions and practice with them. The most common and simple words, face to face interaction, training of values and practice dimensions of social work makes its education different from some other occupational training.

The Contents of Distance Education

Distance education can define in many terms. Some scholars prefer online learning, some prefer open learning. Daniel (1999: 292-293) explains the term of open learning and emphasizes the difference;

> *"The term 'open learning' stands for the general aim of opening up education and training more widely. Distance education, on the other hand, is one means of pursuing some dimensions of openness. (...) A simple way to summarize scholarly reflection on these terms is to say that open learning may or may not involve distance education whereas distance education may or may not contribute to open learning."*

In this study, it is preferred that using the term of distance education as the means of defining where students and instructors together in different time and place, flexibility, accessibility and actually styled in a way that expresses the remaining training outside formal education.

There are some important points in the contents of distance education such as student/learner, tutor, public perceptions about distance education and profile, faculty and faculty view of distance education, technological opportunities, funding for distance education, political regulation about education and distance education.

The roles of tutor in distance education are generally undervalued. Because there can be a tendency of tutor seen as just giving feedback or grade students' work. Lentell (2003: 67-68) transfers some main roles of tutors in distance education;

> *"(...) ensure students gain a thorough grounding in the subject; provide students with academic support in the subject; help students explore the links between this module and other modules; help students integrate practical work experience with academic knowledge. Subject tutors are not required to deliver the curriculum – this is the task of the study guides – but to facilitate students' learning. This is done through: sensitive and full commentaries/feedback on students' assignments; being available on the phone or via email so that students can contact tutors for advice; introducing the key learning points of the module at the two residential schools associated with the module, and devising group and individual sessions to assist understanding of the module; maintaining necessary contact with your students' tutor mentors."*

The other important points of distance education are students/learners. Student's learning motivation and using technology are very important in distance education because it is different from formal education style. Students have to research and find the information, participate in group discussions and adjust their time and way of study on their own. Mills (2003: 109) emphasizes changes on student behavior over time and requirements of learner supportive distance education. In his opinion, student behavior characteristics were as follows in the past; *"respectful of academics, compliant, loyal, accepting (of institutional errors), committed to the long haul, worked within the system, no IT skills, no IT access, no bench marks for quality of support"*. According to his today's student behavior characteristics are as follows; *"demand good teaching, expect personal services, disloyal, assume their needs come first, impatient, will leave and go elsewhere, IT literate, IT access increasing rapidly and huge expectations of quality"*. As it stated by Mills (2003), changes of students' behavior and technological developments beat a path changing the training methods.

In additional to changes of students' behavior and technological developments, public perceptions about distance education and institution view of distance education are important contents for distance education. It is necessary in order to provide distance education as a training method, it must be requested by public and must be offered favorable conditions by faculties/institutions. Therefore it is important for both public and faculty to determine their expectations and perceptions of distance education. Another important point in the contents of distance education is technological opportunities. Here it is required to be specified that not only have advanced technological materials but also widespread and effective functioning of the Internet network. Other components associated with them are also funding and political regulations about distance education. If it is thought developing distance education method as a requirement of this era, it should be provided the best possible education and everyone must have equal access rights.

Distance Education of Social Work: A Literature View

In literature generally, it can be said that there are positive approaches to effectiveness of distance education in social work. There are no significant differences between formal education content with the content of distance education (Tuncay, 2011: 104). *"According to Frey, Faul and Yankelov (2003) research is needed to convince the Council on Social Work Education that e-learning can be an effective way to meet outcomes in social work education"* (Anderson-Meger, 2011: 24).

Considering the historical development of distance education in social work, it can be said that development was slow and social work academicians were suspicious about providing social work outcomes. However, *"distance education in social work was advanced significantly during the late 1980s, primarily as a result of the growing use of computer networks and interactive compressed video systems"* (Raymond, 2005: 29). As it mentioned by Anderson-Meger (2011: 18), *"The Council on Social Work Education Committee on Research and Instructional Technology completed a survey of 501 social work BSW and MSW programs to determine the use of distance education in social work programs. A 27% response rate indicated that almost all of programs were either using some form of distance education or planning to implement distance education in the near future"*.

Most of the studies in the literature are related to compare distance education programs with formal education programs. Significant findings related to distance education in social services has been obtained in a study conducted in the United States (Vernon et. al 2009). It was seen that 220 bachelor degree and 133 master degree courses, most of them are elective, is delivered by distance education methods. In this context, a significant proportion of the courses (20%) practice course. It was found that some given courses such as social work ethics, social work with at-risk groups, interview techniques' rate were lower. Whereas, it was seen that some courses such as social policies (14%), human behavior and the social environment (13%), research (10%) were handled intensively. The technologies used in social work education also demonstrate variations. It is used most widely online (72%) distance education technology in undergraduate and graduate-level. The lowest percentage only interactive television (9%) and the remaining (19%) are used television and online technologies in their distance education.

However most researchers (e.g. Banks & Faul, 2007; Coe & Elliot, 1998; Frey et. al 2003; Huff, 2000; Macy et. al 2001; Madoc-Jones & Parrott, 2005; Maidment, 2005; Otterholm, 2009; Woehle & Quinn, 2009; Wolfson et. al 2005) discuss the contents of the distance education social work and compare with the formal education outcomes. In general, distance education in social work is met moderate. Researchers emphasize advantages and disadvantages of distance education in social work. The next title, these advantages and disadvantages are discussed in comparing with Turkey's conditions.

Applicability of Distance Education in Social Work in Turkey: A Critical Analysis

Pennells (2003) points out some issues and challenges in adjusting to new technology in supporting learners in developing countries. In his opinion, equity, costs to the student, the burden on support staff, educational quality, institutional learning and change are challenges of applicability of distance education. In terms of Turkey, assessment can be made out of similar titles.

Students' accesses to distance education and pay the required fees raise the equity issues. Considering that even experienced various difficulties in participating in compulsory education in Turkey, can students and their families' have enough power to meet the higher wage distance education compared to formal education? Because *"the costs of printing and binding material if desired, having a suitable computer and maintaining or paying to access Internet, computer facilities and services"* (Pennell, 2003: 158) and it can be expensive. The other issue about students is their learning motivations. When looking at the general student profile in Turkey, students are accustomed to directing. Very few of them investigate a topic which is outside of their subjects or homework.

Another challenge of applicability of distance education in social work is about the burden on support staff. *"Skills in on-line course design, management and learner support need to be developed in the academic, technical, counseling and administrative staff involved, and students need to acquire on-line study skills"* (Pannell, 2003: 159). Therefore, the infrastructure arrangements have been made, reliable and uninterrupted internet access should be provided from anywhere. It is very important that usage of technology by students and also being properly configured for remote training materials by professionals.

Another challenge of applicability of distance education in social work is about educational quality. This issue is related to infrastructure arrangements, structured course materials and students' technology skills, of course. "*Computer conferencing provides an opportunity for linking students from different professional and personal backgrounds, countries, languages and abilities. It also enables constructivist approaches to course design and*

support to be adopted effectively" (Pennell, 2003: 159). For educational quality, students' profile (their needs and features) must be well defined. Additional regulations are necessary for some social work courses which will be insufficient given in the only theory dimension such as social work field practice, social work ethics, interviewing methods. Even while there were some difficulties about these courses in formal education which based on face to face contact with students, it is questionable how effective can be given these courses in distance education.

Efficient communication, constructivist learning, flexibility, reducing isolation, students' experience, rather than only read about on-line learning (Pennell, 2003: 163-164) may be potential benefits of adopting new technology for social work courses. However, funding, public perceptions and profile, offering students up-to-date learning, the web as a mainstream medium and competition in a global market are environmental pressures to adopt new technology (Pennell, 2003: 164-165).

It can be said that in terms of distance education is a new field in Turkey and urgently and appropriately needs to be developed. The distance education in social work seems to be kept up to date to more controversial feature for Turkey for a period of time. Because of both the distance education opportunities in Turkey and the educational content of social work will lead to driving the discussion.

CONCLUSION

Distance education confronts us as a requirement of age. While distance education initiatives are based on past and progress rapidly abroad, it can speak of a late progress in Turkey. It is seen also late progress in distance education of social work because of social work is a science and profession based on the application. Social work education is focused on interaction, communication, and practice. Knowledge, skill and value based of social work are learned by theory courses and enhanced by practice courses.

There are some advantages in distance education such as access to education in flexible hours, more student participation, highly learning motivated students' profile, the ability to achieve unlimited resources, making discussions in a wider group and moving away from traditional methods of discipline. And also there are some disadvantages like inequality power of access to information, student isolation, lack of ability to interaction and communication in class, practice effectiveness, staying away from education for failure to pay education costs.

The considering the previously mentioned problems of social work education in Turkey, simultaneous video conferences as distance learning methods can be considered as a solution. Students can attend courses that are given by the social work academician simultaneously in distance and ask questions or join discussions like students who are in given lesson class. On the other hand, this solution is about theory courses for now. In addition, student exchange program should use efficiently and social work academicians must be trained immediately. Besides, the establishment of a national social service association is very important and necessary for social work and its client groups.

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DO HIGH SCHOOLS PREPARE FOR ENTRANCE TO ECONOMIC UNIVERSITIES?

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ABSTRACT
This paper presents results of analysis of entrance examinations for the University of Economics, Prague in the subject "English". We carried out statistical analysis that take into account dimensions like time series for years 2011-2012 and type of high school. We have constructed correlation index between GCSE (General Certificate of Secondary Education) exams and entrance exams for the University of Economics, Prague. Conclusions then point that there is no strong dependency (correlation) between results from GCSE exam and results from entrance examination at the University of Economics, Prague. The correlation was analyzed on the subject of English.

Keywords: Knowledge;English; Education Process, Entrance Examination, GCSE - English

INTRODUCTION
Economic education is undergoing extensive changes, as is economic theory. The fundamental pressures on the abilities of students and graduates of economics subjects at university level are due to the practical disintegration of applicable economic theory and the impracticality of traditional macroeconomic instruments (Kuncova,Vojackova, 2012). Hand in hand with these new facts there are also changes in the paradigms of classical management. (Maryska, Doucek, Novotny, 2012; Finardi, Fischer, Mazouch, 2012)
These facts are also subsequently reflected in the changing requirements and demands made on economics and management students. A further part is played by yet another factor, this being the declining demographic curve for young people entering universities. Between 2012 and 2013 this drop represented roughly one third of the total number. There is no doubt that this also influenced the quality of applicants for university studies. Other aspect that influences quality of applicants is the level of expected average salaries for successfully graduates. This factor is for example analyzed in (Hanclova 2006; Marek, 2010) for local conditions of the Czech Republic. So what kind of student do we actually need for the study of economics?
At the University of Economics, Prague we are of the opinion that these should be students with knowledge of one or more foreign languages and then also students capable of working with abstract concepts. In the entrance proceedings for the majority of faculties we judge this latter through the ability to master a certain level of mathematics. With regard to the global environment, even though anti-globalization tendencies are now quite obvious, expressed for instance by the large world economies closing in on themselves, we are still convinced that the "lingua franca" of the present is the English language. This language is not only essential for world-wide communication, but it also has a certain degree of importance in the region of Central Europe, in spite of the fact that historically this area is focused linguistically on German and its history was linked for three centuries with the development of the Austro-Hungarian Empire. (Doucek, 2010)
The aim of this paper is to show the development and comparison of knowledge of the English language between the GCSE and the entrance examination for the University of Economics, Prague. Comparable study for Mathematics entrance examinations was published in (Maryska, Doucek, Mikovcova, 2013).

METHODS AND DATA COLLECTION
The data used in the research was obtained from the central data systems of the University of Economics in Prague. From these data was acquired both on the results of the entrance examinations and on the leaving certificate results of those applying to study, as well as data on the actual course of studies.
With regard to Law No. 101/2000, on the protection of personal data, all the data collected was rendered anonymous. Anonymizing the data involved the removal of all personal means of identification, including in particular names, surnames, birth numbers, etc. The output of anonymized data was the allocation of a numerical designation to each student participating in the entrance examinations. Backward identification of the individual student is not possible.

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Due to the nature of the entrance examinations carried out at the University of Economics, Prague, data are not available for all faculties and all fields of study. The reason for this is the fact that some faculties (such as the Faculty of Economics) do not hold standard entrance proceedings, but accept students on the basis of the results of SCIO tests. SCIO tests are a national system for the testing of students, performed by an independent private institution. It is the choice of each university in the Czech Republic whether it recognizes the results of these tests as relevant for the waiving of entrance examinations or not. At the University of Economics, Prague this system is used to waive the entrance examination in only one of the six faculties. (Maryska, Doucek, 2011)
A further factor influencing the completeness of data is the inaccessibility of the results of leaving certificate examinations, especially in the case of foreign students. "Artificial" records are then generated for them in order to create at least an environment that enables analysis of the results of the entrance exams and the results of exams during normal studies. These students are omitted from the correlation analyses of leaving certificate exams.
Due to the extent and complexity of the analyses, the results of analyses are presented in the following text only for selected characteristics.

Input Conditions
At the time of the start of the project the state General Certificate of Secondary Education in the Czech Republic were divided into two levels of difficulty – basic and higher. In 2012 the Ministry of Education, Youth and Sport abandoned the two-tier concept for the state GCSE and left only the basic level of leaving certificate examinations functional. This fact had a significant effect on the project, as our working hypothesis had been that the higher level of GCSE could replace the admission procedure at the University of Economics, Prague.
For specification of the evaluation of results we state, for the sake of completeness, that there are six faculties on University of Economics, Prague at this time - Faculty of Finance and Accounting (FFA), Faculty of International Relations (FIR), Faculty of Business Administration (FBA), Faculty of Informatics and Statistics (FIS), Faculty of Economics (FE), Faculty of Management (FM).

Methodology
Data acquired in the manner stated in the preceding text were processed by means of technology that permits working with a large volume of data. Concretely this means the platform of Microsoft SQL Server 2008 R/2 (MS SQL). Extracts of data from primary systems were carried out in two forms: in the form of text files and in the form of extracts in Microsoft Excel format. The choice of format was always that of the person responsible for the export of the data. Export of data in Microsoft Excel format was prevalent.
On the basis of this platform a data model was prepared of a data warehouse (DWH) in the traditional architecture of DWH Stage and DWH Core. For the filling of the data warehouse import and transformation processes were prepared, known as ETL (Extract Transform Load), in the instruments of Microsoft Integration Services (SSIS). Above the data prepared in the DWH an analytical model was created in Microsoft Analysis Services (SSAS), which are also part of MS SQL. Within the framework of SSAS data blocks and dimensions were prepared. The blocks represent pre-calculated data acquired from the DWH, which can be looked at from various views (dimensions). In this context dimensions are represented by registers, which permit analysis of values in analytical blocks. Prepared in advance in the data blocks were, in particular, the values of the following indicators - median, average, maximum, minimum and determining deviation, which describes various aspects of the investigated data.
The entire solution observes to the maximum possible extent the principles of the proposal and the implementation of data warehouses as described, for example, in (MacLennan, Tang, Crivat, 2009).
With regard to the user unfriendliness of the instruments mentioned so far, the user layers were created in Microsoft Excel. This was selected chiefly because all of the users are acquainted with the functionality and possibilities of this instrument. Microsoft Excel furthermore expands the group of indicators that can be used for the analysis of data. This expansion includes, for example, analysis of dependences, testing of hypotheses, etc.

RESULTS AND DISCUSSION
Among the primary results of the investigation is finding out how many students submitted applications to study at the University of Economics, Prague and what the level of admission to the individual faculties was. For the requirements of this paper there are two basic groups of results – on the one hand the overall analysis of the structure of applicants for study, the proportions of applicants according to country of origin, and then the results achieved in the entrance exam in "English". The decline in the number of students from the Czech Republic may also be supplemented at Czech schools by admitting students from other countries, or eventually also by what is called delayed demand (studying after several years of practical work experience) (Kunstova, Rezankova, 2012). This is why part of the analyses carried out was not only the number of foreign students applying for admission to the VSE, but also a more detailed analysis of the results of their admission procedure. In this paper, however, there is no room for greater detail and so in Table 1 we give only the proportions of the first six countries in the

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number of students applying to study at the University of Economics, Prague.

1.1. Initial Knowledge of Foreign Languages – English Including

The English language was identified as the most frequent language for applicants at University of Economics, Prague. Summarizing of data is presented on the Table. 3

A student applying for the entrance examination to the University of Economics, Prague can choose from a number of languages approved for the entrance examination. English, German, French, Spanish, Italian and Russian are available. From the table below it can be seen that over the past four years students have selected mainly one of the first four languages. The Russian language has declined considerably as it is not permitted for study applicants from the countries of the former Soviet Union.

That the English language is represented most frequently is partly due both to its widespread and almost obligatory teaching at all secondary schools, and also in particular to the requirements of some faculties and fields of study (for example Faculty of Finance and Accounting, Faculty of Informatics and Statistics-specialization Applied Informatics etc.), which allow exams to be taken only in the English language.

Table 1: Proportions of Applicants for Study at the UPE According to Country Source: Authors

UEP Applicants	2010	2011	2012	2013
Czech Republic	82.62 %	82.27 %	77.84 %	78.83 %
Slovak Republic	7.19 %	7.23 %	7.03 %	7.59 %
Russian Federation	3.95 %	4.04 %	4.50 %	6.02 %
Kazakhstan	1.68 %	1.68 %	1.56 %	1.44 %
Ukraine	1.31 %	1.53 %	1.65 %	1.92 %
Vietnam Socialist Republic	0.97 %	1.33 %	1.53 %	1.83 %
Other Nationalities	2.28 %	1.91 %	5.88 %	2.37 %
Suma	100.00%	100.00 %	100.00 %	100.00 %

Table 4. Entrance Exams in Foreign Languages 2010 – 2013 – Share of Languages Source: Authors

Language	2010	2011	2012	2013
English	91.44 %	93.04 %	91.98 %	94.55%
German	6.59 %	4.88 %	5.33 %	3.69%
French	0.96 %	1.12 %	1.16 %	0.76%
Spain	0.52 %	0.64 %	1.02 %	0.65%
Italian	0.11 %	0.07 %	0.12 %	0.05%
Russian	0.39 %	0.25 %	0.39 %	0:31%
Total	100.00 %	100.00 %	100.00%	100.00%

In the following tables analyses are made of the results of the entrance examinations of applicants wishing to study at the individual faculties of the University of Economics, Prague. In the last column – "Correl." – are the values of the correlation between the result of the entrance examination and the result of the "English" exam taken at the University of Economics, Prague.

Table 5 describes development for the University of Economics, Prague as a whole, regardless of division according to faculties. From the Table 5, it is evident that for the university as a whole there are no marked shifts in the level of knowledge over the years either in the indicator Avg. (Average), or the more appropriate indicator Med. (Median).

The last column in the table (Correl.) shows that there is no more significant dependence between the result of the entrance exam and the result of exams in the course of the study of English.

Table 5. Entrance Exams in English 2011 – 2012 – Correlation to SGCE Source: Authors

Year	Count	Avg.	Med.	Mod.	Min.	Dev.	Var.	Skew	Skewnees	Correl.
2011	2,220	79.72	80.00	80.00	44.00	11.16	124.64	-0.52	-0.30	0.296
2012	1,806	79.05	80.00	90.00	40.00	11.78	138.75	-0.63	-0.06	0.253

Remark: The first data for 2013 could be collected after the end of winter semester of the school year 2013/2014.

Detailed results for the individual faculties in individual years, which follow on from the preceding table, are given in Table 6 and Table 7.

The following Table 6 describes the situation in 2011. It can be seen clearly from the table that there are fundamental differences in knowledge of English in the applicants for the individual faculties. The lowest level of knowledge shown in the entrance examination is in the Faculty of Management (FM) and on the Faculty of

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Informatics and Statistics (FIS) and the highest standard, on the other hand, is at the Faculty of International Relations (FIR), which may be described as an expected result with regard to the fact that this is the faculty concentrating on international relations, for which knowledge of languages is a key factor. Even in analysis in the individual faculties it is impossible to demonstrate significant dependence between the result of the entrance exam and the results of exams in the course of studies. The exceptions are the faculties FFA (Faculty of Finance and Accounting) and FIR, where the value of the correlation index reached the levels of 0.476 and 0.426 respectively.

Table 6. Entrance Exams in English 2011 - Correlation to GCSE - Faculties Source: Authors

2011	Count	Avg.	Med.	Mod.	Min.	Dev.	Var.	Skew	Skewnees	Correl.
FFA	463	77.51	78.00	74.00	50.00	10.80	116.54	-0.13	-0.63	0.426
FIR	867	82.09	84.00	92.00	50.00	10.97	120.33	-0.79	0.04	0.476
FBA	436	81.11	82.00	80.00	54.00	8.89	79.11	-0.34	-0.01	0.264
FIS	428	69.35	70.00	70.00	46.00	11.71	137.20	0.10	-0.77	-0.01
FM	26	74.40	76.00	76.00	44.00	18.08	326.80	-1.60	2.90	0.068

Table 7 depicts the state of points acquired in the entrance examination in 2012. In the FFA, FIR and FBA (Faculty of Business Administration) there was a slight increase in the value of the points achieved (from 1.55 points to 0.13 of a point), in the FIS there was a drop of around 0.5 of a point and the greatest drop was in the FM – roughly 4.4 points. This result is, of course, statistically significantly unreliable, because the data sample was very small. The result of the correlation at the FIS is very interesting, as here we found practically no dependence between the GCSE and the entrance examination.

Table 7. Entrance Exams in In English 2012 - Correlation to SGCE - Faculties Source: Authors

2012	Count	Avg.	Med.	Mod.	Min.	Dev.	Var.	Skew	Skewnees	Correl.
FFA	460	79.06	80.00	82.00	52.00	10.27	105.40	-0.34	-0.40	0.394
FIR	589	82.24	82.50	90.00	50.00	10.28	105.75	-0.61	0.05	0.425
FBA	258	81.63	84.00	86.00	54.00	9.99	99.78	-0.82	0.20	0.361
FIS	485	68.73	68.00	70.00	40.00	13.50	182.27	0.01	-0.86	0.044
FM	14	70.00	70.00		62.00	11.31	128.00			-0.05

With regard to the correlation in 2012 it can generally be said that it remains at a very similar value to that in 2011. While exploring the correlation between the GCSE examination and the entrance examinations we reached the following conclusions:

- For the basic level of the state GCSE examinations we arrived, with a sample of 6,443 applicants, at the correlation value of 0.4202.
- For the higher level of state GCSE exams we arrived, with a sample of 1,792 applicants, at the correlation value of 0.6204.

The conclusion arising from this is that the state GCSE examinations at the higher level could be used as a criterion for the admission of applicants for economic studies.

CONCLUSION

Research into the admission procedure at the University of Economics, Prague was originally undertaken in an effort to acquire basic material to strengthen the qualified decision-making of top management of faculties regarding the manner of admission of applicants to the university. For these needs we used standard statistical methods for statistical analysis on the data we acquired from the entrance exams of applicants for study. For the requirements of this paper and with regard to its limited possibilities, we present here only part of the results achieved for the subject of "English". (Maryska, Doucek, Mikovcova, 2013)

In the course of our research we achieved the following results:

English language is the most frequent langue of applicants for study on UEP,

The statistical characteristics of the investigated sets of data are homogeneous with minimal deviations from the standard (standard deviation, obliquity, spikiness, etc.),

The results achieved in the admission proceedings in English language did not change much in the two years investigated,

The greatest correlation between the GCSE results and the admission proceedings at the University of Economics, Prague is demonstrated by applicants for the FIR.

The dependence between the results of the entrance examination and the result of the state GCSE exam did not alter in any remarkable manner,

- The dependence between the basic level of the GCSE and the results of the entrance examination is the moderately large correlation coefficient value of 0.4202.

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- The dependence between the higher level of the GCSE exam and the results of the entrance examination is the high correlation coefficient value of 0.6204.
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DO I CARE? TEACHING FOR PASSION OR MISSION? AN EXPLORATION OF CRITICAL REFLECTIVE APPROACHES

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This paper focuses on how instructors' Critical Reflection (CR) approach moderates the relationship between Students' Achievement (SA) and Instructors' Credibility (IC). Substantive research has been done on Instructors Credibility (IC) affecting students' acheivement in University, but the focus on Critical Reflection (CR) approach as moderator calls for further exploration. Hence, this paper presents a conceptual framework to examine critical reflection of instructors that challanges their credibility, especially the 'caring' nature towards their students and teaching, which eventually increases students' acheivement in university. The fundamental framework for reflection by Brookfield (1998), which encompasses four complementary lenses that are instructors' autobiography as learners, the lens of other leraners' eyes, the lens of colleagues' experiences, and the lens of theoretical, philosophical and research literature forms, the basis for the conceptual framework.

Track: Improving Classroom Teaching, Learning and Teaching, Professional Development

Keywords: Critical Reflection, Student Achievement, Instructors' Credibility, Brrokfeild's framework of Reflection

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DO THEY LEARN TO TEACH SCIENCE FROM THEİR PREVIOUS TEACHERS?

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ABSTRACT
This study aims to determine effects of teaching methods and techniques used by their previous teachers on science teachers' and preservice science teachers' curiosity and interest to learn science. In this study, it is intended to investigate effect of teachers' applications in the past that was remained in science teachers' and preservice teachers' memory and help them increase their demand and curiosity to learn science and also to lead them to be a science teacher. For the purpose of this study, preservice teachers studying at one of the institution and science teachers graduated at the same institution are chosen by easily accessible sample method. This qualitative study is peformed as a survey. Data were collected through semi-structured interviews as one of the qualitative data collection techniques. Data obtained from the study was analysed by using content and descriptive analysis techniques and interpreted by the reserachers. It was found that, science teachers and perservice science teachers mostly remember (80%) lectures and writing lecture notes among their previous teachers' teaching methods and techniques. On the other hand, results showed that instead of lectures, they preferred experimentation, making projects, watching animations, researching and presentation methods. Science teachers and preservice science teachers stressed that these methods and techniques are interesting, intriguing and they provide learning by doing, connect with real life, objectify and visualize the content.

Key words: Science teaching, Teaching methods and techniques, Science teachers, Preservice science teachers

INTRODUCTION

Many methods and techniques are carried out to increase students' attraction against science lessonsto provide them to have positive attitudes and to increase their achievement in science lessons that are described as difficult to understand and boring by many students at the level of primary, secondary andeven higher education. Methods and techniques are flourishing together with updated science programmes and provide better possibility of explaining science subjects for teachers. However, the first condition for that teacher can explain science subjects in a more appropriate way is to raise science teachers who are better on their fields (Ergul, 2009). Studies carried out about how science teachers to be raised (Kennedy, 1999; Nuangchalerm, Prachagool, 2010; Soldat, 2009) have focused and made suggestions on how science education should be (Howes, 2002). In existing studies, it has been stressed that the academic information that teacher candidates took on teacher raising programmes is not sufficient and that they gain self-sufficiency and personal teaching experience are important. (Mellado, 1998; Morrell and Carroll, 2003; Doyle, 1997). The role of science teachers who raised well, beside transferring information to students on science subjects, are that they provide students to gain basic skills, attitudes and values, to collaborate with each other and to improve their skills to debate. Therefore, it is needed that they enrich teaching method and techniques that they have and choose which are proper to lesson process (Aktepe and Aktepe, 2009; Sahin, 1998; Taskaya, Surmeli, 2014).

The importance of that teachers benefit various teaching methods and techniques in teaching is understood when Physics, Chemistry, Biology, Environment subjects which are available on frame of Science Education are considered. There are many various methods and techniques that can be used towards science education teaching (Kaptan, 1999; Gurdal, Sahin and Caglar, 2001).In studies carried out, it has been determined that teachers want to practise an education based on experiment and practising by stressing the importance of learning-in-doing and connecting science subjects with real life in science education (Ergul, 2009; Lowery, 2002). In this direction, it has been determined that they prefer teaching model based on constructivist model from modern teaching methods and that they mostly stressed inquiry-based-learning (Ergul, 2009; Pekmez and Can, 2007).Beside methods and techniques that teachers used in science education, the reason of choosing these methods and techniques are also important. In this direction, it has been tried to reveal in this study what science education implementations that get teacher and teacher candidates' attraction, that make them bored or enjoy during their teaching life process are and whichever they used in their own teaching. Thus, it has been investigated whether or not there is a difference between practices that are carried out by teachers and practises that are thought to be carried out by teacher candidates.

In this study, answers have been sought to those questions:

Of science education teachers and preservice science teachers;

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1. Which implementations of their teachers that they received science education before universitydo they remember?
2. What are their thoughts on their implementations carried out during science education?
3. How do these implementations effect science education that they made or they would make?

METHOD

This study is based on survey model and it aimes to determine which practices their science teachers' applied during science teachers and preservice science teachers science education process before their undergraduate education and also to find their opinions about these practices and to investigate the effect of these practices on their science teaching practices that they apply or will apply.

Sample

In this study, firstly, it was tried to determine science teaching practices which draw sample groups' attention, or make them bored or enjoy during their school life. In addition, it was tried to revealed which of these practices they apply during their teaching profession. For that reason, both science teachers and preservice science teachers were prefered as sample group. In this way, it was tried to find whether there is a difference between practices made by science teachers and practices which will be considered to apply by preservice science teachers. Therefore two separate study groups were generated.

When creating the first study group, random principle was considered and 29 preservice science teachers were selected voluntarily among the 4th grade preservice science teachers whom were in 2014-2015 acedemic year at Marmara University Science Education Department

When creating second study group, science teachers whom work in public schools affiliated to the Ministry of Education and were graduated at the same university in the previous years of the same program. These teachers were reached through social media. 27 science teachers were participated to this study voluntarily.

Collecting the data

In this study, data were colelcted through interviews technique which one of the qualitative data collection methods. Prepared questionnaire was consisted of five questions including two multiple choice and three open ended questions. Two experts were consulted for the validity of prepared form. In accordance with the suggestions from experts interview form was fixed and applied to two preservice science teachers and then incomprehensible questions were revised. After necessary corrections, the form was put into the web in 2014-2015 spring semester and answered by preservice science teachers and science teachers via internet.

Interview form;

In thse first question, by giving multiple choice, study groups were asked which practices their teacher apply during their science teaching. In the fifth question, they were asked of these practices which of them they apply or will apply. In the second question, which of the practices they remember during their science teaching applied by their teachers. In addition, of these applications the reasons they recall also were asked to study group. In the third question, which of these practices increase their interest in science were asked to study group. In the fourth question, they were asked to write in detail the practice they recall. The questions are as follows:

1. Which of the methods and techniques your teachers apply in science lessons (options were presented)?
2. Which of the practices you remember in science lessons that your teachers apply during middle and high school years, and why?
3. Of these practices which of this/these increase your interest towards science lessons, and why?
4. Write a practice in detail you most recall and still recall in science lessons during middle and high school years by explaining the reasons.
5. Which of these practices you prefer or will prefer in your teaching profession (options were presented)

Data Analysis

Data obtained from the interview forms were analysed by using descriptive and content analysis and then interpereted by the researchers and presented in tables. During second question content analysis, three categories were generated. In analysis of other questions descriptive analysis were used and frequency and percentage values were presented in tables.

FINDINGS

Data obtained from interview forms whch applied to the teachers and preservice science teachers were presented as tables and frequency and percentage values were interpreted. Responses given to second question was seperated by three categories by using content analysis and examined.

Besides frequency and percentage values, fourth question was presented by using teachers' and preservice teachers' expressions. Firstly, first and fifth questions in the interview form were evaluated together and

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persented in table. Teachers' and preservice teachers' responses were evaluated considering their recalls and practices.

Tablo 1: Distributions of the results of practices that teachers' and preservice teachers' remember and apply related to science teaching

	Science Teachers (N:27)				Preservice Science Teachers (N:29)				
My teacher was doing… (Options of first question)	**f (1)[1]**	**%**	**f (5)[2]**	**%**	**f (1)[1]**	**%**	**f (5)[2]**	**%**	**I will do… (Options to fifth question)**
Taking notes	23	85	23	85	26	90	5	17	Taking notes
Teaching	25	93	15	56	27	93	6	21	Teaching
Teacher made experiments and students observe them	15	56	19	70	16	55	24	83	Teacher made experiments and students observe them
Students make experiments teacher control them	6	22	20	74	3	10	22	76	Students make experiments teacher control them
Trips around the school garden and make us collect materials (leaf, stone, seed, ..)	5	19	19	70	6	21	17	59	Trips around the school garden and make us collect materials (leaf, stone, seed, ..)
Trips (zoo, botanic garden, scientific museum or factory)	2	7	13	48	8	28	22	76	Trips (zoo, botanic garden, scientific museum or factory)
Trips in school or around the school and make observations	1	4	13	48	6	21	20	69	Trips in school or around the school and make observations
Solving tests	16	59	17	63	18	62	7	24	Solving tests
Teacher do projects and students observe them	1	4	5	19	0	0	12	41	Teacher do projects and students observe them
Make students do projects	6	22	22	81	3	10	23	79	Make students do projects
Make students do drama	2	7	14	52	4	14	20	69	Make students do drama
Applying analogies	9	33	23	85	6	21	23	79	Applying analogies
Teach subjects using games	3	11	15	56	6	21	17	59	Teach subjects using games
Solving puzzles	1	4	11	41	1	3	10	34	Solving puzzles
Giving research homework	19	70	26	96	8	28	17	59	Giving research homework
Presenting homeworks in classroom	10	37	23	85	12	41	7	24	Presenting homeworks in classroom
Watching animations	2	7	21	78	4	14	27	93	Watching animations
Watching CD related to the subject	8	30	22	81	9	31	23	79	Watching CD related to the subject

Table 1 shows that both science teachers and preservice science teachers mostly remembered lecturing (93%) methods related to science teaching that their teachers applied. While teachers mentioned that thay used lecturing method with 56%, presrevice teachers mentioned that they will use this method with 21%. Both two groups' mostly remembered second method is note taking. This method is remembered by teachers with 85% and perservice teachers with 90%. Teachers specified that they use this technique with 85%, on the other hand preservice teachers specified that they use this technique with 17%. While teachers specified that their mostly remembered third method is giving homework with 70%, preservice science teachers mentioned solving test with 62%.

In table 1, it can be seen that, while 96% of teachers prefer to give research homework, 59% of preservice science teachers prefer this method. 93% of the preservice science teachers specified that using animation is the the first method they will prefer for science teaching. 83% of them specified demonstration experiments, 79% of them secified doing project, using analogy and watching video that they will perfer for science teaching. However, 80% of the teachers stated that they prefer methods such as using analogy, doing projects, watching videos and presenting homeworks. While the least remembered methods by the teachers are trips around the school and observations (4%), projects doing by the teachers and solving puzzles, the least practices they mentioned is doing projects and presenting them to the students (19%). On the other hand, preservice teachers did not mark this option, differently, they stated taking notes as the least applied method (17%).

[1]Results obtained from answers to first question
[2] Results obtained from answers to fifth question

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In the second question, science teachers and preservice science teachers were asked what were the practices their teachers apply in science lessons that they attended before their undergraduate education and also why they stil recall these practices.

Findings obtained from interview form are presented in Table 2 and 3. During data analysis, three categories were generated by implementing content analysis. In this way, the most recall practices were separated in three categories including; classical methods, alternative methods and visual methods. As can be seen in Table 2 and 3, remembered practices were put into the categories and the reasons that they recall were grouping as enjoyable and boring. After that frequency and percentage values were determined.

Tablo 2: Distribution of the boring and enjoyable practices and their reasons remembered by science teachers

Categories	**Practices applied by the teacher**	**Student's opinion N (27)[3]**				**Reason to recall (frequency)**
		Enjoyable		**Boring**		
		(f)	**%**	**(f)**	**%**	
Classical methods	Note taking			7	26	Drawn to sentences in the book, (1)Writing continuously, Note taking (6)
	Teaching			10	37	Ordinary (1) Unable to associate with daily life (1) Routine (3), Not included visual practices (2) Boring (3)
	Group working			1	4	Inhomogeneity of the group and unable task sharing (1)
	Problem/Test solving			1	4	Ordinary(1)
	Preparing homework	1	4			Provide active participation (1)
	Question-answer	1	4			Associating with daily life (1)
Alternative methods	Game	1	4			Interesting (1)
	Analogy	2	7			Enjoyable and have witty mataphors (2)
	Trip around school	2	7			Have tangible observations (1) Interesting and enjoyable learning environment (1)
	Doing project	2	7			Provide active participation (2)
Visual applications	Using colored chalk	1	4			Interesting (1)
	Experiment	16	59			Do less (3), concretizationı (1), Using different thing other than book and notebook (2) Appealing all of the senses (1), Provide active participation (2), Interesting (4) Preparing experiment reportı (1) Seeing laboratory materials is interesting (1) Doing experiments by ourselves (1)
	Watching documentary	2	7			Interesting (2)
	Using projection	1	4			Interesting (1)

[3]Total of the percentage is not 100 since responses obtained from each interview form include more than one data

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	Using scientific book and journal	1	4			Different and interesting (1)

In the last column of the table reason of the recall and frequencies were presented. According to Table 2, science they could not associated with daily life, science teachers evaluated classical methods (26%) and tesching (37%) as boring. In addition, since unable to task sharing, group working, a classical method, evaluated as boring. However, methods such as question-answer and preparing homework which are classical methods, considered as interesting and enjoyable (4%).

Remembered practices which are placed in alternative and visual methods categories are evaluated only as interesting and enjoyable. Laboratory practices was placed into visual practices and using less by the teachers, providing visuality and being interesting are the reasons why these practices recall.

Tablo 3: Distribution of the boring and enjoyable practices and their reasons remembered by preservice science teachers

Categories	**Practices applied by the teacher**	**Student's Opinion N (29)[4]**				**Reason to recall (frequency)**
		Zevkli		**Sıkıcı**		
		(f)	**%**	**(f)**	**%**	
Classical methods	Note taking			3	10	Boring (1) Instructive (1) Tiring (1)
	Teaching			18	62	Reduce efficiency of the course (2) Boring (14) Unable to active participation (2)
	Group working	1	3			Permanentı(1)
	Question-answer	3	10	1	3	Enjoyable (1) Using brainstorming (1), Less tiring comparing to note taking (1) Boring (1)
	Preparing homework			1	3	Inefficient work (prepared and presented by certain stuents) (1)
	Problem/Test solving	1	3			Including questions related to LYS (1)
Alternative methods	Game	1	3			Enjoyable (1)
	Analogy	2	7			Making concrete and visual (2)
	Tip around school	1	3			Presenting concrete examples (1)
Visual practices	Experiment	12	41	**3**	**10**	Enjoyable and visual (8) Making concrete (1) Associating with daily life (1) Visual and interesting (1) Memorable (1) Demonstration does not provide thinking and investigating (3)
	Drama	2	7			Permanent and enjoyable (1) Providing active participating (1)
	Animation	2	7			Using visuality and concrete elements

When examined the data presented in Table 3, it can be seen that lecturing (62%) is the most remembered practices in classical category by science teachers. Preservice science teachers remember this method as boring, unable to active participation, has low efficiency. Secondly, preservice science teachers' remember laboratory practices (41%) which are enjoyable, visual, concrete, memorable and associate with daily life. In addition,

[4]Total of the percentage is not 100 since responses obtained from each interview form include more than one data

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demonstration (10%) which is one of the laboratory practices remembered as boring and unable to reach the teaching goals. Moreover, games, analogy and trips around school are remembered by preservice teachers since they are concrete, enjoyable and visual. Question-answer techniques specified as enjoyable with the percentage of 10% and boring with the percentage of 3%.

In the third question, teachers and preservice teachers were asked which of the practices increase their interest toward science lessons that their teachers applied before undergraduate education. Findings obtained from responses to the interview form is presented in Table 4 and 5. In these tables, it can be seen that laboratory practices specified the most memorable method (59%) by science teachers in their past experiences. As mentioned in Table 4 the reasons are that, this practices is used less by the teachers, increase students' curiosity and interest, associate experiments with daily life, create interest and curiosity toward experimental materials. In addition, 26% of the teachers stated that science interest did not occur, because basically they did not encounter with an interesting practice.

Tablo 4: Distribution of the practices and the reasons that increase science teachers' interest towards science lesson

Practices that increase interest	**N:27**		**Reason**
	f	**%**	**Because ….**
Games	1	4	It is interesting (1)
Analogies	1	4	It is interesting (1)
Using the board effectively and organized	1	4	It is interesting (1)
Doing project	1	4	The idea of creating product is interesting (1)
Trips around school	1	4	It explore the connection between life and science (1)
Doing research homework	1	4	I collect the information (1)
Laboratory practices	16	59	Experiment were rarely done (2) Lessons are more enjoyable (2), Teacher's making experiment draw my attention (1), I prepare an experiment report (1), Seeing materials draw my attention (1), It provides concrete (1), Touching experimental materials draw my attention (1), Since related with daily life (2), Doing experiments with my friends draw my attention (1) It creates curiosity and interest (3), I get responsibility in experiments (1),
Using visual materials	3	10	Encourage scientific journals and articles (1) Watching documentary (1) Using torso model (1)
I had no interest	7	26	I heve never seen neither an experiment nor a project (1), Lecturing and solving problem were always used (1), I had difficulty to understand (1) There wasn't any practice that increase my interest towards science (4)

Science education teachers' opinions are presented in Table 5. According to this table, laboratory application is the main application that increase science education teachers' interest towards science. As the reason of this result, it is stated that laboratory practices are interesting and intriguing. 17% of the preservice science teachers specified that there was no practice before their undergraduate education that increase their interest towards science. They explained the reason as different and interesting practices were not made during that time.

Science teachers and preservice science teachers stated the reasons why they remember practices that increase their interest towards science are as follows; these practices are associated with daily life, students can participate actively, they increase students' interest and curiosity, they are visual and concrete applications

In the fourth question, students are asked to write a practice that they still remember during their science lessons in their middle and high school years. They also asked why they stil remember these practices in detail. Responses related to this questions are presented in Table 6 and 7. According to the teachers' responses presented in Table 6, laboratory practices are the most remembered applications. In addition, lecturing, since it is boring, is in second place with the percentage of 15%.

The reasons why they remember them as recalled practices are as follows; they are more attractive, enjoyable, and provide active participation.

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Tablo 5: Distribution of the practices and the reasons that increase preservice science teachers' interest towards science lesson

Practices that increase interest	N:29 f	%	Reason Because ….
Anlogies	4	14	Associated with daily life and being concrete (2) Applications that have benefited from the rich visuals (1) Provide active participation (1)
Using the board effectively and organized	1	3	Regular drawings and systematic expression (1)
Doing project	1	3	Revealed a product with our own effort (1)
Trip around the school	1	3	Provide active participation (1)
Doing research homework	1	3	Demonstrate a product with our own knowledge and efforts and can be associated with daily life (1)
Laboratory practices	17	59	İncrease my curiosity and I learn by myself (3) Cause to understand concretely (2), Interesting (8), Visual application (1) Associated with daily life, active participation (1), Experiments created awareness in daily life (1) The application is made using all the senses (1)
Using visual materials	3	10	Applications that have benefited from the rich visualsı(1)
I had no interest	5	17	No teacher has to practice to increase my interest in science lessons (2) Same methods were always used (1) My interest has started at university (2)
Drama	2	7	Associated with daily life and being concrete (1) Provide active participation(1)
Teachers' personal characteristics	2	7	Teachers' knowledge was enough and relationship with the students were well (1) The teacher whom incease students' self confidence (1)
Question-answer	2	7	Aski questions related with daily life (2)
Computer based practices	1	3	Interesting (1)

Tablo 6: The distribution of the practice that science teachers did not forget related to science courses and it's reason

Remembered practices	N:27 f	%	The reason why it is remembered (frequency)
Analogy	1	4	Teaching as if it is game (1)
Experiment	12	44	Doing for the first time or less (5) Being attractive (4) Out of routine (1) Doinng by myself (1) Visuality (1)
Colecting materials in the garden and examining them	2	7	Making with real materials (2)
Science/Project weeksı	1	4	Participation is mandatory and it is interesting (1)
Soving problems that prepare students to university exam	1	4	Boring (1)
Teaching	4	15	Boring (4)
Watching scientific documentary	1	4	Being attractive(1)
Doing project	1	4	Doing by himself/herself(1)
Research homework	1	4	Permananet and enjoyable (1)
No answer	3	11	

Responses to this question shows that science teachers remember laboratory practices while they were learning science, because these applications are interesting and with these practices it could be exceeded the routine. In addition, watching documentary from the CD and doing project also are remembered by the teachers because they contain diffrences.

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Teacher 11: "Spesifically we had watched CD related to science. After watching that, I decided to have a cereer in the field of science. Only this practice we had done in lesson was so effective for me. If we had the opportunity to watch more documentaries I think it would be much more useful"
Teacher 15: "The only lesson we had exceeded from lesson was examination of a cell under microscope in abiology lesson. It has exceeded from the current course, an experiment was designed and teacher had come to class already making preparations".
Teacher 17:" [……..] Completing a project with my own effort was the most remembered practice for me. Except form y biology teacher no teacher entered my science courses had done such a practice. They just was lecturing and wanted us to take notes".
Teacher 20: "A bacteria that I had seen under the micropcope in middle school was so affected me. Because it was the first time that I had met with micro world. These were not telling in books and we could see them affected me".
Responses to question 4 given by preservice science teachers are presented in Table 7. According to this, as science teachers even more than they, preservice science teachers (59%) stated that laboratory practices had remained in their minds. The reasons why they recall this practice stated as follow: thie method is interesting, concrete, have active participation and encourage to inquiry. However, whilst two preservice science teachers mentioned troubles occurs in the laboratory, one of them mentioned the tasteless of the demonstration

Tablo 7: The distrbution of the practices and about science lesson that preservice science teachers did not forget and the reasons

Remembered practices	f%	N:29	The reason why it is remembered (frequency)
Experiment	17	59	Tasteless of the demonstration (1) Trouble in the laboratory(2) Based on inquiry (2) Active participation (3) Scientific process skills are used (1) Materials make visualization are used (2), Provide association with daily life (1) First time made (2) Interesting (3)
Colecting materials in the garden and examining	1	3	Working with concrete materials (1)
Scientific trips to museum, exhibition, etc.	1	3	Interesting and include concrete materials (1)
Using visual material	4	14	Using nodels (4)
Drama	2	7	Provide active participation and concretization (2)
Lecturing and take notes	1	3	Classical, boring and exhausting Klasik sıkıcı ve yorucu olması (1)
Reserach homework	2	7	Preparing individually and presenting in the classroom (2)
No answer	1	3	

As can be seen from the responses to question 4 by the preservice science teachers, experiments are effective, because they are interesting and perceptible evisual elements. As drama practices provide active participation and research homework also learned by doing, both of them create pleasent and permanent learning.
Preservice science teacher 10: "Examination of the hearth experiment had drawn my attention. I think it was very similar to the way we see the pictures in the textbooks. Our teacher had cut a very ingenious way, we had seen every part and touched inside and outside structure of the hearth. It was very impressive examination. When we did this experiment in university, I was very excited and was feeling myself experienced".
Preservice science teacher 14: "Water wave experiment is the most memorable practice in my mind. We had seen what the intended use of information and formulas that we had learnt in class. We had found an opportunity to watch the movements of the waves visually".
Preservice science teacher 15: "Our biology teacher had used a method similar to drama while teaching photosynthesis subject. He likened the chosen students to structure involved in photosynthesis. For example, one student was likened to the sun, one student was likened to the ferredoxin and another student was likened to the cytochrome. Then he tried to explain the flow of electron in each structure by students' touch with each other. At this stage, our teacher also undertook the task routing. I think, since I had actively participated this activity, teaching differently from the other lessons, and I listened with pleasure, it is still in my memory".

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Preservice science teacher 19: "In high school years, an observation study that I had done for Chemistry lesson was stayed in my mind. The subject of assignment was determination of sugar and urea in urine. I first learned the theoric part of the assignment, then by asking the hospital I had got information to find out how it was done. After that, during a week out of school time in hospital laboratory, I did a study on the on how the samples were examined and analysed. Later on, I had presented this study in the class. […….] I remember this studying in the laboratory since it provide both permanent learning and enjoyment during one week"

DISCUSSION

In this study, it has been aimed to reveal what implementations that science education teachers and science education teacher candidates remember from the past while learning science are and whether or not these implementations have an effect while teaching science. Many studies about science teaching, too, make an emphasis to methods that student learned by doing and experiencing, in which active participation is in for permanent learning (Alkan and Kurt, 2008; Senocak, 2006). It has been thought that this study would create an opportunity for the sake of reconsidering science education methods by determining what the implementations that attract attention to science are. The reason why two separate studying groups are included in the study is to investigate whether or not there is a difference in preference of science teachers who is teacher and has not become teacher yet. When looked at the result of study, it has been seen that the most distinctive difference between preference of teachers who are working and of those teacher candidates who have not become teacher is seen they prefer traditional methods like straight-telling, making students note, solving problem and give students' homework and make them give presentation.

In this study, parallel result on the other studies have been determined, beside these methods, it has seen that other techniques such as experiment, brain-storm, question answer, discussion have been preferred (Aktepe and Aktepe, 2009; Sonmez, 2002; Taskaya and Surmeli, 2014). The reason of that story-telling method was preferred more when compared with other methods is connected with physical conditions of schools (Taskaya and Surmeli, 2014).

According to results obtained from second question of which content analysis are conducted, teachers and teacher candidates have stated that techniques from classical methods such as straight-telling, making students note, solving problem is not effective by describing them boring, rutin, tiring, based on rote. They find alternative methods and visual implementations as enjoyable and effective since they are catchy, interesting, and open to active participation and they present concrete examples connected with daily life. The importance of education methods that make students active participation to lesson possible were stressed in the other studies and it has been stated that, at the same time, this kind of studies has effected student's achievement in the positive way (Mitchell, Foulger, Wetzel and Rathkey, 2009; Schulte, 1999).

In the study carried out, each of study groups has stated laboratory practices as most effective and catchy method but teacher candidates, by contrast with teachers, has stated demonstration experiment as boring and ineffective by giving them a separate state. Again, both study groups have stated laboratory practices as main practice they remember and that increase their interest in science but using visual materials are in a more usable state for both groups by compare with other methods and techniques.

As result, it has been seen that teachers and teacher candidates remember practices in which they themselves participated and involved and carried out in laboratory more vividly except demonstration experiments. Also, it has been determined that practices which teachers and teacher candidates told they used or would use are on experimenting. In short, learning science in its own kitchen is more effective.

SUGGESTIONS

When results of current study are considered; it could be suggested that:

- Lessons are carried in laboratories to increase interest and curiosity towards Science
- To give place to experiment about every topic
- To give opportunity to experiments in which students would be active and carry by themselves rather than demonstration experiments.
- To give learning methods based on investigating and researching by enhancing with experiments.
- Not to use classical methods such as straight-telling and making students note unless it is necessary.
- Different method and techniques such as drama, analogy, plays and puzzle are able to be occasionally given place to increase students' interest.
- To visit out of school learning environments such as science museums, museums, zoo and botanical gardens where could be related to science at least one time in every somester.

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DO WE TEST DURING ENTRANCE EXAMINATION WHAT WE REALLY NEED?

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ABSTRACT
Our article analyzes entrance exam results in "English" and results from standard exams from "English" at the University of Economics, Prague (the UEP). The article represents a partial output of the analysis of study prerequisites for economic studies. Using identified anonymized data obtained from entrance exam results and from study results, we calculated the basic statistical characteristics of the files and analyzed the time series for the years of 2010 – 2014. This article formulates work hypotheses concerning entrance exam results in both types of exams in "English" and tries to find out a correlation between these results. When processing the data, we had to reject the formulated null hypotheses based on the F-test and T-test
Keywords: Entrance Exam; Study Exams; English; Correlation

INTRODUCTION

The drop in the population curve in the Czech Republic is currently reaching the lowest values and therefore, the lowest number of students are applying to universities. In compliance with this fact, the Ministry of Education, Youth and Sports is changing its science and research policy and support of university education in the Czech Republic. This drop in the number of students (Fiala, Langhamrova, 2009) then leads to reduction of educational institutions, which will consequently result in their shortage once the number of students increases. Very interesting is, that although lower number of students is applying to the universities the number of students is increasing. Thant means the ratio accepted/rejected students is increasing in favor of accepted applicants.
Due to the limited space of this article, we present only the results of the basic admission procedure analyses. Our goal is thus to analyze the entrance English exam results and standard English exam results of students applying to the UE, Prague during the years of 2010 – 2014 and their correlation.

The proposed models and analyses are mostly based on the study (Psacharopoulos, 1995), the experience of the UE, Prague from prior projects with a similar topic (Scholleová, Mikovcová, 2011; Fischer, Finardi, 2010 ; Smutny, Nedomova, Mikovcova, 2014) and the research of education systems in European countries (Maryska, Doucek, 2011), (Ala-Mutka, Punie, Redecker, 2008).

Problem Formulation

We focus in our research on a relatively specific area – the analysis of entrance exam results and the analysis of exam results of the students of the University of Economics during their studies. Our research is a part of the other surveys performed at the Faculty of Informatics and Statistics.
Our analyses enhanced solution of the key problems that is currently solved at the University of Economics in Prague, such as in particular whether or not the knowledge tested in the entrance exam corresponds with the knowledge necessary for studies, whether or not there is a correlation between entrance exam results and regular exam results and whether or not there is a correlation between the type of university or nationality and entrance or regular exam results. In this article, I will focus on a correlation between both English exam results and successful studies at the University of Economics in Prague.
For the purposes of our survey, we formulated the following hypothesis: Students with good English entrance exam results have good English entrance exam results.

H1: For the applicants with Czech nationality;
H2: For the applicants with Russian nationality;
H3: For the applicants with Slovakia nationality;
H4: For the applicants with Vienam nationality.

We also analyzed a correlation between both English exam results, using a classification similar to that of the above mentioned hypotheses but referred to as C1-C4.

MATERIAL AND METHODS (DATA COLLECTION)

The central data systems of the UEP were our basic source of data. These systems contain data about all applicants as well as about the study results of all applicants who then became UE students.

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In this article, we analyze in detail only a data group showing English entrance exam results and Standard English exam results, compare these results and try to find the answer to the question whether or not there is any correlation between entrance exam results. We also perform the analysis with respect to individual faculties contained in the data file.
Each faculty of the UEP has its own entrance exam procedure and can choose how it will be carried out or may even remove it. The following two basic approaches are used at the University of Economics in Prague:
Students are accepted based on the entrance exam (or the entrance exam may be removed in view of high school grades);
Students are accepted based on the SCIO test results (national knowledge test realized among high school graduates).
Two faculties of the UEP (the Faculty of Economics and the Faculty of Management) are not included in the analysis due to the unavailability of data.
The Czech Republic passed Act No. 101/2000, on the protection of personal data. Therefore, we anonymized all processed data at multiple levels. We anonymized all information that could lead to the identification of a specific student. We removed the information about an applicant's first and last name, birth certificate number and identifier in the study information system. None of the additional information obtained from primary systems made it possible to identify an applicant or student.

General Data Characteristics
The data file with entrance exams currently includes 103,829 records that we have been collecting since the year 2010. Each record provides information about the admission procedure result of one student. If a student took the entrance exam in several years or filed several applications to the UEP, he is then included in the data file several times. The most key attributes in the data file include gender, field of study, faculty, type of study, entrance exam result and information about whether or not a student passed the entrance exam and was accepted.

RESULTS AND DISCUSSION
We mentioned in the introduction and the problem formulation that we would analyze a correlation between standard English exam results and English entrance exam results. We also defined several hypotheses that apply to these two subject-matters in the entrance exam.
This part is divided into description of mathematics entrance exam results and English entrance exam results, analysis of a correlation between mathematics entrance exam results and English entrance exam results by faculty, refutation of the formulated hypotheses.
The first table provides overall information about structure of applicants that are passing an entrance exam from English. As we see share of students with Czech nationality, which are passing an entrance exam from English is degreasing and share of the group "other" is increasing. This is caused by two factor:
Increasing number of students with non-Czech nationality
Increasing number of students with Czech nationality that are passing an entrance exam from different languages.
Above mentioned suggestions are confirmed by the numbers in table 2.

Table 1.Applicants for study based on their nationalities, Source: authors

Nationality	2010	2011	2012	2013	2014
Czech	83,33%	82,46%	80,38%	83,02%	68,26%
Russia	2,35%	2,17%	3,52%	2,49%	4,93%
Slovakia	10,85%	10,81%	12,47%	9,74%	8,32%
Vietnam	0,80%	1,32%	1,09%	1,26%	2,31%
Others	2,67%	3,24%	2,54%	3,49%	16,8%

The table 2 provides standard statistical characteristics of the population passing an entrance exam from English between years 2010-2014. We see that total number of applicants is degreasing.

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Table 2. Results of Entrance Exams, Source: authors

Year	n	mean	sd	median	range	skew	kurtosis
2010	2934	79,05	11,73	80,00	92,20	-0,79	1,19
2011	2563	75,00	16,96	78,00	87,00	-1,33	1,84
2012	2266	78,17	12,41	80,00	70,00	-0,75	0,43
2013	1943	77,66	12,35	80,00	90,00	-0,81	1,11
2014	1827	80,28	9,93	80,00	34,00	0,27	-0,96

Table three provides information about number of student that pass standard exam from English in defined year. This table provides also overall information about whole data sample. We see that number of students is degreasing in each of analyzed years. This is caused by the definition of the study programs. Every students can pass standard exam from English anytime between the first and the third year of his study. In general we can say that results are relatively stable in time. The mean value is between 2,4 and 2,1. The year 2013 is quite interesting because the mean value is usually degreasing in time. This is caused by the fact that the best students pass exams earlier than the others.

Table 3. Results of Study Exams, Source: authors

Year	n	mean	sd	median	skew	kurtosis
2010	3149	2,31	0,81	2	0,24	-0,41
2011	2664	2,21	0,81	2	0,20	-0,50
2012	2357	2,16	0,81	2	0,39	-0,23
2013	1061	2,43	0,84	2	0,15	-0,56
2014	29	2,10	0,82	2	0,20	-0,80

Very important and interesting is following table (Table 4). This table compares results from entrance examination from English (rows) and results from standard exam from English (columns). We have to unified both data samples to be able to compare it and we use method as follows. Results from standard exams are defined as A, B, C etc. These values can be defined as follows:
A: 90-100% points from the subject,
B: 75-89% points from the subject,
C: 60-74% points from the subject,
D: less than 59% points from the subject,
NA: students that pass standard exam from English but did not pass entrance exam from English because they have entrance exams from different language or student that not yet pass standard exam at all

Table provides expected results. Applicant that have better results from entrance exams usually have also better results from standard exams. For example if students got more than 90 point from entrance exams then in 40% of cases got A from standard English exam.

Table 4. Comparison Entrance Exams / Study Exams, Source: authors

points/grades	**A**	**B**	**C**	**D**	**NA**	**sum**
90 - 100	39,99%	20,65%	6,17%	3,90%	7,58%	16,93%
75 - 89	35,12%	44,09%	30,69%	17,78%	22,39%	34,71%
60 - 74	4,99%	16,96%	27,87%	34,95%	27,79%	20,60%
< 59	1,86%	3,46%	9,59%	19,19%	17,84%	7,82%
NA	18,04%	14,85%	25,69%	24,18%	24,39%	19,94%
sum	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

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The correlations described in Table 5 tells us that there is medium negative correlation almost in all years. We can say that based on the calculation of correlation coefficient there is only small/medium dependency between results from entrance examination and results from standard exams. The year 2014 does not contain values for nationalities Slovakia and Vietnam. This is caused by the not availability of the data. Students don't have to fulfill these exams in the same year and can happened that they will pass this exams in the next year/yers.

Table 5. Correlation – Nationalities, years, Source: authors

Year	All	Czech	Slovakia	Russia	Vietnam
2010	-0,440	-0,452	-0,417	-0,385	-0,364
2011	-0,364	-0,357	-0,422	-0,310	-0,330
2012	-0,506	-0,506	-0,515	-0,422	-0,575
2013	-0,365	-0,390	-0,409	-0,392	-0,140
2014	-0,429	-0,647	NA	-0,500	NA

Very interesting information is provided by the following Fig 1. This figure provides information about histograms of points and grades from entrance exams and from standard exam. These histograms are prepared for all analyzed nationalities.

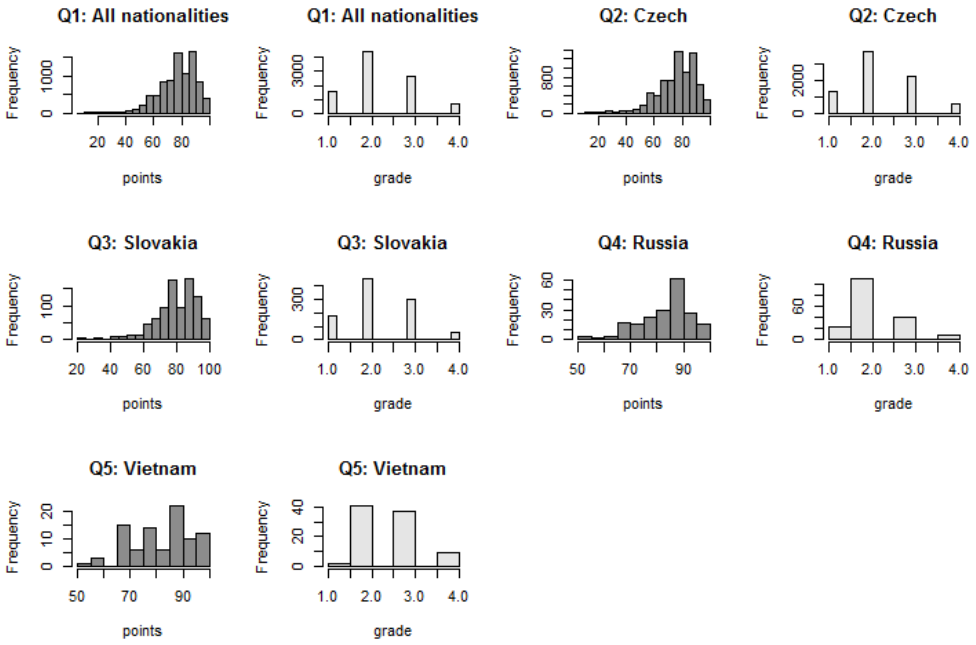


Fig. 1. Histograms of points/grades from entrance exams and standard exams, Source: authors

CONCLUSION

We analyzed the data obtained from the entrance exams to the University of Economics in Prague. Our goal was to analyze the number of points in entrance exam and standard exam in English achieved by the students.

Based on the performed analysis of the both exams from English, we reached the following conclusions:

The number of points in English achieved by applicants from entrance exams are dropping with time, and this drop is permanent and significant and represents three points each year on average.

The correlation analysis has proven a medium to medium strong negative correlation between English entrance exam results and English standard exam results with respect to all faculties of the University of Economics that were analyzed.

Based on the hypothesis analysis using the F-test and the T-test, we found out that all null hypotheses formulated in the introduction of this article were rejected.

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DOES IT MATTER? TWEETING IN A RESEARCH METHODOLOGY CLASS

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ABSTRACT
The use of the ubiquitous social medium, Twitter, has been extended to the classrooms as a pedagogical tool. Many studies have recorded positive correlations between the use of Twitter and learners' motivation, engagement and learning. Past studies have also reported the positive function of Twitter in advancing collaborative learning and collegial discussions on subject matters. This small-scale study, which adopted a mixed method approach, reports students' perceptions on the use of Twitter in a Research Methodology (in Literature) class and students' uses of Twitter as a tool for learning. Data gathered through analyses of students' tweets and a survey questionnaire administered found that 1) students showed mixed responses to the use of Twitter in the classroom and that 2) students used Twitter 'superficially', generally as a platform for sharing ideas, clarifying confusions, helping and motivating each other. It was also found that the nature of the course and technical limitations experienced by students had an impact on their perceptions of the use of Twitter in their Research Methodology classroom. Suggestions are offered for future applications of Twitter in the classroom.

INTRODUCTION
Teaching a research methodology class (in Literature) is a daunting task to many instructors, considering research methodology is a field that the "academic community itself has no uniform conception of" (Lehti and Lehtinen, 2005) and students often come to class with a less-than-positive attitude towards the idea of research. Research methodology instructors therefore face the challenge of not only making students understand and apply research principles and processes but also motivating students, by and large known as "Generation Y", "digital natives" (Prensky, 2001) and "Net generation" (Tapscott, 1998) who are generally more obsessed with ubiquitous Web 2.0 technologies than what takes place in the classroom.
Such technologies refer to web-based technologies with which users can contribute to and consume content on the Internet. Other than this feature, Web 2.0 technologies also enable social communication and interaction among users. Today, Web 2.0 tools (often used interchangeably with the term social media) such as Facebook, Twitter, Youtube, Flickr, Tumblr, and Pinterest continue to flourish. Efforts have been made by teachers to integrate them in classroom practice. Indeed, research on the use of Web 2.0 technologies have been under way, with researchers reporting on its potential to have a large impact over the coming five years in education around the globe (Johnson, Baker, Estrada & Freeman, 2014), proliferating to become a new literacy practice (Greenhow, 2012). Moreover, recent research have also discussed the usefulness of Web 2.0 as a tool which promote independence in students' study and research (Crook, 2008), increase students' engagement (Park, 2013), promote active learning (Lee, 2011) and enhance group communication (Wang & Hsu, 2008; Cole, 2009; McLoughlin & Lee, 2008).
Web 2.0 technologies also consist of social media technology, made up of social networking websites (SNSs) such as Facebook and Twitter. Considered as less formal than other media, educators have been using them as part of their professional communities of practice, as learning communities, and as a platform to share interesting stories about topics students are studying in class. Feliz, Ricoy & Feliz (2014) however, have argued that existing studies on this subject are not sufficiently conclusive, implying that understanding how social media technology can be leveraged for learning is crucial.
Research on the use of Twitter outside the field of education has emphasized its communicative, informational, and organizational properties such as helping to develop and maintain relationships through conversation (Marwick and Boyd, 2011), to gather and disseminate information (Kwak, Lee, Park & Moon, 2010), and to mobilize protest (Howard et al., as cited in Greenhow, 2012). The use of Twitter has been extended to the classroom as a pedagogical tool. Many studies have recorded positive correlations between the use of Twitter and learners' motivation, engagement and learning (Feliz, Ricoy & Feliz, 2013; Park, 2013; Junco, Heiberger & Loken, 2010). Past studies have also reported the positive function of Twitter in advancing collaborative learning and collegial discussions on

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subject matters (Elavsky, Mislan & Elavsky, 2011; Rinaldo, Tapp & Laverie, 2011). A form of microblogging, Twitter allows its users to create their own content, tag it and share it. Due to its unique, brief text update of 140 characters, Twitter lessens users' requirement of time and thought investment in order to generate content. In addition, it also enables users to update frequently. With more than 3.5 million users sending out roughly more than 5.4 million tweets per day (Sakawee, 2014), Twitter has experienced substantial growth in Malaysia since it was introduced in 2006. Research on Twitter's use in education in Malaysia however, is scant even though education-related Twitter accounts such as Malaysian Edu Hub, My Mentor Study in Malaysia and Teach for Malaysia are plenty. One research that investigated the use of Twitter for post-reading activities among Malaysian community colleges reported a low level of Twitter usages among teachers and students, implying a bleak future for the use of this technology in Malaysian classrooms (Hamidon et al., 2013). In order to understand the potential of Twitter in the higher education context in Malaysia, more studies are needed.

THE STUDY

This study was implemented over a period of fourteen weeks (one semester) in the course entitled Research Methods in Literature, taught as part of an English literature degree programme at Universiti Putra Malaysia, Malaysia, and enrolled 29 students. The course covers the content, form, and style of academic papers in literature, including basic research strategies using both text and electronic sources directly applicable to literary studies. At the end of the course, students were expected to be able to compose bibliographic research relevant to literary topics, write and present a research proposal. The main reason for the adoption of Twitter in the RM classroom is to extend their learning of research methods in Literature and to provide support for their research project.

This study employed a mixed-method approach to investigate the potential use of Twitter in order to assist students in developing their research skills. Exploratory in nature and design, this study commenced from the recognition of the inherent advantages, limitations and unpredictability in using Twitter in educational settings. Three research questions guided the study: 1) Is the use of Twitter effective in generating responses from students? 2) What kinds of responses are elicited through Twitter? 3) What are the students' perceptions of the use of Twitter in the Research Methodology classroom?

At the beginning of the semester, the students were asked to create a Twitter account and submit their ID to the course instructor. 15 students had already had their own Twitter accounts for one year and more. These students cited personal reasons for using Twitter such as using Twitter to present information on their interests, to connect with persons who share some of their values, to get enjoyment, and to get entertainment. However, only 5 of them logged in to their accounts frequently, more than once per day.

For this course, all 29 students were asked to create a new account only accessible to the instructor and those registered for the course. Most students had laptops and smart phones, so they could send their posts (tweets) on Twitter anytime, anywhere, and not necessarily in class. Twitter use (posting and responding to tweets) was made compulsory at least twice a week. They were asked to respond to the teacher's weekly prompt. The prompts varied in terms of purpose but mainly they were intended to 1) check students' understanding of lessons learnt e.g. *Have you been explicating or analysing texts? #Week8* 2) check students' research progress e.g. *A certain theory suits a certain text better". What theory have you chosen for your proposed text(s) and why?#Week10* 3) check their perceptions of classroom activities e.g. *How do you find Refworks*? *#Week4*. Other than these prompts, the teacher also sent tweets to motivate her students in the research process e.g. *You still have time to decide on a problem area! But soon you have to decide. Do not wait until the last week of the semester, though! #Week2*. In addition, they were also encouraged to tweet anything that is related to the course and their impending research project.

This study relied on two types of analysis. To identify the types of students' response, a qualitative content analysis of students' posts was carried out. This involved a close and careful reading of the students' posts by two raters, who then coded the responses and categorised them into different themes. To find out students' perceptions regarding the use of Twitter, a structured, Likert-scale questionnaire was used. The questionnaire comprised 33 questions that measure important aspects of the students' experiences in using Twitter. Items are measured on a five-point scale, indicating the amount of agreement or disagreement, ranging from strongly disagree (1) to strongly agree (5).

FINDINGS AND DISCUSSION

At the end of the semester, a total of 575 tweets had been posted in relation to the course (excluding the teacher's). On average, about 40 tweets were sent out per week throughout the semester, and each student tweeted about 20 times throughout the semester. These numbers were not encouraging considering each student was expected to post at least 58 tweets throughout the semester (2 posts per week), contributing a total of 1,682 posts. When asked how many times they checked their Twitter account throughout the semester, about 60 percent answered they seldom did. About 28 percent replied they either checked their accounts once a week or more than twice a week.

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Analysis One: Response Coding

Based on the qualitative analyses of students' responses, 14 categories of posts were identified. Table 1 represents the types of responses elicited from the students' posts.

Table 1: Types of Students' Posts

Type of posts	Example	No. of responses	Percentage
1. Answer prompt by instructor	Teacher: *Have you thought of a research topic? #Week2* Student1: *What's exactly on my mind right now: The Color Purple-The Bluest Eye-Psychoanalytical criticism.*	104	18.08
2. Retweet/Favourite		14	2.43
3. Share thoughts about own research	Student2: *I'm just thinking of doing a comparison between Sing to the Dawn and Girl from the Coast.*	42	7.30
4. Ask info/clarification (general)	Student3: *Do we use the feminist criticism if we're looking into oppression/exploitation of children/young adult?*	21	3.65
5. Ask info/clarification (teacher)	Student3: *@Teacher Is there an angle I can delve into regarding the characters' voices? The silenced and the silencer?*	25	4.35
6. Ask info/clarification (friend)	Student4: @Student5 *So u r using what lens? I'm using the feminist lens.*	4	0.70
7. Share info (link/visual/tweet)		9	1.57
8. Give opinion on friend's tweet/question	Student6: *Anyone knows the format to omit letter from a word? example: 'safer' change to 'safe' #Week12* Student5: @Student6 *Change the whole word by using [ ] I think.*	42	7.30
9. Thanking teacher/friend for their opinion/help	Student7: @Student3 *I'm probably in the right path then. Lol. Thank u @Student3!*	20	3.48
10. Summarize week's lesson	Student8: *#Week5 We will not get anything by plagiarism. It shows that you only know how take other's, rather than produce yours. :)*	49	8.52
11. Divert from prompt	Teacher*: Have you thought of a research topic?* Student9: *I'm always contemplating on the subject, was Shakespeare real?*	3	0.52
12. Responding to teacher's feedback	Student10: *@Teacher Yes! It's getting clearer! & it helps us to accomplish our lit rev. Thanks for being patient and teaching us from A-Z #Week7*	125	21.73
13. Responding to friend's feedback	Student11: *@Student12 Apparently there's a handful of us interested in the same topic, haha.*	77	13.39
14. Miscellaneous	Student13*: Tbh, I am disappointed with myself. Rip my literature and gender assignment. Working hard on research method. Allah ease.*	40	6.96
Total		575	100

The distribution of percentages indicates that the students' responses were distributed unevenly across the fourteen categories, suggesting that Twitter allows students more scope in expressing their responses to the course. This

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uneven distribution was somewhat predicted considering this was the students' first experience in using Twitter as part of their coursework. About 18 percent of the posts were answers to the teacher's prompt, 22 percent were responses to teacher's feedback and 13 percent were responses to friend's feedback. This finding correlates with the reasons they checked on their use of their Twitter account. 62 percent of the students strongly agreed they logged in to their Twitter accounts to check the teacher's prompt and their classmates' responses. 69 percent strongly agreed they logged in to respond to the teacher's prompt.

Types of students' responses were generally divided into two categories: 1) responses to teacher 2) responses to each other. Students' responses to the teacher were often triggered by the teacher's prompts and these responses can be further subcategorized into 1) sharing progress of research 2) sharing feelings about research 3) sharing research experience. Students also sought clarifications, information and confirmation from the teacher relating to their research. Even though students shared information about their research when they responded to the teacher's prompt, most of the time information that they shared was superficial: brief and no further explanation was given. The following threads illustrate this superficiality:

Thread1:

> Teacher: *How is your research proposal coming along? 5 weeks left before you submit. Oops. Hehe. #Week9*
> Student14: *@Teacher So far so good, Miss.*
> Student15: *@Teacher It's time to start drafting! Hehe.*
> Student5: *@Teacher Gonna start to think and work hard on it now.*
> Student13: *@Teacher Intensive readings with an intensive face…*

Thread2:

> Teacher: *A certain theory suits a certain text better". What theory have you chosen for your proposed text(s) and why? #Week10*
> Student16: *@Teacher Writers often address an issue in their writing, however some writers let d readers decide d approach/theory #Week10.*
> Teacher: *@Student16 So what have you decided on?*
> *No answer from Student16

Analyses of the students' posts to each other show that they 1) shared knowledge about research 2) helped each other in research and 3) motivated each other. Sharing knowledge about research and helping each other in research also seem superficial since most of the time the students concentrated more on motivating each other rather than sharing knowledge and helping each other. The following thread illustrates this superficiality:

Thread3:

> Student13: *@Teacher I like Proquest and Purdue Owl. Sometimes I just read other people's paper works to get ideas.*
> Student15: *@Teacher I would do the same thing as @Student13 does. I would go through Proquest website to read journal or article.*
> Student13: *@Student15 Same with me!*

This shows that Twitter has become more of a social support group rather than as a learning support. The rather large percentage of responses involving responding and communicating with the teacher (answering to teacher's prompt and feedback) could suggest students saw the teacher as the main source of information and initiator inside and outside the classroom. In addition, the students could have felt compelled to respond to the teacher and their course mates to show their participation in Twitter.

Sharing thoughts about own research, giving opinion on friend's tweet/question, summarizing week's lesson and asking for information/clarification share about the same percentage each, contributing to about 30 percent of total tweets. This finding suggests that the students use Twitter generally as a platform for sharing ideas about research and clarifying confusions. This is largely inconsistent with the findings of Crook's research which has found that Twitter did not make students independent (2008). In the context of this study, the students were not independent because their in-depth contribution and sharing of knowledge and research process were lacking.

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Analysis Two: Students' Perception

The value of Cronbach's Alpha based on the 33 items in the questionnaire is 0.743 (moderately acceptable) indicating a relatively stable index of students' perceptions of using Twitter. Table 2 presents the items along with the percentages (1 = strongly disagree, 5 = strongly agree).

Table 2: Students' perception of using Twitter (in percentage)

Item		1 SD	2 D	3 MA	4 A	5 SA
1.	Twitter is fun as a coursework	6.9	34.5	41.4	10.3	6.9
2.	Twitter provides a new experience in learning	3.4	17.2	37.9	20.7	20.7
3.	I use Twitter because it is part of my coursework	0	13.8	27.6	24.1	34.5
4.	Twitter extends what I have learnt in class	3.4	24.1	37.9	34.5	0
5.	Using Twitter is a hassle	13.8	13.8	34.5	24.1	13.8
6.	Twitter helps me to communicate with the teacher outside class	3.4	6.9	20.7	41.4	27.6
7.	Twitter helps me clarify topics or concepts that I do not understand in class	3.4	6.9	37.9	27.6	6.9
8.	Twitter helps me to communicate with my classmates outside class	10.3	13.8	37.9	27.6	6.9
9.	Twitter helps me to record my concerns with my research	3.4	13.8	37.9	34.5	10.3
10.	Twitter helps me to be active in learning	3.4	17.2	48.3	20.7	10.3
11.	Twitter is more suitable for social networking and not for learning	3.4	20.7	20.7	31.0	20.7
12.	Allocating 15% of total evaluation to Twitter is too much	6.9	6.9	20.7	31.0	34.5
13.	I would not use Twitter if it is not part of the coursework	10.3	6.9	20.7	20.7	41.4
14.	Twitter is a faster mode of classroom communication	13.8	10.3	48.3	24.1	3.4
15.	Messages on Twitter motivate me to do better in the course	13.8	10.3	51.7	20.7	3.4
16.	Twitter should be part of the coursework for future Research Methods classes	17.2	27.6	31.0	13.8	10.3
17.	I prefer face-to-face consultation than sharing my concerns on Twitter	6.9	34.5	27.6	31.0	0
18.	Twitter gives me the freedom to share my thoughts when and where I feel like it	10.3	10.3	34.5	31.0	13.8
19.	Using Twitter is a waste of time	6.9	37.9	34.5	6.9	13.8
20.	I learnt a lot of things about research through Twitter	17.2	31.0	31.0	17.2	3.4
21.	I prefer to consult the teacher using Twitter rather than face-to-face	17.2	31.0	31.0	13.8	6.9
22.	I feel uncomfortable sharing my concerns on Twitter because people will know my problem	20.7	27.6	27.6	13.8	10.3
23.	Using Twitter is the easiest and most cost-effective way to discuss research processes.	13.8	24.1	37.9	17.2	6.9
24.	Twitter lets me express myself which I find hard to do in the classroom	6.9	17.2	44.8	20.7	10.3
25.	Twitter's 140-character limitation is a bother.	6.9	6.9	24.1	6.9	55.2
26.	I would not use Twitter if there are no marks allocation	6.9	3.4	55.2	10.3	24.1
27.	I feel more engaged with the course through Twitter	13.8	24.1	44.8	6.9	6.9
28.	I learnt to be precise in expressing my thoughts using Twitter	6.9	13.8	44.8	20.7	13.8
29.	I don't find the use of Twitter beneficial to my learning	10.3	20.7	44.8	13.8	10.3
30.	Twitter helps to alleviate my worries concerning my research	6.9	20.7	55.2	10.3	6.9
31.	Twitter makes my learning more collaborative	10.3	24.1	28.3	6.9	10.3
32.	Without Twitter, I would feel 'alone' in the course	37.9	27.6	27.6	0	6.9
33.	Twitter provides me with valuable support in learning	6.9	17.2	51.7	13.8	10.3

Based on the findings, it can be concluded that students generally had mixed responses to Twitter in the Research Methodology classroom. Generally, they perceived Twitter as having some form of value to support their learning in

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terms of seeking clarification, sharing support, motivating each other, and communicating with the teacher. However, it is shown that students generally had a negative perception towards Twitter itself. About 60 percent of the students agreed that they would not have used Twitter if it was not part of the coursework, and that allocating 15 percent of the total evaluation to Twitter was too much. Based on students' responses to the open-ended questions in the questionnaire, it was also revealed that most of the students did not favour Twitter as a technology tool that promotes better learning.

When asked about which application they thought was better than Twitter, 19 out of the 29 students said they preferred Facebook; citing reasons of familiarity such as everybody had a Facebook account and was active, and that Facebook was more popular than Twitter. Another reason given is that Facebook would allow them to write longer, different from the nature of Twitter itself which had a different interface and character limit. This preference explains why 60 percent of the students agreed that Twitter's 140-character limitation was a problem for them. What added to the students' frustration were the challenging issues with limited mobile data and Wi-Fi connection in hostels and in the classroom.

The results above suggest that students have mixed responses to the use of Twitter in the classroom as they found it useful as a platform to communicate with the teacher and their classmates, sharing thoughts about own research, giving opinion on friend's tweet/question, summarizing week's lesson and asking for information/clarification. One other main hindrance to adopting Twitter in the Research Methodology class is the nature of the course itself - the main bulk of the course evaluation came from presenting and writing a research proposal – most of them did not really have a clear idea about their research until towards the end of the course itself. This was observed when students presented their research proposals at the end of the course. This perhaps explains their superficial Twitter postings about their research and general research processes. Other equally important reasons are the popularity of Facebook and the students' familiarity with it, affirming Rinaldo's finding that student resistance to using Twitter is a primary barrier to student adoption (2011).

IMPLICATION AND SUGGESTIONS FOR FUTURE RESEARCH

The use of Web 2.0 technologies such as Twitter can be a hindrance in learning. The findings from this study suggests that the adoption of Twitter in the classroom is 1) interconnected with students' preference of certain tools, 2) dependent on the nature of the tool itself. In Twitter's case for example, the 140-character limit serves as a barrier to the students, limiting their writings/responses. It is therefore important for teachers to carry out a survey on students' preference before adopting Twitter or any Web 2.0 technologies in class. Perhaps it would also be beneficial if the teacher could schedule tweeting time in class, and hold a short discussion based on responses on Twitter.

CONCLUSION

Introducing Twitter in a Research Methodology class may sound like a novel idea as Twitter as a social media technology has the potential to engage students, increase the interaction between teacher and students, and provide social and emotional support. This research shows that even though the adoption of Twitter as a learning tool provided some form of support to the students, it did not extend students' learning of Research Methods (in Literature). This is due to various factors relating to students' preference, nature of the course and inadequate infrastructure. These findings show that the use of Twitter in the RM classroom could perhaps matter when students associate positive feelings to the use of it. Until then, a future for the use of this technology in the Research Methodology class remains to be seen.

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DON'T BET ON THE PRINCE – GENDER EDUCATION THROUGH LITERATURE

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The attempt to effectively enhance gender equality through education often stumbles against deeply rooted prejudices, especially in patriarchal and militaristic societies. I would like to suggest in this paper that approaching the issue through literature might be more effective, since it appeals to the imagination, sometimes to humor and fantasy, rather than to ideas and opinions which tend to be rigorously cemented quite early in life.

I'd like to demonstrate how a poem by Judith Viorst may ease our way into a discussion of deeply rooted gender definitions and expectations.

Keywords: literature education

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4-6 YAŞ ARASINDAKİ ÇOCUKLARIN SOSYAL BECERİ VE PROBLEM DAVRANIŞLARI YÖNÜNDEN İNCELENMESİ

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4-6 YAŞ ARASINDAKİ ÇOCUKLARIN SOSYAL BECERİ ve PROBLEM DAVRANIŞLARI YÖNÜNDEN İNCELENMESİ

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ÖZET

Araştırmanın amacı, okul öncesi eğitime devam eden 4-6 yaş çocuklarının sosyal becerileri ve problem davranışları yönünden incelenmesini amaçlamaktadır.

Araştırmanın örneklem grubunu Denizli il merkezindeki ilköğretim okullarının anasınıflarına devam eden 5-6 yaş grubundan 224 çocuk oluşturmuştur. Veri toplamada sınıf öğretmenleri tarafından doldurulan "Kişisel Bilgi Formu" ve "Okulöncesi ve Anasınıfı Davranış Ölçekleri" kullanılmıştır. Ölçekler Merrell (1994) tarafından geliştirilmiş, Poyraz-Tüy (1999) tarafından Türkçe'ye uyarlanarak geçerlik ve güvenirlik çalışmaları yapılmıştır. Araç iki ayrı ölçekten oluşmaktadır. Sosyal Beceri ölçeği (alt boyutlar: sosyal etkileşim, sosyal bağımsızlık, sosyal işbirliği) ve Problem Davranış Ölçeği Problem (alt boyutlar: içselleştirilmiş problemler ve dışsallaştırılmış problemler,) 4'lü likert olup, puan artışları sosyal beceri düzeylerinin, problem davranışlarının arttığını göstermektedir. Veriler SPSS paket programı kullanılarak analiz edilmiştir. Veriler güvenirlik analizi, t testi, korelasyon ve tek faktörlü varyans analizi yöntemleri kullanılarak analiz edilmiştir.

Cronbach Alpha iç tutarlılık katsayısı Sosyal Beceri Ölçeği'nin alt boyutlarından sosyal işbirliği için .93, sosyal bağımsızlık için .90, sosyal etkileşim için .78'dir. Problem Davranış

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Ölçeği alt boyutlarından dışsallaştırılmış problemler için .97, içselleştirilmiş problemler için .90'dır.

Sosyal Beceri Ölçeği Toplam Puanı ile Problem Davranış Ölçeği toplam puanı arasında anlamlı, ters yönlü yüksek bir ilişki görülmüştür (r= -.709, p

Sosyal Beceri Ölçeği toplam puan ortalaması tek çocukların (X= 59.95) 2-3 kardeşi olan çocuklardan (X=55.54) daha fazladır (p<.05). Sosyal işbirliği alt boyutunda puan ortalamaları tek çocukların (X= 24.39) 2-3 kardeşi olan çocuklardan (X=22.00) daha fazladır.

Annesi çalışan çocukların Sosyal Beceri Ölçeği puan ortalaması (X= 59.92) annesi çalışmayan çocuklardan (X=47.47) daha fazladır (p<.05). İstatistiksel olarak fark içselleştirilmiş problemler ve dışsallaştırılmış problemler alt boyutlarında da bulunmaktadır (p<.05). Annesi çalışan çocukların Problem Davranış Ölçeği puan ortalaması (X= 21.44) annesi çalışmayan çocuklardan (X=40.44) daha düşüktür (p<.05). Sosyal etkileşim, sosyal bağımsızlık ve sosyal işbirliği alt boyutlarında da fark istatistiksel olarak anlamlıdır (p<.05).

Anne yaşının, anne eğitimi, çocuğun cinsiyeti ve doğum sırasının, çocukların sosyal becerileri ve problem davranışları üzerinde herhangi bir etkisinin bulunmadığı saptanmıştır (p<.05).

Sonuç olarak, sosyal becerisi yüksek olan çocuklarda problem davranış görülme oranı azalmaktadır. Tek olan çocukların, annesi çalışan çocukların daha fazla sosyal beceriye sahip oldukları saptanmış olup, annesi çalışmayan çocuklarda problem davranış görülme oranı daha fazladır.

Anahtar Sözcükler: Sosyal beceri, problem davranış, okul öncesi

Keywords: Sosyal beceri, problem davranış, okul öncesi

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ECONOMIC CULTURE AND SCHOOL SISTEM

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The paper aims to highlight how even in Italy the economic, financial and social security culture of young people has become the subject of attention also from the school system; until today, in fact, the economic education was entrusted to the initiative of non-formal educational institutions that acted with initiatives and projects that do not guarantee, however, the formation of a real economic culture.

As already it happen in other countries of EU this interest can be seen from the will of the Italian Ministry to place in secondary schools of economics as a discipline.

Considering the OECD data, but also some Italian research institute, a need to be alert for two aspects of fundamental: the first is the need not to train specialists in economics, finance and social security, but the young are able to understand the economic issues of the company, capable of managing their daily lives; the second is the need to have teachers are able to create economic and financial culture in young.

To achieve these objectives it is necessary to think about the economy since primary school and not only in the secondary school degree and train teachers of all disciplines use the economy to school.

Keywords: Economic culture; economic education; education policy; school system; teacher economic education

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EDUCATING THROUGH THE BODY – DEVELOPING THE HUMAN HEART

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ABSTRACT

¨Education¨ is a process intended to achieve and bring the best out of individuals. But due to a long held Illustration tradition we have forgotten to pay attention to our human development. We have neglected to define what that ¨best¨ might be and to look for the right formula to do this. We have basically focused on developing the best of ourselves by studying different sciences and gathering information and by developing intellectual skills. However our new century demands an effort to find a new formula that will help us get the best of ourselves as human beings by using our human energy, something that should be obvious in a world full of different kinds of energy (solar, electrical, nuclear, and the like). We still have to discover our human energy, multiply it and use it in our contemporary world. This goal should be a complement and an innovation in education since our human energy has driven human development from the beginning of times and has taken us to where we are today. We have created a civilization but now we must learn how to live peacefully and cooperatively so we can control our destinies in this and all the following centuries. This article defends the importance of educating people´s human heart by discovering and using their own physical energy. It explains how Aikido, a contemporary non-fighting martial art, is a formula that can be used in education together with the regular subjects that are part of both formal and informal programs. Aikido is a new educational paradigm intended to help individuals develop a new kind of humanity. It presents general results from a doctoral thesis in education that evaluates Aikido´s potential in education that can help us achieve the best there is in human beings. This work also aims to present some results regarding the use of Aikido in accordance to its particular humanitarian goals.

Keywords: educating through the body

INTRODUCTION

Educating the heart has been a challenge for many centuries. Aristotle is said to have pointed out that education is incomplete without it. A long time after him, the term "education of the heart" (*Herzensbildung)* was used again by the German writer Friedrich Schiller in reaction to the Illustration idea of an education that separated feeling and thinking in favor of using the senses and the mind in a scientific way in support of a logical education. There was also another famous German, Wilhelm von Humboldt who thought about this but preferred to talk about an "education of the character" -*Bildung des Gemüths*-. According to Frevert (2012) in the XVII century the heart was considered as the site of both feelings and character.

Since then, this topic has called the attention of Education because since the XVIII century it was considered that a man had to be physically, mentally and spiritually educated in order to take a step forward in the civilization process. It was believed that education had to cultivate human values and strengths since negative actions due to feelings such as envy, greed, fury, and hatred are known to disturb a healthy pacific life. But since this situation has escalated throughout centuries, contrary to scientific expectations and knowledge, philosophical dissertation and analysis as well as religious directives and efforts, it is evident that the heart still has to be educated. Contemporary people like Sir Ken Robinson (2011) and the Dalai Lama (2013) have talked about their concern about educating both the heart as well as the mind. And about sixty years ago, Morihei Ueshiba (1883-1969) developed a new Japanese activity he named Aikido that is intended to train people in the art of peace and to educate the human heart by making people return to their humanity. Aikido is a highly ethical, secular, and educational system designed to gain consciousness of who we are and how we act as human beings. It also helps to achieve a strong character and a full conviction of the need to think and behave in a universally constructive way in terms of union, confluence and harmony. Seen as a contemporary martial art, Aikido has the potential to train people to react constructively and in full control and balance of their emotions in order to overcome uncertainty, weaknesses, and all kinds of violence.

When talking about the heart it is important to realize that humans are born not with one but two complementing hearts: (a) one is the organ that pumps the blood in our body and keeps us alive, and (b) the other is the impulse, desire and will driving our destinies that can help us to succeed in life and to find happiness. The most important kind of success we need today is the final elimination of all forms of violence

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(physical, psychological and verbal) and destructive thinking which points out to the education and professionalization of our own humanity. From an Aikido perspective inhuman people are those people who discriminate, abuse, betray, hide, confuse, and pretend as much as those who are selfish and violent. So educating this driving-human-heart is really important today because it supports our feelings, our emotions and helps us deal with frustrations and animosity. From an Aikido perspective, when people are sad, when frustration is overwhelming, when depression takes over, when betrayal is present or when the truth is hidden or a murder is committed, it is because people have a weak, small and sick heart which lets negative things be in control and makes people use their intelligence under negative and destructive emotions. The Dalai Lama (2013) has pointed out the need of "some sort of education system that may be universal and able to fit in secular education in order to make people achieve both a healthy body and a healthy mind".

Also from this perspective, being able to overcome personal weaknesses is to have a big, strong, and solid heart, and thus a greater humanity. But this kind of heart needs to be trained, something that points out towards physical training as a vital experience. Weaknesses cannot be overcome by means of mental study or scientific approaches and analysis so much as it cannot be overcome by means of psychological intervention or religious teaching. Many centuries ago Aristotle realized that both virtues and defects lie within us and we can cultivate them by force of habit since they are not something innate (Politics, book five).

RE-ORIENTING EDUCATION

The term ¨education¨ comes from the Latin *educare* (to raise/to instruct) and *educere* (to bring out/to achieve) and formal school has traditionally emphasized instruction and cognition over formation and intuition obviously putting aside the intention to bring the best out of individuals in order to achieve human success. In its more general sense education is a form of learning in which the knowledge, skills, values, beliefs and habits of a group are transferred from one generation to the next through both formal and informal learning, storytelling, discussion, research and training. These forms of education, taking place under the guidance of others or carried out through autodidactic learning, are experiences that have a formative effect on the way a person thinks, feels, or acts so they are considered educational. But education needs to be reoriented in such a way that all knowledge, skills, values, beliefs and habits can be guided by the spiritual human heart that leads people to succeed and share with the rest of human beings. As Sir Ken Robinson (2011) has stated, "education is the process by which we give people a sense of who they are and their capabilities, so that life can mean something to them and to the rest of us".

It seems that the concepts included in such a general definition –knowledge, skills, values and habits– need to be reoriented towards the individual self in order to change the current intellectual paradigm for a new one focused on the body so that people can learn to recognize their human energy, to value human skills, to improve their habits and to reinforce their constructive beliefs by means of a formula free from all kinds of violence. The expression "to learn by heart" needs to be complemented by expressions such as "to live/ to act/ to grow/ and to improve/ by heart". Knowledge is defined as "familiarity and understanding of facts, information and also skills and habits of a group" but it is necessary to pay attention to knowledge as "familiarity, understanding, and development of the human heart" too as part of the urgent need of a new set of skills and habits that may benefit the one universal group represented by humankind. The crisis we live in our contemporary world demands this reorientation, a change of paradigm, in order to achieve an integral education that may lead to the professionalization of a human heart driven by full conviction and cultivated by means of a new paradigmatic physical training. Educating the heart requires constant training and hard practice.

Educating through the body is important if we want to reorient contemporary education. Instead of expanding theoretical knowledge we need more experiential and intuitive formation: we need to go back to the individual rather than elaborating new theories about him/her. A change of paradigm may help to change previous primitive behavior, to refine human conscience in people and to achieve a noble heart driven by a new kind of human energy. Aikido was designed to cultivate the human heart by joining it to the center of our body and by making multiple-sided movements intended to make an impact in our brain so as to intuitively lead our lives in a different way. This new paradigm has an ethical system of physical work that helps strengthen values and virtues and is intended to put people in mutual communication by using a new kind of habit formation training. We need to reinforce knowledge not only as a result of cognitive and referential processes but also as a result of intuitive and constructive experiences. Rather than transferring knowledge

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through storytelling, discussion and research processes which emphasize discursive and mental procedures it is necessary to transfer it through positive, self-awakening physical activities hidden in the heart of our human nature.

When considering that the next step to improve education to make a better world and to find happiness lies in the development of sensitivity and intuition it becomes evident that a new kind of training is needed. We can try to convince ourselves to be good and change but it is also possible to rely on our body to help us transform ourselves in a direct, active way. Physical training is an important educational tool which has been neglected in the past because it has been mainly seen as preparation for sports and competition. But it can be used for much more than that: it can be used as a means to help us recognize the potential of human energy, improve it, multiply it, and use it in order to grow and succeed in life. From an Aikido point of view training in a different way and with different goals in mind can definitely impact our lives. It is then necessary to consider the development of the human heart as a goal and to turn our attention to care of ourselves and to work with both body and heart.



As an activity Aikido inherits the virtues and values the ancient samurai warriors, without the combat goals and skills they used to train for. The balance, stability and control gained through Aikido prepare individuals to face the challenges of life and to overcome human weaknesses. This was also a special physical education formerly reserved for the noble samurai classes of Medieval Japan which Aikido has adapted to meet the needs of our contemporary world in order to achieve human excellence.

SO WHAT IS AIKIDO?

Aikido is a new paradigm in contemporary Martial Arts. It was developed between 1920 and 1969 by Morihei Ueshiba, a Japanese master who devoted his life to design an art free from fighting goals and techniques and changed them to educate the heart (*kokoro*) in order to meet our contemporary need for peace and harmony. Its first forms were developed before World War II and took its final form after the disastrous end of the war. Mr Ueshiba was strongly convinced that our minds needed to be reoriented in order to develop a universal humanity so he designed an activity intended not for self-defense but to create an AIKI culture, a culture of union, confluence and harmony. He realized that since human kind has created a civilization it now needs to learn how to live in it (Escobar, 2002). So he devoted his life to create a paradigmatically new art intended as a particular space and time devoted for human growth.

He saw the need to develop a higher kind of human energy he called KI, a potentially improved "life energy" resulting from the intervention and combination of: (a) *kokoro* (the conscious, imaginative and constructive human heart), and (b) *seika tanden* (the body center located at our lower abdomen). The founder called this union *shin shin toitsu* and he discovered that using it could enable people to create Ki an energy which is also produced by the circular Aikido movements in accordance to the force of gravity and the combination of the expanding and contracting forces known in Physics as *centrifugal* and *centripetal* so that we have this

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instead of this  .

The use of these universal forces implies taking advantage of the energy found in the universe and the movements practiced in Aikido are intended to be applied absolutely free from human negative intentions and brute, destructive force. By using this new kind of energy a person avoids using the muscular and violent strength and reactions previously utilized for war and fighting; by doing so, it develops the happy and balanced sensation of a body full of a highly noble and superior energy. According to the founder of Aikido this is the energy needed to be used for self-growth and transformation, the energy that pumps constructive strength and solid character into the human heart, in words of Mr. Y. Kurita Yutaka, the last *uchideshi* (live-in student) of the founder of Aikido who teaches at the Kurita Juku school - México.

Aikido teaches that in order to experience a satisfactory self-fulfilled life people must work with their emotions and learn how to develop personal strengths as well as a new set of values based on the no-violence principle. Its goal is to live with integrity and human dignity, according to the strengths and virtues the human driving heart is constituted from. The physical activities of Aikido give people a sense of direction and understanding of their human souls and mindsets embodied by *kokoro* (their heart). And by using it individuals can achieve human excellence and a complementary human professionalization which is still absent in education. The new century demands an education of the human heart if the goal is to really improve societies; if men really wish to be civilized and sensitive they must change first so that they are able to change with others. Only an education of the heart may help us get together, pursue one same human goal, support each other, and achieve mutual growth, benefit and human integration: that is the meaning of the word "AIKI" in Aikido.

If we don´t develop a human heart ourselves how can we expect the world to do it? If we don´t make an effort, how can we expect any improvement? So instead of mere discourse intended to convince, the best way to really accomplish improvement is through a transforming work of the body that implies a real effort, self-conscience and control. Learning and practicing positive physical moves can eventually give people constructive thinking and teach non-destructive actions. This may eventually change our current mind frames centered in the use of selfish violence and destructive competition. Aikido is an activity that can physically transform and improve old frame-minds.

Aikido embodies the qualities and virtues aimed by those interested in spiritual development, it teaches people how to prepare for a great live and not for a big fight, it is intended to help individuals transform themselves and their communities, to gain the will and power to overcome their weaknesses and to defeat their real enemies: laziness, selfishness, aggressiveness, hypocrisy, disrespect, intolerance, corruption, abuse, and many more. That is why Aikido is usually referred to as the "art of peace" since it embodies the unity, confluence, and harmony (AIKI) concept. This means we need to educate people on how to have a competent human heart. By doing so we might be using the secular education system the Dalai Lama is looking for and scholars like Sir Ken Robinson have not yet proposed. Aikido is definitely a secular ethics system based on physical constructive movements absolutely rid of violence, ancient martial forms and useless competition, an element forbidden in Aikido because it creates selfishness, animosity, envy, fury and many other negative emotions. Aikido is meant to give people a sense of who they are and their capabilities.

USING THE BODY TO BECOME COMPETENT HUMAN BEINGS

¨Competence¨ is a common term used in contemporary education to refer to the integral capacity a person needs to act and perform as necessary to solve professional and work problems. But we also need a human

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competence that can help us to be in control of life as well as to live in peace and harmony. To be competent in human being terms requires a positive and constructive frame of mind in addition to the referential knowledge acquired in school in order to be in control of one´s own life and to transform ourselves and our societies. As some authors like Pimienta Prieto (2012) say, competence requires skills, attitudes and values learnt both mentally and physically in an ethical context, and Aikido provides practitioners with the most ethical point of view: the rejection of all forms of violence and destruction. Aikido is designed to train the body in such a way that people can learn how to get rid of violent intentions, it transforms the mindset in favor of one´s self-control in preparation for the collaboration and support of others.

So this  is not the same as this 

Aikido has the potential to help educators prepare their students in the four educational competencies that according to Delors (1996) have been recently established by the UNO so that they can: (a) live harmoniously with others, (b) do the best for themselves and others, (c) be the best human beings they can possibly be for their own good and that of others, as well as how they can (d) learn about themselves and others. Arts and sciences require particular talents in order to succeed whereas Aikido only requires human energy and will. Proposing to use Aikido as an educational method is paradigmatic based on the currently accepted idea that knowledge is not something acquired exclusively through the brains but also through the body. According to Hannafford (2008) physical action is crucial from the moment we are born since it creates the multiple brain connections that empower our cognitive potential as well throughout all of our lives.

Aikido is a space where people can be aware of their own being and human potential and a time devoted to find, recognize, multiply and apply an improved human energy called Ki which is to be used in all aspects of life and not just in the training hall. Aikido is transcendental, because its movements are designed to help people transcend themselves led by their human heart, a heart which makes us different from other species, given our capacity to learn, transmit, propose, express, change and transform this world (Escobar, 2014). Talking about human energy in Aikido is talking about what is necessary for our human potential to improve as when compared to the energy needed for a car to operate, a house to be illuminated, a will to reach a goal and an effort to achieve. This is the kind of heart that can be educated through the body in order to give a new dimension to the old saying “Know thyself” by switching it to “Conquer thyself” in order to transform and improve the civilized world.

DEFINING WHAT IS BEST FOR HUMAN BEINGS

They say all a Man wants is happiness so finding a way to live in peace and harmony should be a must. But in order to engage in such a project people need a special kind of energy, an energy that supports and strengthens human nature and Aikido is designed to teach people about this energy. What is best for humans is undoubtedly to try their best to find a formula or a method to develop humanly and to learn how to put an end to violence and selfishness for the sake of their survival.

Contrary to science, religions, and art, which have promoted the use of reason, love, compassion and sensitivity, as ways to improve the human heart, Aikido instructors believe problems can be solved when human beings act in correspondence. They claim problems can be resolved by developing a capacity to live in union, confluence and harmony, something that can only be done through a conscious and continuous effort. It might be said that it is a sort of neuro-physical programming activity: it deals with the creation of new conscious habits in order to eradicate violence and negative behavior, it works on behavioral patterns through experience so it can be considered a new kind of "programming". This kind of programming is intended as a new methodology for *Personal development* since it includes activities that improve awareness and identity, develop talents and potential, build human capital, enhance quality of life and contribute to the realization of

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dreams and aspirations given the Ki energy that helps achieve all this. People´s goal is to live happily but human society is shaped by negative forces that work powerfully against this basic desire, such as greed, violence, environmental destruction, and attitudes that create big inequalities between people. Aikido can help by teaching them how to get rid of the primitive impulses that only trigger selfishness in human beings.

Religions see consideration, compassion and kindness as countervailing forces to the destructive aspect of human nature and see them as a sense of solidarity with others and life in general. Instead Aikido teaches practical solidarity, compassion and consideration learnt by experience and interaction as the best possible counteraction to such destructive aspects by teaching that transformation of one´s self may take us to a better life, supported by the right attitude and the right frame of mind. This is the kind of heart Aikido aims to cultivate between people and the search for correspondence between human hearts is the clue: the less correspondence between actions, attitudes and thoughts the more chances there are to kill the possibilities of being happy and civilized. Aikido works apart from ideologies, religions, political and scientific thoughts and concentrates on the work of the body in positive actions and in accordance to the higher order of the universe. Working out the heart cannot be done through physical activities such as Tai chi, Yoga, Painting, Music or Ballet because they don´t have an impact on practical life. When they are practiced it is basically in an individual way and through the mind and body and not the human heart: (a) Tai chi is a slow motion activity done by each person individually and there is no helping partner to share this energy with, (b) Yoga is also a one–man work that promotes good health, relaxation and the work of postures, and (c) Painting, Music and Ballet help express human emotions but they don´t care about gravity, balance, stability and strength borrowed from contact with the Earth and the interchange of energy with a partner. And most previous Martial arts are done for the sake of competition, combat and fighting, they are self-centered and they don´t teach care about others and their human condition, they were not designed to interact and communicate, as Aikido was.

So Aikido is an outstanding formula designed to educate the human heart (*kokoro*) since it cares for values derived from the ancient samurai ethical code named *bushido*, such as:

a) Integrity, nobleness, magnanimity (JIN) – A human being is capable of improving, of becoming noble and of understanding good in everything. Aikido practitioners work to overcome the state of separateness and division of contemporary life. It rejects violence and competition because they lead to lack of harmony and make people lose their dignity as human beings.
b) Fraternity, loyalty and honorability (GI) – Practitioners work for the sake of collaboration and partnership, mutual help, service and attention to themselves and others rather than fighting and opposing. They work to grow personally and for the sake of the group.
c) Courtesy and respect (REI) – Aikido stresses deference and consideration people must have towards themselves and others. Right actions are the result of a right thinking and they show the noble essence of humanity. Aikido´s discipline is rigorous in order to forge the nobleness of human substance. Courtesy and respect lead to the spiritual and sacred dimension of people´s lives.
d) Intelligence and wisdom (CHI) – It is very important to know how to benefit and use knowledge, and how to make it serve others, so as to support and recognize their human dignity. Aikido acknowledges that the intellectual capacity of men is the result of the work of the left and right sides of the human brain but it also believes that such an intellectual potential can be increased when both cognitive and spiritual competences are integrated: perception and learning can be done not only in the head but also in the heart and low abdomen (*kokoro* and *seika tanden*) so that intelligence is enriched by intuition.
e) Faith and confidence (SHIN) – Aikido practice is designed to help people know themselves comprehensively; it is designed to overcome fears and limitations in order to reach our higher potential and to acquire a complete trust in what we are so that both classmates and the environment can perceive and benefit from the nobleness that can be reached from them. Aikido believes in the union, confluence and harmony formula created and developed by its founder master Morihei Ueshiba.

These values make practitioners develop one single heart (*kokoro*), one shared mentality, one same will and one simple formula for growth, one mutual way free from previous ideologies and goals that only divide; they do so without hurting their personal interests or disrupting their personal qualities. All the above-mentioned

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values are meant to lead, further and respect the freedom everyone has to achieve success in all aspects of their personal life. A heart of such magnitude can help people to keep up all the strengths, virtues and ethical aspirations they need in the 21st century. Such a single great heart can be both the motor and the purpose of everybody´s actions. One single heart can be the beginning and the end of the great cycle of life. In Aikido the heart is the personal strength, commitment, and full conviction to do what is right, correct and positive by rejecting all negative or violent actions and behavior. Positive Psychology proposed in the West by Seligman (2009) is a new attempt to help people use their signature strengths every day to produce authentic happiness and abundant gratification, to develop strengths and virtues, and Aikido can be the methodology it needs to achieve this, another way of practical intervention.

AIKIDO AND POSITIVE PSYCHOLOGY

Positive psychology is the branch of psychology that uses scientific understanding and effective intervention to aid in the achievement of a satisfactory life, rather than merely treating mental illness. Since it began, Positive psychologists agree that one must live a happy, engaged, and meaningful life in order to experience "the good life". The topics of interest to researchers in the field are: states of pleasure or flow, values, strengths, virtues, talents, as well as the ways that these can be promoted by social systems and institutions. It looks for a state of ¨flow¨ which leads to a sense of satisfaction and achievement: Aikido only differs in the fact that it is the individual him/herself who has to work on such topics and make a concrete effort to achieve them.

Aikido and Positive psychologists –as can be understood to Seligman and Csikszentmihalyi (2000)-, are concerned with positive experiences and positive relationships as can be seen in the following definition: ¨Positive psychology is the scientific study of positive human functioning and flourishing on multiple levels that include the biological, personal, relational, institutional, cultural, and global dimensions of life." Aikido studies human functioning, works with it and demands its full consciousness in order to flourish on those same dimensions starting with the individual in order to have a positive impact on the institutional, social and global dimensions. Aikido focuses on the same levels Positive psychology studies and has them as a formula to achieve a successful life. Aikido looks at success as a result of the physical application of its special energy force called KI. It complements the idea and the path to happiness embodied trough out the centuries such as happiness obtained from: (a) self-knowledge (Socrates), (b) rational activity in accordance with virtue over a complete life (Aristotle), (c) regarding philosophy as something utilitarian, and from (d) valuing the individual emotional expression (as Romantics did). And by helping people develop a strong character and solid positive attitudes, Aikido helps them have the spirit to face the challenges they find throughout their lives by keeping them in a constant state of flow and positive action. It teaches them to adapt to various circumstances and to rely on their own energy, which has no age, no political ties and no religious bounds. Aikido helps them give meaning to their lives and a deep sense of accomplishment, flourishing of the self and improvement of their human relations. Aikido is beneficial to families, schools and companies and differs from Positive psychology in that it doesn't encourage individuals to strive to their best but makes them do it instead.

Psychology has helped people change negative styles of thinking and feeling and its approach has been very successful in changing how we think about people, our future, and ourselves. Aikido people change by means of its peculiar physical training so it can be assured that it promotes a realistic way of fostering well-being in individuals and communities. It doesn´t have a set of rules or commands but a set of movements designed to make people become used to ¨no violence¨ and to grow as human beings. Its approach is a result of the humanistic and philosophical sources of the East but it cannot be found in just any regular Aikido school since there are also four different forms of practice neglected by regular, common instructors, namely: (a) IPPAN GEIKO (general practice), (b) TANDEN GEIKO (practice centered in the lower belly / abdomen), (c) TOKUBETSU GEIKO (practice according to the philosophy of self-improvement), and (d) KI NO NAGARE GEIKO (practice with the special energy that characterizes Aikido). The first kind is found in most schools whereas the other three are taught in just a few selected schools.

A RECENT STUDY ON AIKIDO AND HUMAN ENERGY

In a recent doctoral study, still unpublished, I have discovered that not all schools teach the original Aikido developed by its founder. It was carried out between 2013 and 2014 and it covered 6 different cases (schools): two in Texas, one in California, two more in Mexico City and one in Aguascalientes city (Mexico). Only one

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school was found to have an instructor who was not only a former student of the founder of Aikido but also an instructor interested in creating a Manual of topics related to the activities practiced in training sessions. This instructor is Yutaka Kurita, a former live-in student of Morihei Ueshiba who currently lives in Mexico City and works in what is now a new comprehensive approach of the Aikido originally developed by its founder. It was concluded that not all of them understand and educate practitioners in human energy and *kokoro* (the human heart) because their main goal is to practice techniques and they don't work on the physical self-conscious use of gravitational forces or the development of the human heart. Being aware of one's body, of the positive effect of non-martial moves, and to use our human heart to discover the essence of human beings takes time, effort and a good and interested instructor.

The results from the research carried out clearly indicate that Aikido activities and experiences as well as its environment contribute to the creation of a new *habitus* (the lifestyle, values, dispositions and expectations of the particular group formed by practitioners) based not on social position but on the particular lifestyle this activity generates. This according to the term as was coined by the sociologist Bourdieu (1960) which is known in correct Aikido as *Wa no kokoro* (¨circular/reciprocal heart¨), according to Kurita Y. (2015, Mexico). Unfortunately five out of the six cases analyzed limit their teaching programs to technical aspects and they miss the development aimed and proposed by the Founder of Aikido. It was clear that the physical education received in elementary and high schools must not be stopped since the activity benefits adults as well as adolescents and children. This is due to a lack of well-prepared instructors who should be interested more in the educational potential of Aikido rather than its technical/mechanical or martial-like aspects.
The study proved that only a renewed professional and comprehensive instruction in Aikido can have a positive and beneficial impact on the affective, social and corporal dimensions of practitioners. Since practicing Aikido can help people have a higher quality of life it is necessary to further its practice and teach lower instructors about this potential. Aikido has the potential to improve the quality of life by means of a development of the human capacity to be sensitive, intuitive, attentive and considered and civilized. This means –as the study revealed– that only 6 out of 38 practitioners miss the growth Aikido is supposed to give them. This is quite significant because Aikido is currently practiced all over the world but mainly as a new martial (fighting) art as can be seen in the hundreds of the YouTube videos and books published up to date in many countries.

It seems hard to find a good educational Aikido school since many only see and work on the surface. However, and due to the very nature of the art, they all are driven at least by the same constructive idea of avoiding violence and working in favor of the union, confluence and harmony with others. If individuals change themselves they can transform their societies. If they don´t develop a human heart, they cannot expect others to trust and communicate with them. If they don't overcome their own weaknesses, they cannot help others to become competent as human beings. The vital energy we are born with is all the energy needed in Aikido as an education project but it has to be raised to the KI level, the *energy* necessary to fuel up the works of the human heart. This KI is life energy at its most in reference to good judgment, human reason; determined will, strong spirit and positive, fully committed heart develop throughout AIKI practice. Changing the current education paradigm implies revising the old Cartesian saying "I think, then I am" in order to be aware that "If I think in a certain manner, then I surely am the result of that way of thinking". And if I act in a certain manner I will certainly change my way of thinking. Aikido training is intended to develop one´s own energy, to help people to get rid of negative aspects that spoil their human heart. As a new paradigm Aikido teaches how to make a friend out of an enemy, how to get the best from the personal effort made to cultivate healthy attitudes and a healthy frame of mind.

Throughout its physical activity Aikido creates the special energy already mentioned. This new KI energy can be used for an integral education given the multiple values we assign to our body. According to Delgado and Zurita (2002) the body can be seen differently as a dynamic, esthetic, ethic, social, and instrumental body. Thus Aikido takes advantage of this and uses the body to transform people though the development and multiplication of human constructive energy. A new, AIKI culture, a new kind of humanity, requires the exploration of activities that can contribute to education and help improve the person´s capacities and skills for life and not just for work or profit or more scientific development.

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CONCLUSION

Aikido is about training the heart throughout the body in order to refine people by means of an extremely specialized physical exercise. It helps to develop human energy of higher quality and potential and represents a step forward in physical education as it inherits a training system considered educational in the East: Aikido is a new and different means of human knowledge transference. The old idea that the ¨the mind controls the body¨ is challenged in Aikido when the person can see that the mind has nothing to do when the body is numbed, tired, swollen, or hurt in any form and when neuro sciences support the idea that the body contributes to the general conformation of the mind. From an Aikido point of view, it seems that the body needs to be rescued and utilized if a change of the heart is to take place.

It seems clear that due to a long held Illustration tradition we have forgotten to pay attention to human development. We have neglected to define what is best for all of us and to look for the right formula to improve and transform societies. We have basically focused on developing the best of ourselves by studying different sciences and gathering information and by developing intellectual skills. However our new century demands an effort to find new formulas that will help us get the best of ourselves as human beings. It is absolutely necessary to question ourselves to see if human education is or is not part of the general system centered on sciences and managing information, It is necessary to ponder if the individual is getting training to develop a human heart, apart from religions and philanthropy, and if the individual is trained to react more sensitively towards things, nature, society and all the world he is immersed in.

This can be done by using our human energy, something that should be obvious in a world full of different kinds of energy (solar, electrical, nuclear, and the like) but we still have to multiply and apply such human energy in our contemporary world. This goal could be a complement and an innovation in education since human energy has driven human development and has taken us to what we are now. We have created a civilization but now we must learn how to live peacefully and cooperatively so we can control our destiny in this and the following centuries. This article contends about the importance of educating people´s human heart by discovering and using a new kind of energy named KI. It explains how Aikido, a contemporary non-fighting martial art, is a formula that can be used in education together with the regular subjects that are part of both formal and informal programs. Aikido is a new educational paradigm intended to help individuals develop a new kind of humanity and from the results derived from doctoral thesis in education that evaluate Aikido´s potential it can be concluded that it can help us achieve the best there is in us as human beings.

With a human heart, service, respect and care for others begins with oneself and is done by overcoming our own weaknesses in a process that brings out the best in all of us in a conscious and attentive attitude applied to human life. Full conscience and commitment must be the essence of the heart we need to transform education in the 21st. century.

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EDUCATION FOR HEALTH IN MOROCCAN ADOLESCENT LIVING IN THE SPANISH SOUTHEAST: ANALYSIS OF ASSETS IN HEALTH

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ABSTRACT
Education for Health is a multidimensional process of communication and social and educational intervention, and is influenced by social, cultural and anthropological factors. It aims to enhance the ability to detect and integrate resources, customs, cultural and environmental elements, existing in the communities of life and enhancing the health of people living in them.

Objective: The objective is to determine the assets in health posed by Moroccan adolescents, living in the province of Almeria, before initiating a development of a program of health promotion.
Method: Qualitative research in which health assets of students are identified through the analysis of the content of the interviews and photographs provided by the fifteen Moroccan participants. For the discourse analysis was used ATLAS.ti 7.1.8.

Results: The results highlight the ease of Moroccan teenagers for organizing support networking with peers from different cultures. Preference for leisure activities related to the practice of sports (for men). The motivation to take advantage of the migration project as a resource for achieving the greatest professional success and interest for the health and its maintenance. Students establish a direct relationship between healthy behaviors and Moroccan cultural patterns.
Conclusion: Moroccan adolescents have a number of specific assets in health, not only in relation to the dominant cultural group but even to their own parents, due to acculturation processes as they have been linked with the Spanish culture differently from their parents.

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INTRODUCTION

Health Education can be defined in an eclectic manner as a multidimensional social and educational intervention and communication process that aims to train and render accountable people in health-related decision-making processes. Depending on the method used, the underlying ideology and the objectives pursued, different ways of guiding Health Education activities can be envisaged (Aibar, 2010). Other definitions of this concept refer to optimization; improvements of the human being addressed to the individual's well-being as one of its essential features. Some views go beyond this point and argue that health is a high priority in the list of elements to achieve happiness and it is important for both mental and spiritual well-being as it constitutes one of the key factors for happiness. Health Education shall be, in this regard, a case in which the issue of this optimization becomes reality through the exercise and desire to implement healthy changes in the individual's behavior, regardless of its geographic location. The aim is to, ultimately, improve the quality of human health which, in turn, is an important objective shared by most cultures (Bouché Peris, 2004).

It is also important to take into consideration the strong influence that social, cultural and anthropological factors have on Health Education (such as public opinion, fashion, advertising, values, beliefs, customs, etc.) which justify its perception as a social intervention process. As an educational process it requires explicit educational objectives adapted to the characteristics of the target population and the use of teaching resources to promote their participation (Aibar, 2010). The objectives of the Health Education and Promotion research not only focus on identifying the associations between social and individual risk factors and health or disease. They should primarily be aimed at:
establishing how these factors act,
what protection mechanisms do people possess or develop,
which are their environmental aspects that facilitate or hinder such mechanisms,
which are the healthiest social environment features and how can they be created and maintained, and finally, what can individuals, communities, technicians and politicians do to control them.

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Consequently, this research shall have to be contextual, address the inequalities, be dynamic, participatory, multidisciplinary and a results-oriented health development and understand the changes, be flexible in its methodological aspects and produce useful results that could be shared with all stakeholders involved. (Colomer and Peiró, 2010).

Hernán et al (2013) argue that the prevention-oriented public health approach is a shift towards a positive public health. The traditional trend, focused on the protection, prevention and emphasis on reducing risk factors or creating barriers to diseases is being re-directed towards a perception of health actions that focuses on the biopsychosocial dimension. As Perea outlined in 2004, there is currently a new health culture that conceives the individual from a holistic perspective; a socioeconomic, psychosocial, environmental, ethnic, etc. human reality that is intertwined with the biological reality - ecological, so the concept of health adopts a holistic sense, a concept that encompasses man as a microcosm within a cosmos. Health Education shall now be focused on improving the quality of human life and, for this reason, it manifests a positive sense of support and empowerment of individuals to manage their own health by promoting proper environmental and behavioral changes that will lead to healthier lifestyles.
Each community has different talents, skills, interests and experiences that are valuable for health. We need to implement methodologies that emphasize the development of policies and practices based on the abilities, skills and resources of the individuals and communities in our cities, towns and neighborhoods. This would allow us to, as observed in many of our public health programs and health promotion, discover the individual, collective and environmental resources. The challenge now is to enhance the ability to collaborate and identify the existing resources, customs and cultural and environmental elements in the communities and the people within them and establish a better connection between our knowledge and skills with citizens and institutions to respond to the needs and interests of individuals throughout the course of their lives. (Hernán, M. et al, 2013).

As already indicated by Antonovsky in 1996, the health behaviors of individuals involve the following:

1. An understanding of the situation,
2. the vision of their own abilities to manage them and
3. the ability to transform what is done into satisfactory actions that are also meaningful to life.

and from this perspective, authors such as Morgan et al (2007) defined:

> *"A health asset is any factor or resource that enhances the capacity of individuals, communities and the population to maintain health and well-being."*

Kretzman & McKnight already in 1993 pointed out that a method was necessary in order to attempt to identify the assets or strengths of the community to discover the existing individual, collective and environmental skills and talents. It would be a different process from the practice of inventory and identification of the deficiencies of individuals and communities traditionally used in the health diagnosis process. This approach recognizes that each community has talents, skills, interests and experiences that are a valuable arsenal to be used. The asset map is part of not only individual but also group empowerment, training, participation and accountability process.

The aim of our study is to establish the health assets provided by Moroccan teenagers in the province of Almeria as a prior involvement in the development of a health promotion program. This analysis is part of the project: Transcultural Health Education for Immigrant and Local Youth from Almeria: Analysis and intervention for optimization and improvement, financed by the National R+D+I of the Ministry of Economy and Competitiveness (Ref: EDU2011-26887) of the research group HUM-665 at the University of Almeria.

METHODOLOGY

A descriptive-interpretative qualitative analysis of both the discourse and the images presented by fifteen participants selected through purposive sampling in Southeastern Spain. Our participants were 15 students of Moroccan origin, 7 of which were women and 8 men. The average age was 16 years and the average time of residence in Spain was 9 years.
Participants were provided a camera to take pictures that capture those images that they considered to be the most representative in relation to various aspects of their health. After analyzing the pictures interviews took place in which the photos were shown and they talked about the reasons for having taken them.
The reasons gathered in the semi-structured interviews were obtained during the first half of 2013, they were recorded in audio and transcribed. The qualitative analysis fitted our goal, which was not only to learn about the adolescents' health but also to provide a detailed account of the situation and resources. Therefore, it is clear that the generalization of the results is not the goal of the research. The software package ATLAS.ti 7.1.8 was used for the discourse analysis.

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RESULTS

After repetitive discourse analysis, we identified several health assets among our participants in the external environment in the categories of support, security and respect, boundaries and expectations and constructive use of time.

• *Support:*

Within this area there are no significant difficulties in establishing relationships with peers from different cultures. However, when it comes to aspects regarding deep values they find it easier to interact with people from their cultural group, whilst at the family level, there is less reluctance to establish relationships with Moroccan adolescents than with those from other cultural backgrounds.

> *In my group of friends we are Moroccan, Spanish and even Guinean. But I only go to the homes of and go out with Moroccans and I only hang out with the rest in school. I can't, for example, go to a Spanish friend's house, they would only allow me to do so if they are a friend and they know her; but if they don't, if they do not know their parents then I can't. When it is a Moroccan girl even if they do not know her if I tell them that she's good girl and so on they do allow me to do so. With Guinean friends it is the same as with Spaniards. 425: 475 (ID, woman)*

• *Security and respect*:

In the case of the girls the perception of insecurity in external environments where they fear for their safety and being judged for their identity and values as Moroccan woman is recurrent:

> *In relation to the environment sometimes I do not like it when there are many people around, when I go for walks sometimes I do not like it. Some are bad people and because I do not know the rest, my parents do not let me go out for a walk, I can only leave the house with my sister or my mother. If I want to go out alone in the end they let me do so but then people (also Moroccan) look at me as in I do not know... []... they look at you differently. When most of them are Moroccan they look at you in disapproval and differently and I do not like it.... Especially in the evening and when there are many people around; in that case, I do not feel like going for a walk with so many people out. When you go out alone Moroccan people look at you differently, as if you were a bad person, as if you had no father, they believe that because you do not have a father or you're a bad person you go out with men. They think badly of you, they start to talk among themselves, men and I do not feel good... (59: 475) (NA, female)*

• *Boundaries and Expectations*:

In this case, we observe a great interest in exploiting the migration project as a resource to achieve the most professional success possible. Values that are repeated by their parents and adolescents express them as commitments towards their families although sometimes there are discrepancies:

> *I am in my second year of compulsive secondary education, when I grow up I would like to be a doctor or a policeman but my parents would rather I became a doctor*. 32: 475 (NN, man)

• *Constructive Use of Time*

Moroccan teenagers talk about how they must make good use of it to achieve academically in school in relation to the previously defined family commitment:

> *I study in the evening when I get home, sometimes for two hours. I get good grades but in Geography they are not that good, I have an exam on Friday. The ones I like the most are Maths, Science, Technology, Drawing, Language Literacy... I do not understand it much. 34: 475 (SN man)*

In relation to leisure time we obtained interesting results. Whilst the common denominator is the development of activities related to new technologies and other activities that involve little physical activity, in the case of boys, doing sports activities plays a major role as a fun sport activity that contrasts with the almost complete lack of physical activity in the case of girls. The development of these physical and sports activities among boys promotes peer relationships and increases their social resources as opposed to the situation of girls.

> *I play soccer in the evenings, I train on Mondays, Wednesdays and Thursdays and we play on Saturdays and Sundays. We have ranked tenth in the league. 284: 475 (OS, man)*

With regard to Internal Assets we observed the following:

• *Positive and healthy values*:

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There is a huge interest in health and its maintenance. A direct relationship between healthy behaviours and Moroccan cultural patterns is established albeit not always successful.

> *I'm in good health, I eat healthy food, I do not smoke or anything, I do not like those things and could not care less about them. I use the Sheesha as it is less harmful, it is less harmful than tobacco or imagine what joints contain. 344: 475 (FA, man)*

• *Social Capabilities*

Even though there is a huge exchange of cultural norms of the majority social group, it is true that Moroccan girls still play a role that is more focused on the family and home. However, men show more of an external outlook, which increases their ability to establish relationships with locals and incorporate habits that they consider to be healthy although this is not always the case. There is an unstable balance between the values from their place of origin and those that have been incorporated:

> *When we get together we go to party to Ejido, Roquetas, to pizzerias, we sit... we organise "botellones" and we drink almost everything, even alcohol. We drive there and return at five-thirty or six o'clock in the morning. I don't smoke, I have never tried it, I do like sheesha though. 327: 475 (FA, man)*

• Positive identity and control:

We observed, as a general rule, a positive self-perception and self-control in critical situations typical of their age. They defend their own identity traits and consider different point of views in relation to their cultural group:

> *There are people who do not like our culture and traditions, but they have to accept them too, they believe that we come from a poor country and tell us to go back there, there are some racist people but most of them are good people 384. 475 (HH, female)*

• *Learning Commitment*

Overall, they seem to be open to incorporating knowledge and skills that could be deemed useful. The problem arises in situations of cultural clash. In these cases, they are fully aware of the importance that people who have cultural competence give to them and they are able to address certain aspects from the cultural awareness perspective:

> *The best places and times in school are the playground and with the counsellor because he explains many things I like and Physical Education 188. 475 (YB, female).*

CONCLUSIONS

Moroccan adolescents possess a number of specific health assets, which results in the need for an individual education and promotion approach. They show unique characteristics not only in relation to the dominant cultural group but also their own parents, as they have established relations with the Spanish culture differently from their parents both from a qualitatively and quantitatively perspective.

Based on an idealisation of Moroccan life patterns as a healthy life cliché, they are aware of the importance of not incorporating unhealthy behaviours from the Spanish culture that are also rejected by their cultural group. Nevertheless, sometimes acculturation strategies are geared towards a trend of assimilation especially when such behaviours are considered to be peripheral or not an identity characteristic of their cultural group. It is within this context that they sometimes incorporate unhealthy customs and habits.

Aspects such as seeking support for decision-making processes that are considered as important in references of their own cultural group, the role the family plays in decision-making or the perceived opportunity of the migration project, influence the manner in which education and health promotion can be perceived as a resource in the migration project. Health care and maintenance as a positive value together with the ability to socialise, somewhat less developed among girls, promotes interest in health-orientated habits and customs.

It is worth highlighting the situation of adolescent girls of Moroccan origin. They are regarded as guarantors and having more responsibility regarding the maintenance of the cultural identity than men, whilst at the same time they are also aware of the different alternatives that can, in some cases, stir into controversy with the cultural norms. Ultimately, it is a continuous, adaptive process of unique cultural patterns and knowledge and skills identified as beneficial in relation to health.

The manner in which all the health assets influence each other (both external and internal) allow us to plan health Education interventions for adolescents presenting these characteristics. The alignment of the content with their values, interests and concerns shall lead to the achievement of the objectives.

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EDUCATION FOR WORK AND THROUGH WORK IN BOLESLAWA LAMENT NON-PUBLIC PRESCHOOL IN LUBLIN, POLAND

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ABSTRACT
The research was conducted in bl. Boleslawa Lament Private Preschool with Integration Classes named "Promyczki". Blessed Boleslawa Lament based her educational system on Christian personalism, which assumes that man is born free and rational, and so she treated her pupils. The study is a part of the project which aim is to diagnose functioning of kindergarten. The paper answers questions: how is education for work and through work conducted, what methods and teaching means are used and what are its effects.

Methods used in the research include observation, analysis of children work, interviews with pupils and teachers, analysis of preschool documents, and register of teaching means. The study was conducted within 6 months in 2014/2015 school year with participation of 137 pupils and 12 teachers. It occurs that the level of work education is high and in accordance with core curriculum moreover the preschool uses efficient varied teaching means and methods.

INTRODUCTION – EDUCATION THROUGH WORK AND FOR WORK AND ITS GOALS

The work is one of the fundamental values of European culture. It is also highly valued in Poland. Not only because of its economic dimension, but mainly because of the personal dimension. Work, which is carried out under appropriate conditions, allows the man to develop as a person: the free and a rational being (Kwiatkowski, 2007).

"Education through work is a kind of human activity, intentionally and deliberately organized, in which we use work in the process of impact on the person and make changes in her or his personality" (Wiatrowski, 2005, p. 154). According to this definition, the work is treated as educational method. And we understand education to work as preparing children and youth for the proper perception of work as a value, as well as developing in them qualities of future employee (especially positive self-esteem, creativity and honesty). It is also important to shape child's willingness to continue learning, development of skills and abilities, preparing to find themselves on the labor market and take up satisfactory activity (Stróżyński, 1999).

The aims of education through work and for work are primarily:

1. shaping appropriate attitudes of young to work, to understanding the role of this part of human activity for the development of its future and the fate of the whole society; shaping belief about need and value of each job: productive, creative and service activities;
2. shaping readiness to work in accordance with personal possibilities and social needs;
3. gaining self-knowledge about their own abilities;
4. shaping interests, supporting various forms of creative activities of children;
5. developing skills of self-education, making youth curious, critical, and capable of understanding the possible choices and their consequences;
6. preparing to choose a profession (Bogaj, 2007).

These demands have found concrete expression in the educational and teaching program in kindergartens and schools in Poland. The primary goal is acquisition of skills of understanding the world and self-direction by

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youth. So education for activity in the world in the practical, cognitive and symbolic context is very important in this part of education (Sieroń, 2007).

Education through work and for work is focused on building the overall competencies of the person; It is focused on building understanding and cooperation in the peers communities, rather than on competition; it is focused on the development of the autonomy of individuals, to prepare them for life in the context of the system of values; it shows the work ethos, too.
The child and young man should know their strengths and weaknesses, which manifest themselves in individual and team actions to make correct choice of the field of education and work in the future. It is also important to prepare children and youth for active and responsible life.

CORE CURRICULUM FOR PRESCHOOLS IN POLAND ABOUT EDUCATION FOR WORK AND THROUGH WORK

The aim of preschool education is, between others, preparing children for life in society as a valuable participant: intellectual development, communication development, but above all proper social and moral preparation – to acquire sense of right and wrong and to build system of values.

Kindergarten should also develop social skills e.g. cooperation, mutual help and respect for standards, as well as respectful attitudes towards other people – especially families, children in kindergarten and in other environments, teachers and other educators who work in preschool.

The core curriculum for preschools of Polish Ministry of Education has three areas within which social education should be made. These are: family education, civic and patriotic education. Child after completing his education in kindergarten shall inter alia: to know the names of family members, and to know what they are doing and where they work; to know the important state institutions, social and professional roles performed by different people, for example a doctor, a policeman, or a fireman. The child should also to know the value of his own and other people work and undertake his or her duties in cooperation with other children.

METHODOLOGY OF RESEARCH IN B. BOLESLAWA LAMENT NON-PUBLIC PRESCHOOL IN LUBLIN, POLAND

The aim of our study was to describe and evaluate the level of education through work and for work in the Non-public Kindergarten with Integrated Classes in Lublin. Questions of the research concerned the scope of education for work, methods and forms of children's activities and teaching materials as well as compliance with the core curriculum. In order to conduct the research the method of observation, analysis of documents and interview with teachers and children were used but also there was prepared a record of didactic means in kindergarten. We use also the School Readiness Questionnaire for teachers. The research was comprehensive which means that it included all the teachers and children from kindergarten.

RESULTS

Presenting the results of research we will be answer the question: in which way kindergarten educate through work and to work. We will try to describe it considering subsequent indicators.

During a regular day in kindergarten children are implemented into self-reliance and self-service, for example through washing hands, face and teeth, using the toilet, dressing or eating. Every of this actions is performed more then once during the day.

Children have a permanently assigned duties. After playing, the toy have to be put back on its place, children help in setting the table, watering plants and feeding animals.

During each classes mostly activating methods are used. For example children perform artworks such as painting, drawing or modeling with plasticine, pupils also dance, sing, recite poems, run observations and experiments. It allows children to develop variety of activities.

Teachers use variety of teaching aids (sometimes simple but creative and ingenious, often complicated and modern multimedia resources, too), what – as we observed – encourage children to take variety of activities through arousing their interests and activity.

During classes creativity of pupils is developed in verbal and motor range, e.g. building with blocks, unrestricted artwork, unrestricted dance, motion tasks to unrestricted performance, mathematical and logic riddles.

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Sometimes (but not often) boredom is used as a natural way to stimulate children's own activity and creativity. Kindergarten has such an extensive program, that there is a little time left for use of methods like this.

Teachers offer to children not only execution of artworks, but also help them to continue and finish the work, in the case of difficulties. As a gratification for artwork completion teachers can offer praise, reward or putting the artwork on the exposition and showing to parents. This is very important for children self-satisfaction from work that they have done.

Children's communication skills are also developed. Every day they have an opportunity to talk, ask questions and express their opinions on variety of subjects. They are participating in discussions, brainstorming technique, creation of stories and tails, drama playing, they are listening while teacher reads to them. They learn English by the TPR method (Total Physical Response) and already we can observe effects, as children can sing, recite poems, and use simple phrases in English in everyday life.

Also children's self-presentation skills are developed: diction, posture, gestures, facial expressions, proper dress and behavior. The main method used are theater performances while pupils are actors. It takes place few times during the year on the occasion of family, national, and religious festival, and at the end of the year in the kindergarten. Pupils prepare each performance for couple of weeks. They are practicing roles, the way of speaking and acting. In effect they gain previously mentioned skills, but what is the most important courage and self-confidence.

Each preschool year begins with establishing rules of cooperation in group by teachers and pupils, e.g. we help each other; we respect other people's work, we take care of toys and tools, we clean after our self, we are benevolent – those are important traits for future employee.

Teachers try to avoid unnecessary competition – they rather teach children to help colleagues and cooperation. Competition is rarely used as a teaching method.

Children are given role models. First the teachers, in daily contact with pupils, try to be good role models, but secondly they also give different examples: parents, the saint patron of the kindergarten Boleslawa Lament, which highly valued honest, hard work and was very hardworking. Also other saints are given as an example.

Children are familiarized with professions of their parents and many different ones, mostly through talk, watching illustrations, movies, and reading books. Meetings with representatives of many professions are organized in kindergarten on regular basis, for example: miner, policeman, doctor, dentist, woodsman, musician, actor. Children are also visiting many workplaces, such as bakery, post office, glass factory, zoo, and others. In Village Museum in Lublin they are organized workshops for schools and kindergartens, when children can observe work of carpenter, potter, oilman, miller, beekeeper, embroiderers, spinners, weavers or feeding animals on farm and others. They can also try to make something, e.g. from a clay.

In kindergarten and during trips children are introduced to using many tools and they have opportunity to not only watch them but also try to use any of them. Those are old and traditional tools or modern and complicated (e.g. electronic).

Children are also very well prepared to further learning in primary school. Group of 6-year old were tested for school maturity with use of school maturity scale MAC (Skala Gotowości Szkolnej MACa). They had been tested in aspects of physical, mental and socio-emotional skills. Nineteen pupils were tested and fifteen of them scored high, and only four – average level. No children had been rated low in aspect of school preparation.

Most of these actions are performed in cooperation with parents. During regular meetings the issues of education to work and through work are taken. Parents willingly cooperate with kindergarten.

CONCLUSIONS OF THE RESEARCH AND THE DISCUSSION OF THE RESULTS

Education for work and through work in the Non-public Kindergarten of Blessed Boleslawa Lament in Lublin is conducted in accordance with the core curriculum of the Ministry of National Education. Kindergarten program is evaluated positively by the Education Office, the kindergarten has rich collection of teaching materials in the field of education for work, including many tools and modern technical means. Classes are taught in a creative way, using a variety of forms, means and methods of work with children, especially stimulation methods (e.g. excursions, walks, observation, experimentation), witch stimulate children to activity and work. Children are interested in the transmitted content and they are active but also disciplined. An effects of education in our

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kindergarten are: mastering an attitude of respect for work, developing accurate traits of children (e.g. activity, creativity, accuracy, punctuality), acquisition of social skills (e.g. communication, self-presentation), knowledge of variety of many professions, workplaces, tools, and very good preparation towards learning in school.

The test results are reliable – confirmed by the long-term participant observation. Of course, the tests shall be conducted in more kindergartens and compared with each other.

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EDUCATION OF SAFETY BEHAVIOR ON LEVEL CROSSINGS FROM SOCIETY-WIDE PERSPECTIVE

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ABSTRACT
This article deals with necessity of education safety behavior on level crossings. It contains partial results of research which is focused on impact of risks, non-compliance with safety rules and critical places on users of transport services. Quantity of the accidents and incidents at level crossings is alarming. Through better ways of education it is possible to decrease amount of them. Contribution appeals to the necessity of implementation of educational measures that lead to increased safety due to their elimination.

Keywords: Safety behavior, level crossings, society

INTRODUCTION

Safety of level crossings is constantly actual issue. University of Žilina realized an extensive research of level crossings. For purpose of the research was defined danger zone of level crossing according to regulation ŽSR (Railways of Slovak Republic) Z 12 (Hrašková 2013). Danger zone is a space of the ground communication which is bounded by vertical surfaces which are parallel with outsides tracks at a distance of 2.50 m at outsides from axes on the tracks gauge 760, 1 000, 1 430 mm and at a distance of 3.10 m at the outsides from the axes at the track gauge 1 520 mm.

Majority of modern security equipment at the level crossing are automatically controlled by train movement. This means that if the train enters to the track circuit, starts activity of the security equipment. Usually, it is in distance of several hundred meters in front of level crossing but it depends from type of railway line and also from allowed track speed in a given section of railway line (Majerčák, 2010). If the speed of train is higher the distance is greater. Acoustic (60 - 80 decibels) and luminous (red flashing light) warning signalization is set so that the slowest and largest car could safely pass through the crossing level (truck with trailer with length 22 m. and the pass through level crossing 5 km/ per hour). Only after this time starts activation of an additional warning - crossing gates (Nedeliaková 2013a). From perspective of time it can be up to half a minute and more. Activity of this security equipment will be finished automatically after that the last wagon of the train leaves the track circuit. It is usually again a several hundred meters after the level crossing. All the time is the security equipment in the activity. Significant is fact that during this time none of road users under the Law on Road Traffic must not enter on the level crossing.

CURRENT STATE

Within the research was identified a lot of breach of law, non-compliance with safety rules. Number of incidents with respect to breach security is alarming. When the level crossings were monitored within whole Slovak Republic there was recorded till 640 breaches of law during one day from the side of vehicle drivers (Nedeliaková 2013a). All tragic accidents which happened on the level crossings in the past were from guilty of road users. They did not stop in front of level crossing and they didn´t convinced about the safe passage through the level crossing, they went on red light, or even through closed gates. Following figure 1 documents the number of accidents in SR for period of 13 years, together with number of deaths and seriously injured.

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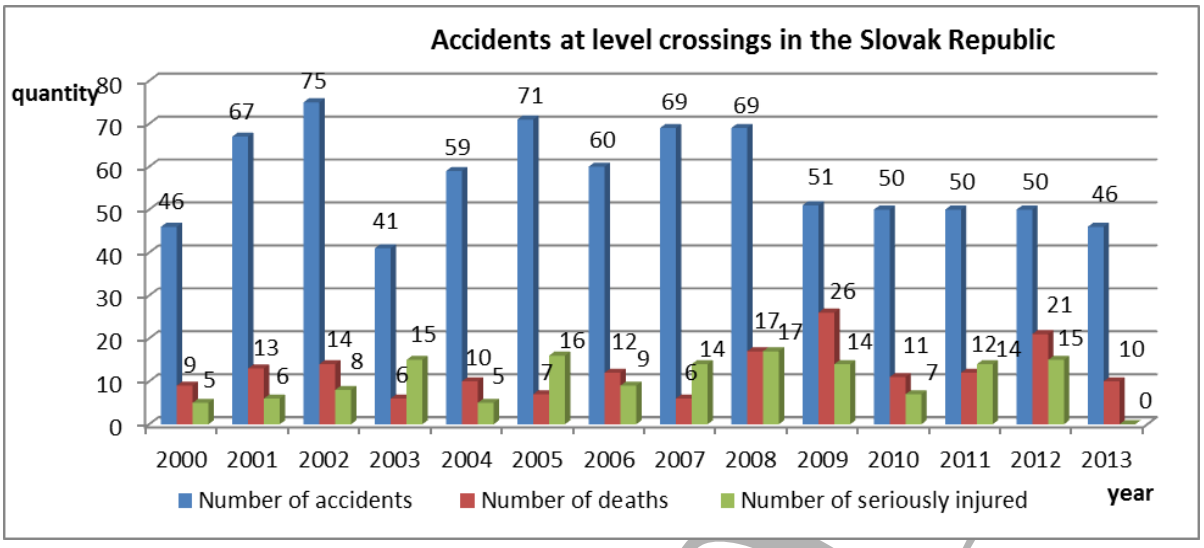


Figure 1: Accidents at level crossings in Slovakia

The assurance level of level crossing is in the responsibility of ŽSR, but also falls to the competence of state administration and traffic police (Nedeliaková 2012). ŽSR can´t arbitrarily change the level of security. Increasing the level of security is assessed according to the occurrence of accidents at level crossing and intensity of road transport.

Way of security of level crossing is assessed according to kind of railway line, class of traffic route, intensity of road and railway transport and the others (Sekulová 2014). In last years is effort to reduce the number of level crossing and construct the grade-separated crossing of traffic route with railway line. Last year was canceled 330 level crossings within the SR. Currently, also with to the reconstruction of the railway tracks and level crossings are built so-called "Signals" (signals for the control of the level crossing protection) which signaling to the train driver the state of level crossing. Signals are the equipment which helps with prevention of accidents at level crossings (Sekulová 2013). Its role is signalize to a train driver that the security equipment is in the correct activity. In the case of necessary (or disorder) the train driver can regulate movement of the train via level crossing.

RESEARCH ON THE SELECTED SEGMENT

From the investigation of collision between train and road vehicle was many times detected that the driver overtaken whole group of stationary vehicles and entered directly under to incoming train (even in the case of correct activity of level crossing security equipment). Braking distance of the train can be even 1 000 m, it depends on weight and speed of train. In spite of sanctions (usually fines) is the effect of these sanctions minimal.

The big problem is a vandalism when occurs to intentional damage of level crossing security equipment (broken optics of warning lights, broken spars, damaged and refuted stands, etc.).

The research was realized on whole Slovakia. For the extent of this issue, we present one specific example for selected segment. This railway line belongs to the first category of railway lines in Slovakia with a high traffic of trains and is a part of V. international corridor which main line leads from Venice to Lvov. The length of this selected segment is 84 km. In the objective segment were monitored seriously accidents, smaller accidents and incidents on which also the oncoming rail vehicle was involved, as defined in regulation Z 17.

For 10 year period was on line section recorded 140 accidents and from this 19 was at level crossings. During this period died 12 people and 4 were seriously injured on level crossings. Total damages for infrastructure manager ŽSR were in the amount of € 19 013.54, for the carriers € 454 082.44 and on the road vehicles € 17 331.94. On the examined segment is 23 level crossings, from this 8 have level crossing light security equipment (PZS) without the crossing gates, 14 is secured by PZS with the crossing gates and 1 is a mechanical level crossing security equipment (PZM). In the figure 2 is shown the number of accidents on level crossings on given segment according to security type for 10 years period.

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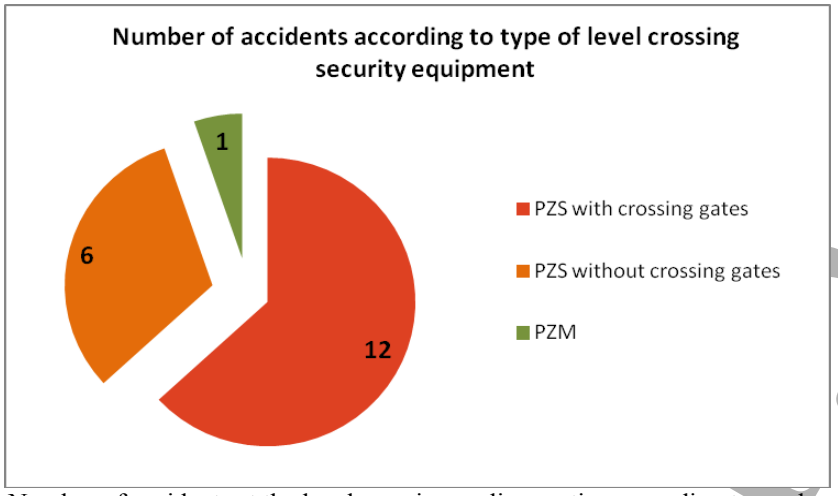


Figure 2: Number of accidents at the level crossing on line section according to grade of security

MEASURES TO INCREASE SECURITY

University of Žilina, Department of Railway transport, with railway operator's cooperation, organizes every year special kind of education on various primary and secondary schools focused on safety on railway crossings. Every year these events have approximately 500 participants from different parts of Slovakia. Children must understand how important the safety behavior is. The necessity of education safety behavior on level crossings is very significant part of teaching and it has huge impact on society. Modern methods of education are always used for comprehensible explaining. These methods represent a combination of presentations, practical use and explanation of undesirable behavior.

This teaching is connected also to another measure for increase users' security of transport operation through explanation of new additional luminous signalization Rail-flash. Nowadays driver of road motor vehicle must have at least 45 m observation tower before level crossing at a speed of 50 km/h. At higher speed, to which often occurring considering to busy lifestyle, is this distance increasing. By introducing of this equipment is information about oncoming rail vehicle to the level crossing transferred to the level of roadway in the distance 180 meters before level crossing. Traffic signs informing about level crossing with a higher number of accidents, the completion of level crossing gates and reconstruction of the subsoil seems to be also difficult from economical point of view.

During calculations the research came out from costs of accidents on given level crossing that have a stochastic character. If the value of human life could be quantified in monetary terms, it would be certainly reflected on the return of investment and reassessment of level crossings security.

CONCLUSIONS

According to research about the accidents at level crossings, the most common reason of rise of accidents at level crossings is non-compliance rules of road traffic due to lack of discipline its users. If occurs to the accident, also occurs to delay of trains, injuries of humans, loss of life, but also the property damage. Therefore, it is important to take into account also this factor in ensuring of level crossing. Frequent accidents limiting traffic and thereby occurs the increase of costs.

Realized research is benefit in identification of all risks and critical places which are relating to level crossings. In this research, we were able to capture the most common incidents and factors from which follows the necessity of individual solution of each level crossing. The research offers a new view to track the intensity through the transport moment. Unequivocal conclusions of research confirm constant actuality of this issue and necessity of people education in relation to the impact on the users of the transport operation and on the whole society.

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EDUCATIONAL AND BEHAVIOURAL IMPACT ON CARING FOR FEET

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ABSTRACT

Diabetes mellitus (DM) is a chronic disease responsible for complications, which not only limit individuals' lives, but also contribute to a high level of morbidity and mortality. The high prevalence of DM with amputations justifies educating people with DM about foot care. Thus, it is important to enable people to manage their therapeutic regimen appropriately.

A descriptive study with 82 people with DM with mean age of 56.89 years, 54.88% of whom are men.

We applied the Foot Examination Protocol; Epidemiological, Educational and Behavioural Diagnosis (Rocha, 2005).

Only 50% were found to have correct knowledge about foot care, which is insufficient to change behaviours because 50% were negligent; only 35.37% had adopted appropriate foot care behaviours.

It is, therefore, necessary to invest in therapeutic education and monitoring of self-foot care for people with DM as well as to audit professionals' actions.

INTRODUCTION

The World Health Organization (WHO, 2015) documents that there are about 347 million people worldwide who have been diagnosed with diabetes mellitus (DM). The estimated prevalence of DM in the Portuguese population aged 20-79 years (7.8 million individuals) was 13%, i.e. one million of these individuals have DM. Portugal, Ministry of Health, Directorate General of Health (DGH) (Portugal, MS, DGS, 2014, p.8).

Several databases such as Pubmed, Scielo and B-on were used to prepare the theoretical framework for this study. We also resorted to Google Scholar and existing bibliographic documents in the ESSV library. In addition to accepted and included studies, DGH regulations, information from the WHO, the Health Portal and the Portuguese Society of Diabetology were also cited. The descriptors used to locate articles/studies were as follows: Education, Diabetic Foot, Diabetes Mellitus and Behaviour. The following research strategy adopted was:

#1DeCs descritor "Educação"; #2DeCs descritor "DM"; #3DeCs descritor "Comportamento"; #4DeCs descritor "Pé diabético"; #5 [(#1 AND #2 AND #3)] (Free full text); #6 [(#1 AND #2 AND #3 AND #4)] (Full text); #1MeSH descritor "Education"; #2 MeSH descritor "DM"; #3 MeSH descritor "Behavior"; #4 MeSH descritor "Diabetic foot"; #5 [(#1 AND #2 AND #3)] (Free full text); #6 [(#1 AND #2 AND #3 AND #4)] (Full text).

The requirements for the analysis were publication from 2013 to the present day; Language: Portuguese and English; Revisions- RCT and clinical trials; Free full text; Mesh terms. The first inclusion and exclusion criteria to select studies were also defined as: Participants with DM type I and type II aged 18 years or older; Interventions: foot care; Outcomes: education and behaviours in foot care, Design: primary and secondary studies.

From the revision of the literature we found that diabetes mellitus is a chronic disease characterized by increased glucose levels in the blood and the body's inability to transform all the glucose derived from food. Portugal, Ministry of Health, Health Portal (Portugal, MS, PS, 2013).

DM is categorised as type I and type II among others. Type 1 DM results from the destruction of beta cells of the islets of Langerhans of the pancreas, with absolute insulinopenia, making insulin therapy indispensable for

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survival. In most cases, the destruction of the cells occurs due to an auto-immune mechanism called type 1 DM autoimmune (Portugal, MS, DGS, 2011, p.2). Type II DM results from the organism's ineffective use of insulin. A major concern related to this type of DM is the risk of hyperglycaemia in patients with high glucose levels in the blood (WHO, 2015).

DM is a condition which implies the need for changes in lifestyle and daily activities to maintain a good quality of life (Mumu, Saleh Ara, Afnan & Ali, 2014), which implies consequences for physiological and psychosocial level. Diabetic foot is one of the most serious complications of DM, resulting in approximately 70% of the amputations performed with non-traumatic causes according to the Portuguese Ministry of Health. The Directorate General of Health (Portugal, MS, DGS, 2011a). Diabetic foot is a disorder that is characterised "as an infection, ulceration and/or deep tissue destruction associated with neurological disorders, different degrees of peripheral vascular disease and osteoarticular deformities." (Silva, Pereira, Almeida & Venâncio, 2014).

Strategies to prevent diabetic foot and complications associated with DM are described as follows: adherence to treatment, monitoring of signs and symptoms (Huang, Zhao, Li & Jiang, 2014) monitoring capillary blood glucose, the adoption of healthy eating habits and regular physical exercise combined with motivation, social support and the management of stressful situations in order to promote a better quality of life (Engler, Rambsey, & Smith, 2013).

Therapeutic education works in conjunction with conventional therapeutic measures and requires people to assume their responsibilities in order to define therapeutic goals so as to adopt the most appropriate strategies (Boavida, 2013). Non-adherence to the teachings and recommendations is reflected in partial or complete deviation from behaviour/lifestyle changes known to improve health in people with DM (Mumu, Saleh, Ara, Afnan & Ali, 2014).

In diabetic foot care it is relevant to defer to qualified health professionals to invest in treating the triggering factors, among which the problems of calluses, nails and skin are highlighted. In the presence of ulcers, it is necessary to note the type and characteristics of the injury, such as the location, depth and multiple signs of infection (Silva, Pereira, Almeida & Venancio, 2014).

Professionals should seek to integrate the patient as well and his family, in achieving the necessary care and screening for warning signs in order to prevent further recurrences of ulcers. The earlier the treatment starts, the better the results (Silva Pereira, Adams & Venancio, 2014); however, evidence shows that less than half of people fully carry out prescriptions. It has also been proven that despite DM patients having knowledge about necessary precautions, it is not enough to change habits and behaviours (Boavida, 2013).

Educating for effective management of DM, involves integrating tiny bits of everyday life in the clinical consultation as a guide for making integrated decisions, i.e. the sociology of experiencing DM is considered, because despite DM being and remaining for life, life happens and superimposes itself.

For this reason the DM consultation implies a concentrated interaction between the person with diabetes and a proactive health professional. The person with DM has to be motivated, informed and have the confidence and ability to decide and effectively manage their health, while the professional besides being motivated to inform the patient must have the necessary resources to provide quality care.

Nicolucci, Menino, Eva et al (2006) cit in Cunha & Teixeira (2015) stress that on the one hand, we have evidence of the complications of DM, which significantly reduce the quality and duration of life and are also responsible for enormous health care costs; on the other hand, they identify a large body of evidence has shown existence of effective and practical approaches that can substantially reduce this burden. Thus, Melo et al. (2011) cit in Cunha & Teixeira (2015) say that the provider should fulfil the role of educator in the necessary orientation in monitoring feet. The importance of adherence to healthy lifestyle habits, negotiating the care plan with the patient and planning specific interventions should also be emphasized.

For the successful implementation of a complex treatment which has great impact on the day-to-day life of diabetes patients, it is very important to have a method of education in diabetes, and is therefore considered the process of promoting knowledge, skills and the necessary techniques for self-control to the individual. Its aim is for better glycemic control, prevention of chronic complications and above all, improvement in quality of life (Butler & Kirk, 2007).

It is important that adults benefit from education programmes, with techniques where they observe and practice. Simulation of insulin delivery techniques, carbohydrate counting and blood glucose research should be applied during the group education courses (George, Valdovinos & Russsel, 2007).

In this context, Silva, Clinton, Appleton, & Flanagan (2011) advocate that education programmes for self-management seek to help people to become aware that they are the engine of self-care and the key managers/caregivers and that health professionals are consultants who support them in this role.

As guidelines for practice Cunha, Gaspar, Fonseca Almeida, Silva & Nunes (2014) stress the investment in the training of health professionals with regard to strategies that promote literacy for health. They also suggest integrating the less literate patients, the elderly and socially vulnerable in education programmes and action research to support active lifestyles.

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The evidence is clear: most of the time people know how to do what should be done and want to do it, but simply do not (Boavida, 2013).Thus, we sought to produce knowledge in order to support people with diabetes in resolving issues that are important and relevant to their empowerment.
The aim of this study, therefore, is to answer the following central question: What are the determinants of the educational and behavioural impact on caring for fee tin people with diabetes?
Purpose of the Study: To analyse the relationship of the educational and behavioural impact on caring for fee in people with diabetes.

THE STUDY
Diabetes Mellitus is responsible for complications that not only limit the individual's life, but also contribute to a high rate of morbidity and mortality. Thus, adherence to the therapeutic regimen through empowerment, i.e. acquiring more knowledge/skills that influence therapeutic behaviour, is important. Because managing any chronic disease requires the participation of patients, it is necessary to monitor its impact, particularly in psychosocial functioning and behaviour. Thus, all efforts must be made to collaborate in determining the health gains obtained from the treatments and from the perspective of the citizen, Ferreira, (2012).
For these reasons the need to "educate about diabetes management" has emerged in order to develop knowledge, attitudes and the required skills for individuals to act appropriately and control the disease themselves (Ribeiro, 2010).
Thus, health teams should provide tools for citizens so they can freely become empowered, developing in the person with diabetes greater autonomy and health gains (Pereira, Fernandes, Tavares and Fernandes, 2011).
Adherence to the therapeutic regimen is a type of adherence, defined as "self-initiated action to promote wellness, recovery and rehabilitation, following the guidelines without deviation, engaged in a set of actions or behaviours" (CIPE, 2011, p.38).
Adherence exists when a person's behaviour, in taking the medication, in complying with a diet, and/or lifestyle changes, coincide with the recommendations of a health care provider (WHO, 2003 cited in Dias et al., 2011).
"The term adherence should avoid judgment, so as not to make the patient guilty, the prescriber or the therapeutic regimen and involves an agreement, negotiated over establishing treatment and the care to follow, between the person and the caregiver" (Pinto & José, 2012, p.1639).

The descriptive study with a cross-sectional focus was carried out with a non-probabilistic sample of 82 people with DM drawn from all of the patients attending the DM Unit at a hospital center in the central region of Portugal. Of these, 54.88% were male and 45.12% female, aged between 21 and 84 years ($\bar{x}$=56.89; SD=17.516). The results of the Student t test for independent samples show that the differences are not statistically significant, that is, the average of the ages of the groups is equivalent. It was found that 64.63% of diabetics are married, 69.51% live in rural areas and 34.49% in urban areas. As for education level, 62.20% have basic education and 7.32% have higher education. The following data collection tools were used: the Foot Examination Protocol; Epidemiological, Behavioural and Educational Diagnosis (Rocha, 2005).

The Foot Examination Protocol – Epidemiological Diagnosis (Rocha, 2005). It consists of eight closed questions. It evaluates ischemic, dermatological, neuropathic, autonomic and motor changes, joint mobility limitations, subjective sensory neuropathic changes, as well as the reaction to the 10g Monofilament Test and 128 Hz diapason (pallesthesia bone-transmission vibration sensitivity) and also the presence or absence of the Achilles reflex. Each item has two or more possible options, while no change corresponds to zero (0) and the presence change corresponds to (1) or more. Thus, it is considered that the higher the score, the greater the number of changes.

The Foot Examination Protocol – Behavioural diagnosis (Rocha, 2005). Its aim is to analyse the behaviour of people with diabetes concerning foot care. This consists of twenty-four closed questions allowing participants' behaviour to be evaluated with regards to the following foot care issues: essential hygiene care in general relative to shoes and socks. Each item has two possible answers (correct, incorrect). A value from 0 to 1 is assigned to each item so that the scores relating to behavioural diagnosis vary between 0 and 24, and the higher the score, the better the behaviour.

Finally, *the Foot Examination Protocol – Educational Diagnosis (Rocha, 2005)* is a questionnaire that assesses the knowledge of the essential foot care. The educational diagnosis identifies behaviours that are related to the health status or quality of life. This consists of twenty-four closed questions, whose aim is to assess the level of knowledge of the sample on the following foot care issues: essential hygiene care, general, with shoes and socks. Each item has two possible answers (correct, incorrect) assigned a value from 0 to 1. The scores therefore, relating to the educational diagnosis, vary between 0 and 24, the higher scores corresponding to better knowledge.

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Those who met the following inclusion criteria were participants: having been diagnosed with diabetes for over a year; being over 18 years of age; willingness to participate in the study. Exclusion criteria were as follows: pregnancy; having acute intellectual disability.

Statistical treatment of the data was performed using the Statistical Package Program for Social Sciences for Windows (SPSS for Windows).

FINDINGS

The clinical characteristics of the participants reflected that type 2 DM predominates with 59.76%, with 40.24% of the participants with type 1. The average time from diagnosis of the disease was 13.96 years (SD=8.614). Most people with diabetes are carriers of the disease for less than 15 years (54.88%), followed by those who have had the disease for between 15 and 30 years (41.46%). The average BMI was 27.519 (SD=4.568). Applying WHO (s.d.) cit in DGS (2005) the classification, it was found that 42.31% were pre-obese, 30.77% had a normal BMI and 19.23% were obese class I. The majority (53.25%) showed no hyperglycaemia in the last three weeks and 46.75% have experienced hypoglycaemic crises. A hyperglycaemia episode was reported by 75.32%. The average glycated hemoglobin was 8.845% (SD=1.895). The classification of Portugal, SPD (s.d.) 12.12% had a normal glycosylated hemoglobin value and 87.88% had high levels.

The behavioural diagnosis of the behaviours related to proper foot care, was established through a cohort group from the average of 13.890 ± SD=3.087. Appropriate behaviours have an average of ≤13.118, reasonably appropriate an average of >13.118 and <14.661 and inadequate behaviours, an average of ≥14.661. Negligent care was performed by 50.00% and 39.02% chose proper care. Both genders showed a predominance of inadequate behaviour.

In the educational diagnosis regarding the correct knowledge regarding proper foot care cohort groups were established from the average 16.14 ± SD=3.107. Individuals with average knowledge had an average of ≤15.369, (40.24%), reasonable knowledge, an average of ≥15.369 and <16.922 (9.76%) and a high level of knowledge, ≥16.922, (50.00%).

In the epidemiology and behavioural diagnosis, the median value for the score was 13.378 (SD=3.199) and cohort groups were subsequently established. Low levels of correct knowledge and simultaneously appropriate behaviours had an average of ≤12.579 (39.02%), a reasonable level of correct knowledge and appropriate behaviour, ≥12.579 average and <14.177 (25.61%) and a high level of correct knowledge also expressing appropriate behaviour, ≥14.177 average (35.37%).

Correct knowledge and appropriate behaviours related to hygiene care: correct foot washing was known by 91.46%, but only 78.05% performed it. As for neutral soap, 75.61% had correct knowledge; of these, 69.51% used it and only 65.85% did so correctly. Rubbing feet with a soft sponge, was a behaviour found in 21.95%, despite 39.02% having knowledge about the practice. Using a soft towel to dry feet was known by 56.10%, but only 45.12% did it. Drying between the toes was known by 97.56% and was a concern manifested by 91.46%. Daily moisturizing of the feet was known by 70.73% of the respondents but only 31.71% chose to carry out this appropriate behaviour and only 29.27% both had the knowledge and performed the correct behaviour. As for where the feet were to be moisturised, 15.85% demonstrated an appropriate behaviour and only 15.85% showed adequate knowledge; 14.63% correctly moisturised their feet. The removal of calluses was not performed by 50.00%. Of the 50.00% which had correct knowledge, 42.68% performed it. Proper behaviour of cuticle removal was accomplished by 73.17% of the participants. Of the 79.27% which had correct knowledge, 69.51% reported not removing them. Clipping toenails squarely, as an appropriate behaviour was adopted by only 40.24%, while 54.88% had this knowledge. Among those who had the knowledge, 39.02% carried it out in their everyday care.

Correct knowledge and appropriate behaviour with regard to general foot care: the daily examination of the feet, of the 86.59% who demonstrated knowledge of this care, 71.95% performed it daily. Not using a hot water bottle was known by 90.24%; however, 86.59% did not comply with that measure. The use of compression stockings was known by 97.56% and 96.34% held correct knowledge on this; of these, 93.90% demonstrated a consistent behaviour. The garter belt was used by 96.34%, correct knowledge was expressed by 93.90%, of whom 92.68% used it only under direct medical advice.

Correct knowledge and behaviour with regard to appropriate care with shoes and socks: in the respondents, 26.83% used closed footwear, 31.71% had correct knowledge; however, only 21.95% put it into practice. Footwear should be soft and comfortable – 51.22% adopted it, 54.88% had the correct knowledge; however, 47.66% had both appropriate knowledge and behaviours.

In selecting the material, 63.41% recognized leather as the most suitable material, of whom 53.66% had a

consistent behaviour and 59.76% chose it. Seamless footwear was worn by 79.27% and of the 93.90% who had a correct knowledge, 80.49% wore it. As for the time of purchase, only 12.20% bought the shoes in the late afternoon and of the 28.05% who had correct knowledge only, 10.98% had both correct knowledge and behaviour. Of the respondents, 74.39% inspected the shoes before wearing them and of the 84.15% who had this knowledge, only 74.39% had a congruent behaviour. In terms of wearing closed footwear, 36.59% prefer to use insoles, of the 35.37% who had this knowledge, 32.93% applied it correctly. People with diabetes should not walk about barefoot, 85.57% were found to know this guideline, 71.95% adopted appropriate behaviour, and 70.73% revealed this concern. The use of brightly-coloured, seamless socks was adopted by 36.59% and 56.10% revealed this knowledge, but only 34.15% both knew and applied it. The type of sock worn should be cotton and 70.73% wore them, 84.15% manifested having this knowledge, of whom 69.51% both had this knowledge and wore them.

CONCLUSIONS

Type 2 DM was predominant (59.76%), the average time of diagnosis was 13.962 years, it was also found that only 39.02% of the sample chose appropriate foot care and it was observed that half of the sample had good knowledge on that subject. On the relationship between correct knowledge and behaviour. It was found that 35.37% had a high level in terms both of knowledge and behaviour. Similarly, Cunha & Teixeira (2015), after implementing the *"Insulin+" Therapeutic Education Programme,* found that this intervention developed positive results, since there was an improvement in individuals' knowledge and behavioural in managing their DM treatment.

Insufficient education hinders access to information and understanding of the disease and its treatment, generating deficits in self-care and quality of life of people with DM. In this sample, it was found that 50.00% had high knowledge; however, of these, only 35.37% applied it. Nemcová and Hlinková (2013), after reinforcing education on foot care, found that people questioned were more highly motivated to carry out prevention activities with regards to DM complications. These recommend education as an important intervention strategy to improve knowledge and change behaviours in diabetic foot care.

With regard to the correct knowledge and appropriate behaviours in foot care, it was found that the majority washed their feet with mild soap, drying between the toes, did not remove cuticles, examined their feet daily, did not use a hot water bottle and wore compression stockings and garter belts. A minority of the participants rubbed their feet with soft sponge and dried them with a soft towel, moisturised their feet daily, removing calluses and clipping their toenails squarely. With regard to correct knowledge and behaviours concerning shoes and socks, the majority opted for seamless shoes made of leather, inspecting them before use and did not walk about barefoot. The minority wore closed, soft and comfortable shoes, purchasing them in the late afternoon, using insoles, wearing brightly-coloured, seamless cotton socks.

These results are in agreement with the conclusions of the studies conducted by Barbui & Cocco, et al, (2002) and Rocha, et al, (2009). These authors also inferred that when analysing appropriate behaviours in relation to essential foot care, they found that more than 50% of the subjects performed the drying of the interdigital spaces, did not use hot water bottles, wore soft and comfortable footwear which they inspected before using. They concluded that people with DM knew about the need for proper foot care, but their self-care behaviour was inadequate, although more than 60% wore closed footwear and 85% referred to washing their feet with soap and water and drying them properly.

Consequently, it is important to plan instruction and train self-care and about proper foot care. Despite the importance of the educational factor, Cunha, André, Granado, Albuquerque & Madureira (2015) state that it is not a sufficient condition to promote changes in patient habits and behaviour, due to other variables, as well as the attitude that must be changed to reduce harmful behaviours. This dimension must be cared for by health professionals.

The acquisition of knowledge by people with diabetes has an impact on their behaviour. In this study, similarly to Rocha (2005) and Rocha and Santos (2009), the level of knowledge of those with DM was not congruent with their behaviour on essential foot care feet, but despite having knowledge, they do not always put it into practice. It was concluded that 50% of individuals who hold correct knowledge only 35.37% also adopt appropriate behaviours. Most of the sample has a low level of education, making it necessary to adapt the educational interventions to the uniqueness of each person, using active methods centred on demonstrating appropriate self-care, encouraging active DM management. Thus, it is essential to educate people with DM, through teaching strategies that motivate towards empowerment and promote adherence to treatment, motivating preventive behaviours related to foot care, raising awareness to their actual health status. As facilitating strategies to understanding of information on DM, new knowledge should be acquired, what is already known should be reformulated, false beliefs deconstructed, and the way of dealing with the disease changed, opting for healthier life styles. In this way, it will be necessary for the health care professional to adopt a leadership attitude and consultancy with regards to the person with DM in order to identify the most appropriate measures capable of being carried out, implementing interventions centred on people with DM.

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The implementation of the *"Insulin+" Therapeutic Education Programme* allowed us to ascertain positive results which is strategic for the health institution and the people, since as a rule the study subjects improved their disease treatment activities. It was also expressed that there are external entities willing and able to support people with diabetes and interested in sharing knowledge, with the person with diabetes at the centre of care. Cunha & Teixeira (2015).

With experience/learning/information that diabetic patients acquire over the period of the disease, adherence to the therapeutic regimen will have greater impact, the longer the duration of diabetes in the individual (Santos, 2010). Intervention should centred on the person and empowerment should become the main focus of the new paradigm, where activities of health professionals are supported, in addition to the role developed by these professionals in providing direct care to patients coping with their disease. Strategies that enhance these patients' abilities to manage themselves better and to adhere better to the therapeutic regimen should be adopted. Consequently, monitoring and the respective use of the Diabetic Guide becomes a necessary practice, thereby contributing to the patient's knowledge about the disease, directly influencing compliance with therapeutic regimen. Thus, the development of multidisciplinary partnerships between educational and health institutions emerge as a potential source of synergy and sharing of knowledge and practical experience in promoting education and health gains. There is also need for more rigorous research into the knowledge – behaviours dyad, for which we propose longitudinal studies and action research with the implementation and evaluation of training programmes to clarify the strength of the relationship between the variables analysed.

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EDUCATIONAL MEANING OF IMAGINATION IN DEWEY'S PHILOSOPHY

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ABSTRACT
The purpose of this study is to define imagination in Dewey's philosophy and to investigate its significance. The rapid change of society makes it difficult to evaluate about which factual knowledge has to be provided in the future school. These facts suggest that school has to move eyes on teaching not to provide fixed information but to help students think by themselves. One of the training courses required to build their capacity to self-think in school education is the imagination. Depending on how you look at the imagination, Imaginative education methods and its contents, and the following results, the appearance of the learner will significantly change as well. Therefore, first, it is necessary to clearly define the meaning of the desirable imagination. To this end, first, it is necessary to arrange the view on the imagination of the influential philosophers in history. Next, explore the imagination of Dewey who defines the imagination as one stage in thinking process, and present meaning to education today. Through this, it is expected to raise the need for imagination as part of imaginative education and to clarify the directionality of it.

INTRODUCTION
Creative talent is one of the key educational objectives of modern school education. Because modern school education had a burden to foster a variety of human resources in order to support and maintain and develop the differentiated and segmented complex society. Given that imagination is one of the abilities needed for the cultivation of creativity, imagination education is absolutely necessary to nurture creative talent. But its contents and methods of imagination education may vary depending on how it is viewed and appearance of the learner changed through it may also vary. Therefore, in order to propose imagination education, clarifying the meaning of imagination should be preceded.

Discussion on imagination starts from Plato. For him, imagination is a concept contradictory to reason of phenomenon, imitation etc. and is understood as the lowest stage of awareness not providing true knowledge to any target. Aristotle regarded imagination as the ability to form reason by the mediation of perception and sensation and clearly distinguished it from knowledge or intelligence always considered right. Given that education is the process of acquiring knowledge that is useful and meaningful to humans, ancient imagination is considered a thing that makes it impossible to acquire knowledge or should be separated from the knowledge.

In the modern world, imagination has been discussed mainly in conjunction with cognitive abilities by philosophers such as Descartes, Hume, Kant. Descartes considered imagination to be the ability to mediate one image with understanding(verstand) by combining sensory materials passively and by accepting such Descartes's opinion, Hume also regarded imagination as the ability to combine ideas. Kant defines imagination as the ability to integrate the diversity of emotional intuition (Kant, 1956). The status of modern imagination summarized as Descartes, Hume, Kant has been further enhanced as a tool required for cognition but there are limits that it may stay in the dualistic mindset thoroughly distinguished from reason on one hand and be regarded as a tool of reason-centered education on the other hand.

In modern times, imagination is remarkably characterized by being viewed from the perspective of free configuration or analysis, understanding beyond the cognitive ability to form an image by Dewey, Peirce, Heidegger, Husserl, Sartre etc. and is moved to one part of high-order thinking. In particular, Dewey assumes imagination as the ability of reflective thought and qualitative thought working actively within integrated thinking and considers that thought is required to make a meaningful experience. In his view of considering that 'education is the growth itself of the learner's life' or 'the business of education is to realize the meaning of life', experience, all of thinking and imagination working in thinking can be said to be closely related. Since Dewey's experience is the learner's life itself in which theory and practice, reason and emotion are integrated and can not be separated, imagination in education becomes a key and active mechanism to enhance the quality of experience by activating thinking. In particular, from the Dewey's perspective, theory and practice, reason and emotion are present in an integrated manner in thinking through imagination. Thus, imagination, which was

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under the influence of traditional dualistic epistemology, can be freed from the notion dependent on reason.
Recently, the awareness of the importance of imagination is increasing in the education field but there is regret that application and utilization based on the meaning of imagination or education association have not been fully discussed. At this time, it is necessary to newly understand imagination as the essence of free and active thinking. And if imagination should be educationally spotlighted as both the essence of active thinking and ability to have the form of clear thinking required for the life of a complex modern society, this would be nice to start from the Dewey's imagination concept. Because unlike ontological, epistemological discussion on existing imagination, imagination means the ability to think of a variety of possibilities to Dewey and is treated as active thinking itself breaking the habitual and mechanical relation. In particular, emotions or feelings regarded as meanings contradictory to reality or reason started to be widely recognized as important tools of awareness after the late 20th century (Kim, 2012) and Dewey, who thought that knowledge cultivation and emotion cultivation cannot be separated dichotomously in education, discussed the thinking of qualitative area related to emotions·feelings as an important factor of thinking. In light of his philosophy, such qualitative thought is constituted as knowledge through imagination.
Dewey defines imagination as operation of the intellect which embodies an idea in a particular form or image (Dewey, 1887). For Dewey, imagination plays a role of translating and integrating a symbol that exists in the learning activity as appreciative realizations and then expanding and enriching the meaning of the activity (Dewey, 1916). That is, imagination can be described as a type or means of thinking constantly connecting the current state and activity purpose (ideal form).
Considering that the goal realization of school education to nurture creative talent appropriate for the modern society can start from nurturing the learner's imagination, this study is to derive what the meaning implies in modern education by examining imagination working in the thinking process based on Dewey's philosophy. Tenuous though it may be, such discussion related to the educational meaning is expected to be helpful to provide a clue to the practical discussion later.

MEANING OF IMAGINATION IN DEWEY'S PHILOSOPHY

In Dewey's philosophy, the process of life can be described as a series of thought because life is the process of self-renewal acting on the environment (Dewey, 1916: ch.1) and purposeful activities acting with the mind for self-renewal (Dewey, 1916: ch.8). Therefore, this chapter is to explore the meaning of imagination through the thought concept of Dewey.

1. DEWEY'S CONCEPT OF THOUGHT

Dewey largely classifies the meaning of thought into three. The first is everything that comes to mind and indicates that humans are conscious of it in any way. The second is a thing not undergoing direct sensory experiences such as seeing or listening and tasting etc. and the third is belief dependent on any evidence or testimony(Dewey, 1910). Dewey classifies the meaning of the third thought again into two of belief as unconditional acceptance and belief as acceptance by examining the causes and results i.e. through introspection. Eventually, classifying thought into four, Dewey presents the final concept as the most desirable concept among them and refers to this as reflective thought.
Reflective thought refers to active, continuous and careful consideration on the form of any belief or so-called knowledge in light of supporting grounds and future consequences (Dewey, 1910). In other words, reflective thought is the conscious and voluntary effort to firm up what you believe based on clear grounds. Thought is associated with something that is assumed by a perceived fact, although not perceived and comes to mind and examining the possibility and nature of the relationship between the perceived fact and something that newly comes to mind is a key element of reflective thought of Dewey (Dewey, 1910). In fact, Dewey's classification of though types is just classification for convenience and it is difficult to clearly classify the types of human thought. This means that imagination is working in all types of thought processes from simply imaging a particular thing to everything coming from and going to the relationship between the visible target and assumed target. The concept understanding of imagination varies from scholar to scholar of all ages but they commonly regard it as the ability required to image invisible things and predict particular results based on a number of sensational facts.
Dewey considered reflective thought to be the most desirable thought operation among thought operations made in various forms and this reflective thought, in turn, can be described as thought for the purpose of exploration. If thinking in order to obtain more preferable and good results when faced with the problem situation of life, we define the questions that need to be answered or purpose of issues and control the flow of ideas in a certain direction at this time (Dewey, 1910). We should verify the assumed conclusion while carefully examining if it is consistent with the current problem and purpose. In short, if any problem is given in the situation of life, humans will assume the solution of the problem and a series of exploration activities to determine the suitability of these assumptions will occur. Reflective thought includes all of these processes
But exploration behavior is made based on it only when 'assuming' a certain fact. Because the behavior aiming

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to find facts to contribute to purpose(assumption) is the reflection or exploration behavior. Therefore, reflective thought is like suspending judgement while exploring more (Dewey, 1910). Suspending judgement means to keep various possibilities for predicted results in mind. It is also a resolution of trying as many assumptions as possible and going through the process of verifying them. An assumption is a result(solution) predicted for a purpose(problem) and judgement is bound to be suspended as there are more assumptions because there are more matters that should be reflected and explored. Eventually, various assumptions increase the probability to bring about more thorough and accurate results or better solutions. That is why reflective thought may be also encouraged as thought consistent with the purpose of education to enhance the quality of human life.
Various assumptions to find new results or other solutions are made based on the resources of past experience and existing knowledge (Dewey, 1910). It is imagination that creates an assumption in the thought operation based on the resources of past experience and existing knowledge. In particular, imagination made in reflective thought plays a very important role of suspending judgement by combining each process and resources each other within the overall process of establishing a hypothesis and experimenting, conducting and verifying based on it.

The most important factor in the training of good mental habits consists in acquiring the attitude of suspended conclusion, and in mastering the various methods of searching for new materials to corroborate or to refuse the first suggestions that occur. To maintain the state of doubt and to carry on systematic and protracted inquiry-these are the essential of thinking.(Dewey, 1910: 191).

2. IMAGINATION IN DEWEY'S

Defining imagination is a problem as subjective and difficult as answering to the question 'what is education?'. As the first clue to access the solution to the world of imagination, Lucien Boia(1998) points out that we must transcend the dichotomy of the real world and the world of imagination. On the other hand, recent several education scholars add more interest and support to utilizing imagination as a learning tool in education (Claxton, 1999; Egan, 2005; 2008; Kim, 2013; 2015) and especially Egan(2005; 2008) argues that imagination education will play a key role in the future education. In modern society, the amount of information as well as its dimension is rising rapidly and information regarded as knowledge depends on a variety of media and senses such as music and pictures other than text, visual and auditory and tactile sensation etc. The common thought of many scholars is that high-dimensional cognitive ability is required to acquire such various and complex information (knowledge) of the modern society and the key is imagination. Dewey's imagination concept will further strengthen the claim of Boia and recent education scholars.
Dewey opposes the traditional philosophy's perspective that imagination is mental operation interfering with the process for intelligence to recognize the truth on the basis of dualistic metaphysics and rather considers that imagination becomes the medium of appreciative realization for reactions and meanings in all ranges that cannot be perceived by organisms (Dewey, 1916). Also like previously mentioned definition of imagination, Dewey defines imagination as intellectual operation itself not a thing distinguished from intellectual operation.
On the other hand, defining education as 'continuous growth of experience,' Dewey argues that experience becomes a true experience only when giving special meaning and enlightenment to the experience subject and leading cumulative growth. Just as experience should have specific conditions as a true experience, Dewey thinks that imagination should also have particular conditions to be defined as the high-dimensional cognitive ability acting in the thought process (Dewey, 1887).

The proper function of imagination is vision of realities that cannot be exhibited under existing conditions of sense-perception. Clear insight into the remote, the absent, the obscure is its aim. …… Imagination supplements and deepens observation.(Dewey, 1910: 355-356).

Imagination is not defined separately from perception. Being directly involved in perception(Dewey, 1887; 1910; 1916), imagination fills vacuous or chaotic sensations (Dewey, 1887: 168-169). For example, let's say there is a blue cup in front of our eyes. In fact, this cup can be described as a cylindrical object with a hole at the top about 15cm in height with a ring to make it easier to catch by hand. The moment of seeing this object (cup), we think we recognized it as a 'cup' or 'blue cup'. But in order for us to recognize it as a cup, our experience that used it before becomes the foundation. The moment we see an object with a round handle, we 'recognize' it as 'a cup' while conjuring up our image of pouring water to quench our thirst at the same time. Although simply accepting only visual information on any object, we perceive the object through the process of elaborating the information. Imagination acts as being involved in the elaboration process and helping the cognitive subject to better understand the target. And understanding means that thoughts or feelings, values caused through the cognitive subject's various experiences related to the cognitive target are collectively reflected on the cognitive target and come to the cognitive subject as another, new 'meaning'. After all, Dewey seems to have identified imagination as a tool required to expand and develop the meaning that a cognitive target brings to the cognitive

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subject. In psychology, Dewey(1887) emphasizes the importance of imagination as the ability to identify and reveal the new meaning of a target. Imagination as such ability to expand the meaning has a special value in creating a new target by looking at the cognitive target from a new perspective.

When Dewey says that imagination is operation of the intellect which embodies an idea in a particular form or image, the idea includes both temporally·spatially actual things and spiritual things. Imagination as the ability to identify and discern the meaning of a target idealizes such idea the best and is indeed imagination of the highest form among the steps of imagination classified by Dewey. Dewey explains imagination by classifying it into three steps of mechanical imagination, fancy, creative imagination depending on the degree of the meaning expansion.

Mechanical imagination deals with things that exist in the reality. It is the ability to recombine what you did not experience or do not experience by separating or adding actual things. Mechanical imagination is the imagination working when we generally 'imagine something'. For example, let's suppose that a woman deep in love imagine a future honeymoon house. The woman imagines a house built in a peaceful and luxurious area by separating each image to constitute the honeymoon house from memories to lovely spouse, beautiful furniture and ornaments, latest home appliances and carefully served food and adding them again. The house full of several images taken from the memories of the woman is not a house not experienced in the past nor actually present in the reality. By separating each of shapes perceived through past experience and simply adding them, the woman created things that did not occur, i.e. abstract notion.

For Dewey, fancy is regarded as a higher step than mechanical imagination. Fancy can be said to be romantic because it is formed exceedingly vivacious and receptive emotional disposition (Dewey, 1887: 170) and is characterized by simile, metaphor, imaging considered as a poetic sense. The examples of fancy are children's dreaming of flying in the sky with wings and imagining talking to animals or plants. This fancy has a feature of being somewhat different from creating a new meaning because images that come to mind are difficult to be actually embodied and fancy cannot be regarded as the activity revealing the target or nature of imagination.

Dewey calls imagination as the ability to reveal a new meaning of the cognitive target as creative imagination. But, although creative imagination can be said to be imagination of a higher step than mechanical imagination and fancy, it is imagination that can be developed from the steps of mechanical imagination and fancy and hence, it is indeed the classification just to help understanding. Creative imagination is to directly perceive the hidden meaning of the target or spontaneously discover sensuous forms (Dewey, 1887: 171). If creative imagination is working, the idea is separated and combined to give a new meaning away from facts or meanings already known about the target. The new meaning of a target can be obtained as a result of reflection by considering and referring all emotional aspects of visible and invisible reality of the cognitive target. Perception of a new meaning is not limited to separation or combination of the theory or reality of the target already experienced or revealed nor limited to happening under the influence of feelings or emotions. Conversely, if referring only one side of these two areas, a new meaning as the ideal value of the target cannot be discovered.

But creative imagination should not be misunderstood as the ability to simply combine mechanical imagination and fancy. The feature that distinguishes creative imagination from these imaginations is to conceptualize·generalize the idea of cognitive subject. Only the type of new ideas by mechanical imagination was renewed through separation and combination of the target and new target by fancy is a purposeless spontaneous product or emotion. On the other hand, if creative imagination sheds new light on the target, the idea reflecting the property can be generalized an universalized (Dewey, 1887: 171-172). For example, consider the case that developed the vaccine for large-scale vaccination through the fact that people affected with cowpox among those raising livestock as occupation do not suffer from smallpox. Discovering a fact that a breeder did not suffer from smallpox after paralyzed due to cowpox and recovered, he vaccinated cowpox to his family to avoid smallpox. After that, a doctor paid attention to the value of cowpox-ideal value preventing smallpox- and imagined vaccine that enables large-scale vaccination by combining the value with treatment technology of current medical science. The idea of vaccine is not the result that the actual target or notions such as cowpox, smallpox, livestock, paralysis are simply separated and added again and combined. It is not fancy ends up with unrealistic delusion or fiction, simple fun and interest, either. The idea that a doctor came up with actually created vaccine by adding his passion and interest. In short, this doctor created the new target of vaccine with the idea obtained by shedding new light on the property contained in the fact that those affected with cowpox do not suffer from smallpox-by enabling large-scale vaccination, vaccine has the value helping protect the health and life of more people- and this fact can be understood and gain the sympathy by anyone. In this regard, exercising creative imagination can be said to be the conceptualization· generalization activity.

People encounter embarrassment, confusion in the situations of life and the struggling results of past people to solve and conclude these problems of life were recorded as the history of mankind. Current historical records including the example of vaccine development are traces that filled the mind while pending a premature conclusion and imagining something to be spread or visualized in the future at that time of past. According to Dewey, reflective thought means judgment suspended during further inquiry and this attitude is one of the most important elements to train good mental habits(Dewey, 1910: 191). In this sense, creative imagination is a

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powerful tool helping (reflective) thought to occur as the source of exploration activities.
More exploration means to keep more cases in mind and more predict the results to happen while examining the possibilities for the result you want to achieve. The intervention of imagination makes these possible. According to Dewey, only systematic regulation of the conditions under which observations are made and severe discipline of the habits of entertaining suggestions can secure a decision that one type of belief is vicious and the other sound(Dewey, 1910: 197-198). The action by an immediate reaction to changes in the nature such as movement of birds or direction of the wind can be said to be superstitious habits of inference and Dewey says that such superstitious habits of inference is changed to scientific habits of inference by controlling conditions under which observations ad inference are made. If a farmer decided to sow any seeds, the belief for the results will be ensured as much as controlling sufficient conditions in observations and inference to judge whether the belief for the benefits to be obtained when sowing the seeds is correct or not. Imagination enable the thought process of controlling sufficient conditions and securing the belief.

EUCATIONAL MEANING: IMAGINATION AS PSYCHOLOGY OF THE SUBJECT

Dewey says a subject as 'capitalization' that summarized the results of past experience in a form that can be used best in the future (Dewey, 1902: 284). In other words, a subject can be said to be used in order to give a new meaning to the learner's life. In this chapter, we are to emphasize the importance of imagination by showing that making good use these capitalization-subject allows the learner to realize its meaning to the learner's life through the subject and grow his/her life through it.
In order for the contents of a subject we learn, i.e. knowledge to be meaningful at present, the process of re-interpreting and readjusting the content of the subject from the perspective of the subject currently experiencing is required (Park, 2004: 8). The concept of thought used by us every day is bound to intervene in the process of the experience subject, i.e. learner re-interpreting and readjusting the content of the subject and imagination is included in the intervening thought. Strictly speaking, imagination at this time is creative imagination but should not necessarily exclude mechanical imagination or fancy or be distinguished from them. This can be understood through the fact that qualitative characteristics thought to be noncognitive are included in the experience Dewey says.
Qualitative characteristics are the characteristics of the target accepted by direct experience from the experience target and can be described as unique characteristics of the situation in the strict meaning(Park, 1999; 2011; Lee, 1993). Since qualitative characteristics are made by the situation itself as interaction, they cannot be standardized or generalized in any way. Because it is not possible to express all of individual special nature made by the situation itself in language and experience situations can be established indefinitely our perception and imaginative manipulation (Lee, 1993: 94). In this regard, qualitative characteristics can be referred to as emotional force that when faced with any problem situation, the experience subject identifies the situation comprehensively and drives in a fixed direction.
For Dewey, experience is the interaction itself between humans and environment and thought also can be considered as one experience If traditional philosophy divided objectivity and subjectivity, subject and object and placed only reason corresponding to the objective area in the area of thought, thought can be described as the situation where rational thought and qualitative thought associated with qualitative characteristics are not separated and occur in an integrated way for Dewey. What Dewey wanted to emphasize when saying that experience is not primarily cognitive (Dewey, 1916: 140) but peculiar combination of an active and passive element (Dewey, 1916: ch.11; 146) is that experience should not be classified into something completely intellectual or behavioral and defined only as nature of one side and be understood as interaction itself and the whole in which all the elements are intertwined and indistinguishable. Qualitative thought dealing with the qualitative characteristics can be also said to be the important aspect of thought to understand the world of life as much as rational thought and be rather applied to human life more broadly and associated with the meaning of life more deeply than rational thought (Park, 2003).
In this context, subject matter are abstracted from direct experiences including qualitative characteristics and the learner can derive 'meaning' when interpreting such subject in connection with his/her concrete and direct experience. That is, Dewey argues that the subject can have a correct meaning only when reinstated to the current experience of the learner and it needs to be psychologized(Dewey, 1902).

The abstractions, generalizations, and classifications which it introduces all have prospective meaning……In the largest sense the logical standpoint is itself psychological; it has its meaning as a point in the development of experience, and its justification is in its functioning in the future growth which it insures.(Dewey, 1902: 284-285).

If we deal with issues related to education, they are finally concluded to the contents of the subject, i.e. a matter of knowledge. In terms of the discussion so far, however, knowledge is a new 'meaning' occurring when bringing previously accumulated knowledge to the current problem situation and interacting. If applying this

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logic to school education again, knowledge as the result of education presents previously accumulated experiences as the subject matter and becomes the meaning newly constructed by the learner in the individual's life of a learner through free imagination.
Such experience as meaning is remarkable when education activities lead to the artistic aspect. Regarding complete interpenetration and alert commerce between self and world of objects and events as the best experience, Dewey takes “esthetic experience” as the example of this experience (Dewey, 1934: 25). The reason can be guessed if thinking a feature that the impression and beauty given are given by art to us when all of the elements involved or participating in the work of art are completely harmonized. Dewey takes the following as the example that the experience of the appreciator appreciating works of art leads to this esthetic experience.

For to perceive, a beholder must create his own experience. And his creation must include relations comparable to those which the original producer underwent. They are not the same in any literal sense. But with the perceiver, as with the artist, there must be an ordering of the elements of the whole that is in form, although not in details, the same as the process of organization the creator of the work consciously experienced (Dewey, 1934: 60).

At this time, recurrence is made by imagination. The act of appreciation replayed by imagination can be seen as the process of creative experience in which the appreciator reconstructs his accumulated knowledge, meaning, value system and in the same sense, learning is the activity of combining doing, knowing and appreciating (Park, 2003: 180). Eventually, learning is that a learner actively reconstructs the meaning of subject matter and the subjective elements of the learner cannot but intervene at this time. That is, learning is a process of understanding statements made or discovered by previous explorers but the process is that a learner acquires the meaning of his life by taking full advantage of his mind around the context of life and experience situations of the experience subject (Park, 2003: 180-181). Therefore, thinking ‘the mind at every stage of development has its own logic’, Dewey said that learning will be able to avoid identifying a ready-made organization of subject-matter with logicality when understanding the learner’s thought style working in experience(Dewey, 1910: 228).
An experience is a means of supplying subject matter required for understanding instruction involving signs and of evoking attitudes of open-mindedness and concern as to the material symbolically.(Dewey, 1916: 242). In particular, such instrumental value and importance are given a lot to realistic direct experiences. Therefore, it is important to ensure that education through the subject can be direct experience. Because education made through signs or symbols becomes direct experiences which are realistic to a learner so the learner can better recognize the meaning of education contents to be conveyed. So Dewey says as follows:

Were it not for the accompanying play of imagination, there would be no road from a direct activity to representative knowledge; for it is by imagination that symbols are translated over into a direct meaning and intergrated with a narrower activity so as to expand and enrich it. (Dewey, 1916: 245-246).

The biggest role of imagination examined through the discussion so far is to psychologize the subject so that text can be direct experience to learners in education activities of learners. By connecting activities and symbols and giving meaning to the symbols, imagination psychologizes the subject matter to the learner. Given that imagination is voluntary power to switch everyday experience to educational experience, education activities will be able to stimulate imagination.
In light of the principle of creative imagination, rational thought and emotional qualitative thought are just the classification for convenience and cannot be distinguished in real thought. If applying it to school education, education activities presented in school education cannot be presented apart from education contents and education contents cannot also have any meaning apart from education activities. Therefore, in order to guarantee the effectiveness of education activities for which we strive, the most important thing is to convey education contents by considering the psychology of the learner.
Given that (creative) imagination plays a role of a medium that allows us to recognize the invisible meaning of a subject, education activities that become experiences as capitalization of imagination should be presented as many as possible. That is, widening the opportunities and scope of interaction to continuously reconstitute experiences will be a shortcut to foster the ability to imagine creatively. But widening the opportunities and scope of interaction is possible when social relationships are evenly balanced. That is, what is important is the atmosphere where social members and groups share and recognize a variety of interests freely. Dewey thinks that democracy is characterized by expansion of common interests and full exertion of many other capacities(Dewey, 1916: ch.7). Through the discussion so far, it was found that imagination plays a role of psychologizing the subject in the learner's learning activity and capitalization of imagination exertion is rich experience. Having a wealth of experiences is eventually secured from free interaction and therefore, it can be seen that creative talent to exert imagination well can be fostered from a democratic society.

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CONCLUSIONS

The purpose of this study is to reveal the meaning of imagination Dewey says and find out the implications in our education by examining the concept of thought based on Dewey's philosophy and exploring imagination working in the thought.

In the traditional view, imagination is the concept which is contrary to reason and considered to be abstract meaning or meaning of fantasy thinking as one pleases. That is why it is regarded as a target that should be to be excluded and removed in the process of education. In the modern times, this imagination comes into the category of the recognition process by combining the perceived notions as a medium of sense and reason by Descartes, Hume, Kant etc. Today, Dewey, Peirce, Sartre, Heidegger, Husserl etc. try to evaluate imagination in view of rree configuration or analysis, understanding beyond the epistemic ability. In particular, Dewey criticizes the trends that imagination is dualistically divided and understood into mental and substance or reason and emotion and furthermore, enhances and releases the concept of imagination subordinated to reason to active and creative mental power.

Dewey thought that the process of human life, continuation of problem situations succeeds through thought and the subject of life solves the problem situation as imagination is working in the process of thought. In other words, the subject of life realizes the meaning of experience through imagination. As shown above, imagination is important as the ability to reveal a new meaning of cognitive target in Dewey's philosophy.

One of the big topics in modern society may be wellbeing. Belief and expectations that can be closer to wellbeing through education recognized as teaching and learning subject matter are the fact universally accepted. In the light of Dewey's philosophy, knowledge forming subject matter is the meaning obtained as a result of human experience and the purpose of education in this case is to allow the learner to recognize the meaning of his own life from the subject of this meaning. Therefore, true wellbeing is to enable learners to do things really interesting and meaningful. This can be realized when subject-matter of studies and the learner's state of mind can be closely related (Dewey, 1902). Although a lot of changes are tried and improved in the front lines of education, school education does not indeed escape from evaluation-oriented teaching by rote yet. At this time, the biggest problem is that learners do not feel the value and meaning in learning situations or life. In Dewey's philosophy, imagination is understood as a tool to help learners to recognize the hidden meaning beyond that they recognize the subject delivered by signs and symbols as it looks in the learning situation. The foundation where learners can freely raise and exercise imagination is to allow them to do much more experiences. That is, as there are more experiences that can come to learners as meaning, the assets of imagination become rich and this, in turn, gives power to reconstruct and continue experience.

To this end, it is necessary to present activities so that learners can experience the subject well in the education field. If a teacher well observes a learner with warm and sincere interest and presents suitable education activities suitable for his psychology, the learner will exercise imagination and accept the symbolic meaning of the subject as the meaning of his life. However, it is not possible only by the efforts of individual teachers. Working environment and conditions should be improved so that teachers can focus on learners and both education institutions and administration should be supported so that the autonomous atmosphere of a classroom can be created. All these things are possible in the society of democratic atmosphere of respecting and recognizing the various interests of social members living together. It is necessary to meditate on Dewey's thinking considering that education can maintain and develop this democratic society and this democratic society, in turn, can accomplish true education.

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EFFECTIVE TEACHING APPROACHES

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ABSTRACT
This paper presents and interprets the results of the research, which was conducted this year under the internal grant project of the University of Hradec Kralove. The aim of this research was to analyze potential aspects of effective teaching in tertiary and primary education. These research findings and its interpretation will be part of the content of a new methodology proposal for so called Effective teaching in Didactics of Czech language for teacher training students in all grades of primary school. The results of the research project in the form of methodology can be applied in all undergraduate teacher training courses. The investigation of suitable aspects of effective teaching has been based on a model of education system that is being tested and implemented in many professional and educational activities abroad. This research project follows on from other project conducted last year entitled Effective Approaches to Assessment in teaching Didactics of Czech language in all grades of primary school. For this project, we focused on trends and approaches which have proven to be successful in the education system for non-teaching professionals – for example the program for doctors developed by the American College of Surgeons –The Advanced Trauma Life Support (ATLS) course, where effective learning and effective teaching are important elements. One of the objectives of this project, to which this article responds, is the implementation of selected approaches from the above mentioned courses and educational activities. Specifically, it includes the method of conducting class in a way: environment – set – dialog – closure; an effective way to deliver learning materials (learning activities and experiences, utilization of illustrations, feedback learning), and also designing effective discussion questions as a strategic teaching method. The findings of the research project will be applied in teaching Czech language at upper-primary schools, and to be used by university students of the study program: Teaching at Upper-Primary Schools, during their teaching practice and later in their place of work.

Keywords:Effective teaching, questioning techniques, primary school, adult learning.

EFFECTIVE TEACHING – DEFINITION, RESEARCH OBJECTIVES

An effective teaching process (an effective learning experience) covers a large number of aspects which teachers should take into account when delivering their lessons. These include: content relevance, positive motivation, and a supportive environment as well as opportunities to practice with feedback. (Víška, 2014) Effective teaching is more than good intuition, it relies on the principles of effective learning.

In order to become a successful educator, teachers should possess a certain amount of desired behavior qualities when speaking in front of the audience, for which the educational activity is intended. Most notably:

- Effective verbal and nonverbal communication skills; making certain that information is presented in a way that all students understand.
- Stay on-topic and focused.
- Demonstrate enthusiasm for the topic and information presented.
- Show students how information or skills taught apply to their “real world” experiences.
- Show empathy and understanding for each student; being a good listener.

These are aspects which every teacher is expected to master if he or she wants to be effective in the classroom.

This article will mainly focus on teacher education activities in front of the class audience. We will examine the role of teachers' verbal ability related to teaching performance, and we will focus on teacher lesson plan activities that are vital for an individual to become a successful teacher. This paper aims to demonstrate that even traditional teaching activities such as frontal instruction, leading discussions, or asking questions (questioning and discussion techniques) can make the teaching process more effective as well as provide important basis for teaching process and activities. (Janík, 2013)

Effective teaching process incorporates multiple components, these are: generic aspects of curriculum, instruction and assessment techniques, as well as both organizational and management procedures (classroom management), all of which contribute to an effective teaching environment. Other essential elements involved in

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effective teaching are good learning results, classroom climate and child's positive attitude towards school learning, teachers, and classmates.

It is necessary to ensure that the curriculum of all pupils focuses on the educational learning at high level and at the same time to ensure that all pupils move forward consistently in their learning. Hence the need to set a competitive curriculum content and carry out teaching activities that provide a motivating challenge for pupils and expand their opportunities to learn, but at the same time not very difficult that many pupils would feel confused or frustrated.

An effective learning process should be based on the zone of proximal development which refers to the range of knowledge and skills that pupils are not yet ready to learn on their own but he or she can achieve when provided with educational support. It follows that teacher's activities in the classroom need to be truly effective since teachers generally have only one attempt to deliver the information.

The objective of this article is to outline the possibilities to enable more effective teaching practices in order to identify those aspects that lead to improved pupil achievement – to adequately capture the pupils' attention and to enhance interactivity.

We will also look at the teacher's interactive approach in the teaching process itself. It is very important to define the understanding of the term "learning", and to explain what the term means in the context of effective teaching. Learning is a process of acquiring attitudes, knowledge and skills (learning sets) that, together, enable a person to know or do something new or different. This process results from the interaction of preexisting and new learning sets, and what we know or do as we acquire these new learning sets.

There are three theoretical approaches to learning that support effective learning practices (see Table 1).

Theory	Key Characteristics
Behaviorism	Repetitive conditional response Reinforcement
Cognitivism	Information processing Self-directed/reflective learning
Social Constructivism	Active constructors Built on prior experience Social interaction

Table 1 - Theories of Learning (Rotondo, 2013)

POSSIBILITIES FOR EFFECTIVE TEACHING PRACTICE – ESSENTIAL ASPECTS

Acting on the experience of training courses for adult learners, where the author of this paper works as national educator / teacher, it was identified, and verified, in several courses in the Czech Republic, but also abroad, that effective teaching practice arises solely from the actions and approaches of a teacher.

It is only teacher's performance in the classroom or in front of educational group that guarantees an effective learning activity and its impact on students - i.e. good student results, effective application of knowledge in practice and a quick and efficient utilization of that knowledge – these are the skills that highlight the pupil's learning in school fit for the 21st century.

The research project presents two possible approaches: effective teaching and effective questioning. Throughout this paper, we focus on the so-called Effective Teaching and we will point out the importance of asking questions in the classroom, and thus we highlight teacher's verbal qualities and skills related to teaching performance in front of the class audience.

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EFFECTIVE TEACHING

Learning is highly improved when students are participating in an interactive way. Effective interactive teaching requires environment, set, dialogue, closure and management of group interaction. In order to promote an effective learning environment, it is essential to think of the various teaching activities that are implemented in the classroom and effectively divide and structure the lesson.

The following teaching principles are based on the experience from conducting training courses for adults, where they have a huge functionality impact and are very inspiring. Every lesson, or every continuous portion of the lesson, should be divided into four units - environment, set, dialogue, and closure.

The environment represents the preparation of the teaching activity itself – an educational process which is performed in the classroom. In order to deliver great teaching performance it is recommended to eliminate all possible factors that cause a failure in learning process and delivering information.

The classroom environment includes factors such as thermal, audio and visual comfort, seating, and used correctly, in class distractions can have a positive effect on student motivation. Class equipment covers equipment such as teaching equipment, audio-visual equipment, students' material, and assessment forms.

Set is defined as the starting point of the teaching process, when teacher should first gain students' attention and interest, establish relevance, and direct students to focus on specific objectives. The crucial point of the set unit is to encourage students' involvement a identify group's prior experience. In this part of the lesson, it is also useful to clarify the appropriate time to ask questions.

Dialogue is considered to be the main part of a lesson or its portion (informatively, methodically, and objectively). In this part of the lesson, there are several things which are essential:

- Facilitating the Content
- Appropriately sequenced
- Flows from objectives
- Different interactive strategies (includes supplemental questions prepared by the instructor)
- Time management

(Rotondo, 2013)

Based on the above mentioned training courses and previous research project, it is becoming apparent that an integral component of a lesson should be so called "closure". The closure of a lesson is critical as it helps teacher to summarize key points, re-emphasize critical content, linking to objectives and other parts of the course, and simultaneously, it provides opportunity to ask the final questions. In this part of a lesson teacher definitely should ask questions first as students should not be introduced to new learning content. However, the core objective of the closure activity is to clearly terminate the session.

As suggested by Table 2, all four components should be always included in a lesson plan. In terms of time allocation within the lesson, the first part as well as the set and closure activities should only take up a small portion of the lesson, perhaps a few minutes. The part of dialogue should be given the major part of the allocated time.

It was confirmed that all four stages are of huge importance and significance within the lesson.

	Environment	Set	Dialogue	Closure
Time allocation	Few minutes	Few minutes	Most of the time	Few minutes
Use	Always	Always	Always	Always

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Importance	Great	Huge	Huge	Huge

Table 2 – Time allocation, use and importance of the concept (Rotondo, 2013)

QUESTIONING TECHNIQUES

The ability to engage students in productive discussions is essential. Effective use of questioning techniques will promote active student involvement and achievement of learning objectives. The very important part in questioning is the creation of questions, yet even greater challenge comes in terms of the manner in which teachers ask questions that can have huge potential in effective learning.

If teachers ask questions poorly – for example teacher intends to direct a question to one student in particular without calling on the responder, or teacher asks question without giving students enough time and space to answer – then they are not effective in their teaching, In the basic guide for identifying and describing the kinds of questions used in classroom instruction, there are two types of questions which are emphasized - convergent and divergent questions.

Convergent questions are known as a "closed-ended questions". They are characterized by heavy emphasis on drill and memorization, aim at lower levels of cognition, require an answer that comes from students' prior knowledge (designed to assess prior knowledge), do not necessarily reflect comprehension and are useful for initiating factual discussion.

By contrast, divergent questions are open-ended. These questions aim at higher levels of cognition – divergent thinking requires more complex mental processes such as understanding, applying, etc. These questions require more thought and often rely on experience and prior knowledge. This type of questions is also valuable for stimulating discussion. It can be even argued that discussion cannot be initiated without divergent questions.

Strategic use of both types of questions is effective. Its success depends greatly on teacher communication abilities. However, effective teacher should possess excellent communication skills. Regarding the techniques related to the above mentioned questions are as follows:

- Avoid asking a divergent question expecting a convergent answer.
- Avoid asking too many consecutive convergent questions (may appear as an "oral quiz").
- Interactive dialogue is not just questions and answers, but conversation, discussion, and problem solving.

When asking questions, it is definitely necessary to take into account in which manner we communicate. Effective teachers must allow students the opportunity to respond (give them enough space to answer the question) and never ask their questions at random.

There are several options:

- Ask the question and then name the student.
- Name the student and then ask the question.
- Ask the question and then choose a volunteer.

(Rotondo, 2013)

Teachers also need to be consistent in how they respond. Again, it is not possible to use questioning techniques in any way necessary and use its potential randomly. The communication process that takes place between teacher and student (through a students' response) can be summed up in the basic principles. It is crucial that we comply with these and following principles:

- Give students time to answer.

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- Look at the student who is answering, and be attentive.
- Respond with appropriate gestures.
- Acknowledge and comment on every response.
- Paraphrase the student's response.
- Provide clear, unambiguous feedback.

How do you handle an incorrect / unexpected response? This is a very interesting aspect which, if handled poorly, can result in student discouragement to participate in further communication with the teacher. There are several basis principles to follow:

- Explore the reasoning behind the response with the student.
- Explore the response with the group.
- Reemphasize the correct answer.

Interaction between teachers and students is the most important interaction within teaching–learning process. Especially, the process of asking questions belongs among the most essential components of interaction. In order to perform an effective teaching, thus students manage to respond appropriately and directly to teacher questions, etc. it is necessary that teachers handle communication process well and are thoroughly prepared.

CONCLUSION

The research findings are based on the author's work in The Advanced Trauma Life Support course, developed by the American College of Surgeons, where he evaluated several aspects of effective teaching which were then implemented in tertiary and primary education.

First of all, the method of assessment and evaluation using feedback was implemented to enhance and promote, in the next step, the elements of effective teaching. In the following phase, the interpretation of the research project was done on two levels: in the course Czech Language Didactics for teacher training students in all grades of primary school at Pedagogical Faculty of the University of Hradec Králové as well in Czech language classes at upper-primary schools. The entire educational research project is based on the research question concerning teachers' effectiveness in classroom management and communication with students.

The data were collected through quantitative method including standardize observation, specifically the method of interaction analysis. In this research, it covers the classroom observation and the assessment of interaction and communication in the classroom setting. The research technique used in this study is Flanders observation system, the most widely used system for observing teacher's management style and analyzing classroom communication process.
(Švaříček, 2007)

In interpreting the results of the research, which was conducted in the course Didactics of Czech Language for teacher training students, it should be noted that during one semester students were confronted with the above mentioned approaches in order to implement its partial results into seminars, where the research was conducted.

According to the collected data, it is reported that after implementation of methods discussed in this paper, the percentage increase in teacher quality and performance raises significantly, such as: teacher creates an effective classroom environment, teacher uses these methods to motivate students, teacher can explain the essential points of the lesson (using dialogue), teacher asks questions at an appropriate level, and teacher is aware of what constitutes effective use of questioning techniques and abides by their rules, etc.

The research project is currently underway in elementary schools in Hradec Kralove and it will be very interesting to see the interpretation of the research findings, which will be presented through an article text at the 1st International Conference on Lifelong Education and Leadership for All-ICLEL 2015 in Olomouc.

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EFFECTIVENESS OF ZONE OF LEARNING VISUAL ART CULTURE IN ART EDUCATION

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This study aims to identify the visual art teachers' views about zone of "visual art learning culture", a course scheduled in secondary school curriculum. The study was carried out with 15 teachers currently working in three different cities in Turkey: Mersin, Hatay, and Aksaray. A semi-structured interview was conducted which included ten open ended questions. The analysis of the transcribed verbal data was processed through NVivo 8 to carry out a content analysis. The emerging themes were calculated as frequency and percentage distribution. Findings show that zone of "visual art learning culture seems an effective practice in 9th, 10th, 11thand 12th grades at secondary schools. However, differences were found in terms of variables such as gender and education background.

Keywords: Art education, visual arts curriculum, visual art culture, constructivism

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THE EFFECTS OF FULL STUDIO CLASS ON PRE-SERVICE TEACHERS' CONCEPTUAL UNDERSTANDING AND INQUIRY SKILLS

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ABSTRACT

This study aims to examine effects of full studio class on pre-service teachers' conceptual understanding and inquiry skills about Bernoulli Principle. The sample of the study consists of 51 first year pre-service primary science students of one education faculty in Turkey. General physics course was designed by using "Full Studio" approach which is known to be one of the active learning approaches. Course schedule, which involved active learning techniques and Bernoulli Principle, was implemented for four weeks. Single group pre test- post test weak experimental design, in which the same data collection instruments were applied to the same students before and after teaching, was used in this study. Data were collected by means of conceptual understanding test and inquiry skills scale. Additionally, semi-structured interviews were conducted with five students to explore their responses in the test and to reveal their ideas about teaching process before and after instruction. This study is a mixed methods research in which quantitative and qualitative data were collected concurrently. Students' responses to conceptual understanding test were analyzed by using rubrics which indicated changes in conceptual frameworks of students. Analysis results of data obtained from inquiry skills scale showed that students inquiry skills were improved and there was a statistically significant difference between the pre and post scales ($t=3.39$; $p<.05$). Interview data also supported the difference in students' inquiry skills. Suggestions were made for designing a full studio class and for whom to use active learning and full studio approaches.

INTRODUCTION

It has been reported that classes in which traditional teaching methods used are inadequate in promoting students' success in physics (Bernhard, 2000; Demirci & Çirkinoğlu, 2004; Thornton, 1987). It appears that misconceptions have been existed among students before traditional education and there has been a little change at the end of the course (Küçüközer, 2004; Candan, Türkmen & Çardak, 2006). Also studies indicate that the students in the traditional classroom have failed in tests involving conceptual questions even if they are successful in the tests containing numerical problems (Crouch & Mazur, 2001; Bernhard, 2000). There are many reasons why students fail in course. But teaching comes at the beginning of these reasons. In our schools, teacher-centered methods are often used in teaching science concepts and students have to memorize this information. In this case failure brings with it.

Studies show that active learning methods are more effective in learning physics concepts and increase the success more than traditional teaching methods (Gibson & Chase, 2002; Kalem & Fer, 2003; Minner, Levy & Century, 2010). Active learning has become one of the most interesting areas in recent years. Especially, in many developed countries such as USA, Germany, England, several projects have been prepared (Minner, Levy & Century, 2010). Also, the number of publications and research conducted on this subject are increasing day by day (Ün Açıkgöz, 2011). Active learning is a learning process in which a learner carries the responsibility of the learning process and has the opportunity to make decisions regarding various aspects of the learner and self-regulate the learning process. Furthermore, it is a learning process in which the learner is forced to use his/her mental abilities through complex educational tasks (Çeken, 2002). According to active learning approach, students make decisions about how to perform their own learning, how much they should learn and what is missing concerning their own learning. Teachers only guide their students and make some advices when students require and follow up the development of their students.

Active Learning Approaches in Physics Education

Many active learning curriculums, which are based on constructivism, have been developed. At a meeting at Tufts University, the participating physics education researchers reached an agreement on the following points (Bernhard, 2000):

- Questions that require qualitative reasoning and verbal explanation are essential
- Students need to participate in the process of constructing qualitative models that can help them

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understand relationships and differences among concepts.
- Certain conceptual difficulties are not overcome by traditional instruction
- Scientific reasoning skills must be expressly cultivated.
- Connections among concepts, formal representations, and the real world are often lacking after traditional instruction.
- Teaching by telling is an ineffective mode of instruction for most students. Students must be intellectually active to develop a functional understanding

In accordance with the decisions taken, radical decisions about physics education in America were made and a variety of active learning curriculums based on constructivism were developed. The principal aim of those curriculums is to engage students in active learning process and to ensure that students work in groups collaboratively (Bernhard, 2000; Minner, Levy & Century, 2010). Redish (2000), refers to these as "active engagement classes". They all have in common a focus on what it is the students actually do and on what the effect of that activity is.

Active learning approaches that are used in physics teaching have been presented in Table 1. Those approaches are applied in different forms (Bernhard, 2000; Şahin, 2007). While laboratories have been reorganized in some universities, arrangements have been made to active involvement of students in large classes in some universities. The most important revision is arranging group work, laboratory study and problem solving hours so that all these activities can be managed at the same time in a class.

Table 1. Active learning approaches (Bernhard, 2000; Şahin, 2007)

Curricula	***Developer***
Traditional Format	
Discovery Labs	
Tools for Scientific Thinking	R. Thornton, Tufts University D. Sokoloff, Oregon University
Realtime Physics	R. Thornton, Tufts University D. Sokoloff, Oregon University P. Laws, Dickinson College
Socratic Dialogue Inducing (SDI) Lab.	R .Hake, Indiana University
Lecture Based Models	
Active Learning Physics System	Alan van Heuvelen, Ohio State University
Peer Instruction /Concept Tests	Eric Mazur, Harvard University
Interactive Lecture Demos (ILD)	R. Thornton, Tufts University D. Sokoloff, Oregon University
Recitation Based Models	
Co-operative Problem Solving	Ken and Pat Heller, Minnesota University
Tutorials in Introductory Physics	Lillian Mc. Dermott, Washington University
Mathematical Tutorials	E. Redish, Maryland University
Full Studio	
Physics by Inquiry	Lillian Mc. Dermott, Washington University
Workshop Physics	Priscilla Laws, Dickinson College
The Physics Studio	Jack Wilson, Rensselaer Polytechnic Institution
Scale Up	Beicner, North Carolina State University

Laboratory-based models are replaced with the traditional laboratory by a discovery type active learning laboratory. Recitation-based (problem-solving) models are replaced with the recitation in which an instructor solves problems for 1-2 hours by active learning activities guided by carefully designed worksheets such as a mini-lab in which the students carry out shorter guided discovery experiments and learn reasoning in groups. Lecture-based models retain scheduling of the lectures and are carried out in a lecture hall, but modify the activities carried out by the students. In the full studio classes, the teacher lectures only for short periods during the class. Instead most of student time is spent doing experimental activities in groups in designed experiments.

Full studio classes

In the full studio classes, the entire class time is taken up by periods in which the students actively engaged with exploring the physics using some laboratory equipment. Only a small fraction of the period may be spent with a

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teacher lecturing to the students. These classes tend to be more expensive, time, space and equipment required than the traditional lecture format (Redish, 2000).

Physics by Inquiry

One of the initial applications of Full Studio classes is Physics by Inquiry that has been designed by Lillian C. McDermott and her friends at the University of Washington. Their teaching was designed for the learning environments in which the main aim was exploring rather than memorizing and learning by inquiry rather than lecturing so as to ensure that students worked like their teachers (McDermott, 1996a; Redish, 2000). This class was fully equipped explorative laboratory. There was not a teacher and each topic was taught in the periods of two hours of two laboratory classes. Students worked in groups of two with simple materials and followed the worksheets given to be able to answer the questions posed in those periods. Those worksheets were prepared in a manner that each student understood the task and explained the mechanism of how a system worked with his/her predictions. When the system did not work, student's prediction ended with a cognitive conflict. Then, teachers, who were responsible to the group of 10-15 students, took over the control and helped them to find the correct explanation of the problem.

Workshop Physics

Workshop Physics, which was developed by Priscilla Laws at Dickinson College and used in physics education, was a successful learning approach. Theoretical, practical and laboratory classes were integrated rather than separating them. Aim of teaching, in which peer instruction was used, was to learn physics by doing physics. Each student was equipped with a computer and various experiment materials during teaching. Students were active in each class and used Workshop Physics Activity Guide that was written by Laws (1991). Computers were used almost in all experiments. This technique was reported to be quite succesfull in small groups (Knight, 2004).

Physics Studio

Physics Studio is a very similar technique to Workshop Physics and it has been developed by Jack Wilson at the Institute of Rensselaer Politechnic (Wilson, 1994). Separation of theoretical, application and laboratory classes was also removed. Classroom environment consists of studio computers and laboratory materials. More than one student can access a computer. Physics Studio is a more structured technique, can also be applied in large classrooms and puts more importance on problem solving than Workshop Physics (Knight, 2004).

Common goal of both Workshop Physics and Physics Studio is to present more qualitative world to students. Classrooms were equipped with computer materials. Each student group works with computer supported tools like Universal Lab Interface Box (ULI). Physics Studio classes mostly consist of periods of two hours in which students make observations with equipments provided and construct their mathematical models. Classroom has a common area where general presentations are made and each class ends with many teachers' brief presentation or classroom debate.

Scale-Up

The Scale Up (Student-Centered Active Learning Environment for Undergraduate Programs) project has been conducted by Beichner and his friends at the University of North Carolina State and shows that collaborative interactive computer based education can be managed in large classes (URL-1).

The importance of the study

In this study, classroom environment was designed on the basis of "Full Studio" approach under current circumstances. Separation of theoretical, practical and laboratory classes was removed. Arrangements were made to prepare a classroom atmosphere in which students could work in groups and they could conduct an experiment, carry out an investigation by using computers or browse textbooks and journals whenever they were required. This study is believed to contribute to the literature because of the full studio classes which were developed and applications made in abroad was adapted to our country for the first time by using active learning techniques.

Many studies conducted to improve students' understanding of physics. Most of these studies include mechanical (Candan, Türkmen & Çardak, 2006; Ünlü & Gök, 2007; Ünlüsoy, 2006) and electrical concepts

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(Küçüközer, 2004; Şekercioğlu, 2011). The number of studies on fluid mechanics is quite small compared to the concepts studied in previous researches. Studies which focus on the concept area of fluid mechanics chose one or two topics of fluid mechanics on the primary or secondary levels (Gazioğlu, 2006; Akpınar & Ergin, 2007; Çeken, 2002; Şahin & Çepni, 2011; Daşdemir & Doymuş, 2012). The topics considered are generally properties of liquids and gases, swimming, stinging, pressure and buoyancy. However, this study deals with Bernoulli Principle which is the last topic of fluid mechanics and the effects of full studio class on pre-service teachers' conceptual understanding and inquiry skills are investigated.

Teachers attempt to realize desired learning at schools and quality of education is directly proportional to the quality of teachers. Loverude, Gonzales and Nanes (2011) emphasize that attention should be paid not only to content knowledge but also to pedagogical subjects about the related content area in training teachers. In this study, it is aimed to help students acquire both content knowledge and pedagogical knowledge about teaching Bernoulli principle by presenting content knowledge with pedagogical content knowledge. Moreover, students' inquiry skills are aimed to be improved by designed teaching model.

THE STUDY

The aim of this study is to examine effects of full studio class on pre-service teachers' conceptual understanding and inquiry skills about Bernoulli principle. The sample of the study consists of 51 first year pre-service primary science students of one education faculty in Turkey.

Method and data collection tools

Teaching of Bernoulli principle, which utilized active learning techniques, was implemented for four weeks period in a class of which was designed according to "full studio" approach. In this study, single group pretest-posttest weak experimental design, in which the same data collection instruments were applied to the same students before and after teaching, was used. A conceptual understanding test that was developed by researchers, an inquiry skills scale that was developed by Aldan Karademir and Saracaloğlu (2013) and semi-structured interviews that were conducted with five students before and after teaching were used as data collection instruments.

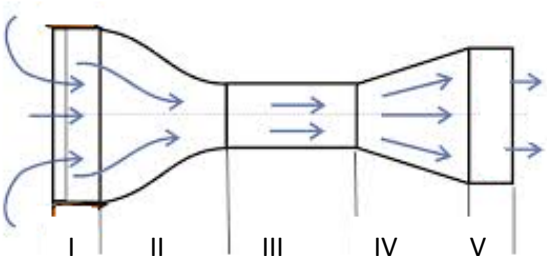
This study is a mixed methods research in which qualitative and quantitative data were collected concurrently. Mixed methods research design is accepted as increasing the reliability and as reinforcing the validity of a study with qualitative and quantitative data. Qualitative data, which were obtained from the conceptual understanding test and semi-structured interviews, were examined by using rubrics whereas quantitative data, which were obtained from inquiry skills scale, were analyzed by using SPSS 14.0 software.

Conceptual understanding test

The conceptual understanding test was developed by researchers. First, a number of questions regarding the Bernoulli's principle were prepared. Then the questions were applied to another group of students and the responses were evaluated. Incomprehensible or difficult questions were removed from the first version of the test. The remaining questions were presented to the four experts in physics education area. Three of them were chosen to take part in the final version of the test as can be seen in Figure 1.

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Question 1



The air flow, as shown in the figure above, is passed in a tube having different cross-sectional areas.

a. Do you think, the rate of air flow is different or remain same in the areas? (If you say different, please rank from major to minor) Please explain your reasoning.
Your answer:…..

b. Do you think, the pressure that exerts to the walls of the tube, is different or remain same in the areas? If you say different, please rank from major to minor) Please explain your reasoning.
Your answer:……

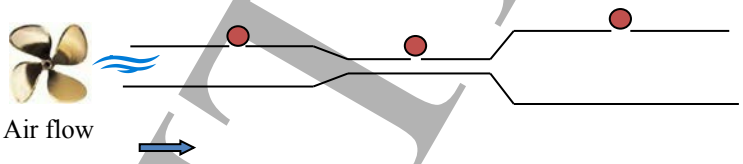
Question 2



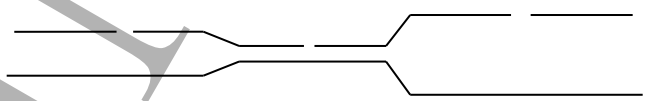
When a light breeze blowing, the smoke rises faster throughout the chimney. What do you think is the reason for this situation?

Your answer:…..

Question 3



There is a tube in the airflow as shown in the figure above. This tube was collapsed in some places and some parts were also enlarged. Three holes on the tube exist on different parts and ping-pong balls were put on those holes. When air starts to flow towards the tube it is known that balls remain stationary above the tube. How do you think positions of the balls over the tube will likely to be? Please explain your reasoning by displaying on the tube below.



Your answer:…..

Figure 1. The questions in the conceptual understanding test

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Inquiry skills scale

In this study, Inquiry Skills Scale, which was developed by Aldan Karademir and Saracaloğlu (2013), was used in order to question students' inquiry skills. The scale was applied to 425 pre-service teachers studying at the departments of primary science, primary teaching, and primary social studies. The scale which was constructed as a five points likert type, consisted of three factors and 14 items. According to the exploratory factor analysis that was conducted by the authors, these factors were named as ''Getting information'', "Checking information'' and ''Confidence'' (Table 2). Each sub-factor's Cronbach's alpha reliability coefficient was calculated as .76, .66 and .82 respectively. The whole scale's reliability coefficient was .82.

Table 2. Examples of the statements in the scale

Statements	***Concerned factor***
I can distinguish what information I need to learn.	Getting information
I try different solutions when answering a question	Checking information
I say without hesitation what I think about the topics discussed in class.	Confidence

The interview form

The interview form, which was prepared by the researchers, consists of two parts in a semi-structured format. In the first part of the interview form, there are conceptual questions about the Bernoulli Principle. Some preliminary trial interviews were conducted to decide on which of the questions had to be used. Different from the questions of Conceptual Understanding Test, two different questions were included in the interviews. Other questions were designed for each individual student based on the related student's responses given to the conceptual understanding test. The second part of the interview form includes the pre-service teachers' opinions on the use of inquiry skills and teaching process. Figure 2 shows some sample questions from the interview form.

Question 1
Is there a relationship between flow rate and pressure of a fluid? How do you explain?

Question 2
What do you expect to happen when it is blowed out between two papers as illustrated in the figure? Why ?



Question 3
Do you say that everyone could easily tell what she/he thought in this course?

Figure 2. Some sample questions from the interview form

Preparation of the learning environment and teaching process

In this study, the classroom was organized as a full studio class and active learning techniques were used. In full studio classes, the discrimination among theory lesson, laboratory and recitation lessons are eliminated. Therefore, the learning environment was organized as follows:

- Four hours of lectures and two hours of laboratory course were given as a total of six hours per week.
- The classroom was divided into two groups. Then each group was divided into heterogeneous groups in their own four or five people. The students' university entrance scores were important for the creation

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of the groups.

- The discrimination among theory lesson, laboratory and recitation lessons were eliminated and because of this reason, teaching of the topic was decided to be processed in the laboratory.
- Laboratory was prepared in accordance with the full studio. Much as possible, computers were established in the laboratory and internet connections were made. There was a computer available to each group. In addition, students could use the library, stationery or try corner whenever they wanted as can be seen in Figure 3.



Figure 3. The full studio classroom

- 'Energy Conservation and Bernoulli's principle' was chosen as the topic of teaching. However, active learning techniques in the designed lesson plans were applied from the beginning of the 'Fluid Mechanics' unit in the full studio classroom in order to ensure that students get used to the classroom environment. Time plan for teaching of the unit was presented in Table 3 on a weekly basis and teaching of the whole unit lasted for four weeks.
- Tests and scales were applied and semi-structured interviews were conducted before and after teaching.

Tablo 3. Time plan for teaching

Lesson	***Subject***	***Lesson***	***Subject***
Week 1 Lesson 1	What is fluid?, General characteristics of the fluids, Density	**Week 3 Lesson 1**	Viscosity, fluid resistance
Week 1 Lesson 2	Pressure , Hydrostatic pressure , Pressure Gases	**Week 3 Lesson 2**	Ideal fluids, Flow lines, Rate Continuity equation
Week 1 Lesson 3	Pascal principle	**Week 3 Lesson 3**	Energy conservation Bernoulli's equation
Week 2 Lesson 1	Buoyancy	**Week 4 Lesson 1**	Applications of Bernoulli's equation
Week 2 Lesson 2	Swimming - Sinking - Hanging , Archimedes Principle	**Week 4 Lesson 2**	Rate measurement, Venturi tube
Week 2 Lesson 3	Surface tension, Capillary , Adhesion , Cohesion		

FINDINGS

Findings from Conceptual Understanding Test and Interviews

In this part, students' responses to conceptual understanding test and interview questions about Bernoulli's principle were presented. Students were asked to respond those questions before and after teaching. Firstly, students' responses were allocated to two broad categories in terms of being scientifically acceptable or unacceptable during the analysis. Thereafter, responses were grouped hierarchically in sub-categories in terms of the elements involved in each response. Below, students' responses were presented question by question.

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The Findings for Question 1

In the case of question 1, it was asked whether the velocity of air changes or not through different regions as shown in Figure 1. Teacher candidates' responses to this question in the pre and post-tests are given in Table 4 in comparison.

Table 4. Responses of students to question 1, part a.

TYPE OF ANSWER			PRE TEST		POST TEST	
			N	EXAMPLE ANSWERS	N	EXAMPLE ANSWERS
SCIENTIFICALLY ACCEPTABLE ANSWER	CORRECT ANSWER	Correct sequencing-Correct explanation	3	• How much cross-sectional area decreases, speed increases.	23	• According to $A_1.v_1=A_2.v_2$ equation, narrower cross-sectional area, increases fluid flow rate. • Fluid flow rate should be fixed. Speed of the fluid must be increased in a narrowed channel compared to the speed at a large channel.
	PARTIALLY CORRECT ANSWER	Correct sequencing – Partially correct explanation	-	-	1	• When we put a boat in front of the air flow in the ping-pong ball experiment, the ball was faster than previous. I sort of think about it.
		Wrong sequencing-Correct explanation	10	• In large areas, speed decrease and progresses more slowly. But in a narrow place, the same amount of air has to pass, so flow quickly.	13	• Greater the cross-sectional area, less the speed for air flow.
		No sequencing-Correct explanation	2	• There is more in the area III. Because in the cross-sectional area III, air is much more compressed. So gas rate increases.	-	-
		No sequencing-Partially correct explanation	1	• It is different. Because the structure and shape of the pipe is different.	-	-
		Wrong sequencing-Partially correct explanation	9	• Because of the length / area / width is different.	-	-
		Correct sequencing – Irrelevant explanation	-	-	1	• Static pressure is the pressure that fluid makes the side surface and it is inversely proportional to dynamic pressure.
		Correct sequencing – No explanation	3	-	2	-
SCIENTIFICALLY UNACCEPTABLE ANSWER	WRONG ANSWER	Wrong sequencing-Wrong explanation	12	• The speed of the air flow does not depend on the area. Therefore it remains the same. • It is the same. Because gases are distributed homogeneously. • Airflow needs larger areas to pass more quickly / Air stream is compressed in narrow areas. • Because the pressures are different. It is due to the cross-sectional areas.	6	• As cross sectional area is decreased, the amount of air passing through the tube increases and accelerates it immensely. • The speed of the airflow varies. Because the pressures applied to the wall in the numbered regions change.
		Wrong sequencing – No explanation	4	-	-	-
		No sequencing-Wrong explanation	1	• I would say normally area III is the fastest. However, pressure of air does not change as in the case of the experiment we did water. When we do try narrowing path of water, its pressure is increased but it is not the same for air and narrowing the path of air does not change the result.	-	-
		Correct sequencing - Wrong explanation	2	• The speed of air flow varies depending on sections. Because the pressure of the air flow increases in narrowed sections.	3	• Flow lines are much where the cross-sectional area decreases.

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UNCODEABLE	Sequencing and explanation irrelevant	3	• III>IV>II>V>I Field II is narrowed and closed and has maximum air pressure. In field IV air pressure is too high because it takes the pressure from both narrow spaces because it is in a closed area, though both have less pressure accordingly.	2	• I>II>IV>V>III Rate is increased in area III.
UNANSWERED	No response	1	-	-	-
Total		**51**		**51**	

Considering the answers given in Table 4, the number of respondents, who gave correct answer, was three and twenty-three in the pre and post tests respectively.These students argue that the speed of the airflow increases as the cross-sectional area is decreased. In the post test, it was found that students made explanations using flow rate concept or continuity equation in line with that expected of teachers.

Partially correct answers category consists of seven subcategories that are named in line with the responses of teachers as correct sequencing-partially correct explanation, wrong sequencing-correct explanation, no sequencing-correct explanation, no sequencing-partially correct explanation, wrong sequencing-partially correct explanation, correct sequencing-irrelevant explanation and correct sequencing-no explanation. In this category, it seems that more students responded especially in the subcategory of wrong sequencing-correct explanation. This situation is valid in both the pre and post-tests.

Scientifically unacceptable responses of students have grouped in four subcategories. These are labeled as wrong sequencing-wrong explanation, wrong sequencing-no explanation, no sequencing-wrong explanation and correct sequencing-wrong explanation. The number of students, who made wrong sequencing-wrong explanation, was twelve and six in the pre and post tests respectively.

When students' scientifically unacceptable responses were examined it was found that some students assert the notions of 'flow rate of air was not related to cross sectional area' or 'as the cross sectional area was decreased the amount of air would be increased'. On the contrary, some students reasoned that air flow would go faster as the cross sectional area was increased. Student 48 explained his opinion on this topic in the interview before teaching as follows:

> *Air flow spreads much in wide regions and it progresses more comfortable, its speed increases and its pressure is reduced. However, speed decreases and pressure increases in the third region due to the narrowed area.*

Response of the same student in the post test was coded in the wrong sequencing-correct explanation category. Below some part of the dialogue after teaching between student 48 and the researcher was presented.

> Interviewer: Are you sure about your response?
> Student 48: No, not about the sequence. But cross-sectional area is inversely proportional to speed.
> Interviewer: Ok. Do you want to reorder?
> Student 48: Yes. III is the largest; IV, V, II and I come in order.

In the pre-interview, student 50 revealed her ideas about question 1 as follows:

> Student 50: More current passes through large areas, it would be so much speed.
> Interviewer: Do you think that the amount of air passing through the area of I and II is different from each other?
> Student 50: It is the same for both, because both are integrated. Then it is pointless. It is faster in area III.
> Interviewer: So, in part II cross-sectional area is narrowed. Does this change anything?
> Student 50: Of course, the air must enter to the area II faster.

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Considering dialogue held with student 50, it seems that she does not have a clear idea and makes a different explanation in her every answer. A dialog from post interview with the same student is presented below.

> Student 50: Because the cross-sectional area is narrowed speed is maximum in area III.
> Interviewer: Ok. What is the reason for this?
> Student 50: The same amount of air has been forced to pass through the narrowed area.
> Interviewer: What if we use water instead of air? Does the result change?
> Student 50: No, nothing is changed. It is also a kind of fluid.

When uncodeable responses are examined, two and three students' responses fall into this group in the pre and post tests respectively. The reason for coding responses in this category is that there is inconsistency between the statements made and the rankings given. For example, area III was considered the last in the rankings, while it was reasoned that speed was higher in area III than the others. One student left the question unanswered in the pre test.

In part b of question 1, it was asked whether the air pressure on the walls of the pipe in different regions would change as shown in Figure 1. Responses given by teacher candidates to this question in the pre and post tests are presented comparatively in the Table 5.

Table 5. Responses of students to question 1, part b.

TYPE OF ANSWER			PRE TEST		POST TEST	
			N	EXAMPLE ANSWERS	N	EXAMPLE ANSWERS
SCIENTIFICALLY ACCEPTABLE ANSWER	CORRECT ANSWER	Correct sequencing - Correct explanation	-	-	13	• Where the speed of air flow is reduced, static pressure increased and dynamic pressure decreased. As the speed increases the pressure made to wall decreases. • Static pressure + dynamic pressure + height dependent pressure = constant. The flow of the fluid is constant. Speed of the fluid in a narrowed region should increase to get a constant flow rate. The height is equal in every part of the tube, so it is ineffective. Then the static pressure decreases as the speed increases.
	PARTIALLY CORRECT ANSWER	Correct sequencing - Partially correct explanation	1	• Pressure is low in tight areas, because speed is high. But in wide areas, pressure is high.	3	• Static pressure is inversely proportional to the dynamic pressure. • Static pressure increases as the wall of the pipe increases.
		Wrong sequencing- Correct explanation	-	-	6	• Bernoulli equation says that pressure decreases according to whatever speed increases. • Pressure on the wall of the pipe made by the airflow and static pressure is inversely proportional to speed.
		No sequencing- Correct explanation	-	-	1	• When we narrowed the cross-sectional area of the pipe wall, it reduces the air pressure and also the static pressure.
		No sequencing- Partially correct explanation	3	• It changes because areas are different.	-	-
		Wrong sequencing- Partially correct explanation	4	• Speeds /cross sectional areas are different. • How much the region is greater, pressure is greater too.	1	• Smaller the cross-sectional area less the pressure applied to surface.
		True sequencing- No explanation	-	-	4	-

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SCIENTIFICALLY UNACCEPTABLE ANSWER	WRONG ANSWER	Wrong sequencing-Wrong explanation	28	• Same in all areas. Because it is only the force applied to the wall. So everywhere is the wall of the pipe. • In large areas, pressure is high. In tight/small areas, pressure is low because of the jamming. • There is more pressure in areas with increased speed	19	• It is same in all areas. Because the wall of the pipe is the same everywhere, so the pressure doesn't change. • Pressure will be more in the narrow area. Because the number of molecules will increase. The pressure is inversely proportional to the surface area. Pressure on the wall of the pipe is reduced as surface area is growed. • Pressure on the wall of the pipe is increased where airflow is strong.
		Wrong sequencing-No explanation	12	-	3	-
		No sequencing-Wrong explanation	2	• As the cross-sectional area of the pipe decreases, the pressure increases.	-	-
		Correct sequencing-Wrong explanation	-	-	1	• Makes more pressure because more air molecules are found in large areas.
UNCODEABLE		Sequencing and explanation irrelevant	1	• It is directly proportional to the cross-sectional area. More pressure is exerted in smaller cross sectional areas. This is observed the most in area III.	-	-
Total			**51**		**51**	

When students' responses were examined, none of the students gave correct answer (correct sequencing-correct explanation) in the pre test while thirteen students responded in this category in the post test. Students basically responded that the narrower the cross sectional area, the bigger the speed of the air flow which would increase dynamic pressure and decrease static pressure on the walls of the tube.

Partially correct answers were allocated to six subcategories which were labelled as correct sequencing-partially correct description, wrong sequencing–correct explanation, no sequencing-correct explanation, no sequencing-partially correct explanation, wrong sequencing–partially correct explanation and correct sequencing-no explanation. Responses in this category lack the enough explanation about the relationships between the concepts of cross sectional area, speed, static pressure and dynamic pressure. Additionally, more students gave responses belong to wrong sequencing-partially correct explanation and wrong sequencing-correct explanation subcategories in the pre and post test respectively.

Scientifically unacceptable responses were divided into four subcategories that were labelled as wrong sequencing-wrong explanation, wrong sequencing-no explanation, no sequencing-wrong explanation and correct sequencing-wrong explanation. 28 students made wrong sequencing-wrong explanation in the pre test while 19 students still responded in this category in the post test. When the responses were examined it was found that students mainly used the concept of 'pressure' without mentioning static and dynamic pressure in their responses. Moreover, the idea of 'increasing the speed also increases the pressure' was frequently used by the students. It is known that dynamic pressure increases with the speed of the fluid but students have to concentrate on the walls of the tube to be able to explain the pressure which is called static pressure and decreases with increasing speed of the fluid. Student 48 explained the situation in the post interview as can be seen below.

> "Where the speed is high, dynamic pressure increases and static pressure decreases.Static pressure is higher in a larger area. It influences the wall of the tube more than the case of small area. We can get the reason of this from Bernoulli's equation"

One student gave an uncodeable response in which inconsistency emerged between the explanation given and the sequence made in the pre test. None of the students left blank this question in both the pre and post tests.

The Findings for Question 2

The reason for the fume's rising up faster through a chimney in a windy day was asked in the second question as can be seen in Figure 1. Students' responses to this question in the pre and post tests were presented in Table 6.

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As can be seen in Table 6, only one student made a scientifically correct explanation that was correct sequencing and correct explanation in the pre test while twenty nine students gave such a response in the post test. Students who gave a correct explanation argued that the pressure at the upper end of the chimney was decreased due to wind blowed above the chimney. Moreover, they were aware that pressure inside the chimney was higher than the pressure outside the chimney that was thought to be the reason of the faster movement of the fume inside the chimney from the higher pressure to the lower pressure.

Table 6. Responses of students to question 2

TYPE OF ANSWER		PRE TEST		POST TEST	
		N	EXAMPLE ANSWERS	N	EXAMPLE ANSWERS
SCIENTIFICALLY ACCEPTABLE ANSWER	CORRECT ANSWER	1	• The smoke in the chimney rises faster when lower air pressure exists inside the house than the air pressure outside in windy weather.	29	• There would be increase in the rate of the speed because the wind blows. As speed increases, the pressure decreases. The upper part of the chimney is the low pressure region while the fireplace becomes the region of high pressure. Direction of flow is towards the low pressure from the high pressure region. Smoke rises faster through the chimney for this reason. I reached this idea from the Bernoulli equation.
	PARTIALLY CORRECT ANSWER	5	• Pressure difference occurs. • Gas pressure drops on the chimney so it rises faster.	8	• The pressure in the air affects the smoke. Therefore pressure applied to the smoke is much greater inside the house as the wind blows and the smoke rises faster. • As the pressure difference is much, smoke moves faster.
SCIENTIFICALLY UNACCEPTABLE ANSWER	WRONG ANSWER	43	• The air has a frictional force; this slows down the rate of rise of smoke. But when the wind blows slightly it helps smoke to move up and the smoke rises faster. • Smoke starts to rise/disperse/mix faster upwards to air with the help of the wind. An air exchange/flow occurs. • It is reverse with blowing speed of the wind and it rises faster through the chimney when a light wind blowing. When the speed of the wind increases, the smoke will be stuck in the chimney and it will drown into the chimney. • The suction power / thrust of the wind or more streams can be the reason of it. • Wind direction is clearer at a time to go to smoke and fumes cannot withstand the impact of large wind speed and rises with him. • The blowing wind can cause a circulation in the mouth of chimney. • Wind speeds of / takes out the smoke.	14	• The low pressure inside the house wants to mix more quickly with high pressure outside the house. The wind sets up a balance as a factor here. • Wind creates high pressure at the top of the chimney. Smoke goes from low pressure towards high pressure. • Because when the wind blows, breaks down his smoke and prevents it to be risen. But smoke rises faster in light winds due to be comfortable. • Because smoke is scattered under the influence of air flow that is created by the wind and rises quickly through the chimney.
UNCODEABLE	Irrelevant answers	2	• Because air pressure is applied and weather takes away all the smoke. • The opposite may be the case, I cannot explain.	-	-
		Total	**51**	**Total**	**51**

Five and eight students responded partially correct answers in the pre and post tests respectively. Those students were also aware that pressure difference existed but they did not mention the effect of the speed of the wind or in which regions high and low pressures would have been occurred.

43 students' responses coded as scientifically unacceptable in the pre test and 14 students continued to reason in the same category in the post test. It has been revealed that different ideas emerged in this category and students mainly used the notions of friction, the effect of wind and repulsive force without referring the concept of pressure in their answers to the pre test.

Students ideas about the same concept were tried to be probed by asking a question in different context in the

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interviews conducted as can be seen in Figure 2. Students were asked to hold two A4 size papers parallel to each other in a vertical dimension. Then, they were asked to anticipate what would happen if s/he blowed between the papers. Students 46, 47 and 48 responded in the pre interviews as follows:

> Student 46: I expect two papers to be separated.
> Student 47: I guess they move apart.
> Student 48: They may repel each other.

When it was blown between two papers it was observed that papers came closer that was contrary to the students' predictions. As a result of this trial, student 46 made such an explanation in the pre interview:

> "Let's consider the narrow region in the first question. We can get inspiration from there. Air speed is decreasing towards the bottom of the paper. But it is probably irrelevant."

Student 47 tried to explain the situation as follows:

> "I guess, air pressure causes this phenomenon.The pressure is much where we blow."

Student 49 explained the same situation in post interviews as follows:

> "It is due to the pressure. We increase the speed of air and decrease the pressure between the papers when we blow. The pressure outside the papers is higher than the pressure between the papers. Papers stick to each other since the external pressure is higher than the internal pressure."

All five students answered both the chimney and blowing papers questions correctly in the post interviews. Finally, two students made irrelevant explanations in the pre test and coded as uncodeable.

The Findings for Question 3

In the case of question 3, it was asked when the air flew, how the balls' position would likely to be as shown in Figure 1. Teacher candidates' responses to this question in the pre and post-tests are given in Table 7 in comparison.

Table 7. Responses of students to question 3

TYPE OF ANSWER			PRE TEST		POST TEST	
			N	EXAMPLE ANSWERS	N	EXAMPLE ANSWERS
SCIENTIFICALLY ACCEPTABLE ANSWER	CORRECT ANSWER	Correct presentation - Correct explanation	1	• As the width of the tube decreases, speed of air increases and pressure decreases. That's why the ball does not raise much.	18	• The speed increases when the cross-sectional area is narrowed. According to Bernoulli's equation, dynamic pressure increases as the speed increases. In order to remain energy constant static pressure must be decreased. In narrow cross sectional area the ball rises less due to low pressure.
	PARTIALLY CORRECT ANSWER	Correct presentation – Partially correct explanation	-	-	8	• Static pressure is reduced and dynamic pressure is increased in places where cross-sectional areas are small. • Reduced static pressure exists on the periphery of the narrow wall. Therefore, air outlet is the least at the wall of the narrow place.
		Wrong presentation – correct explanation	-	-	1	• Static pressure decreases as the speed of air increases. More pressure will be applied on the large wall surface area and the ball will go higher than the other cases.
		No presentation - Partially correct explanation	-	-	1	• Static pressure is inversely proportional to speed. Thus, the ping-pong ball rises more in the thick part of the pipe.
		Wrong presentation - Partially correct	-	-	2	• The velocity of air entering into the tube will be greater and causes more dynamic pressure. But here is the static pressure which is exerted on the pipe wall. Narrowed places will increase speed.

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		explanation				
		Correct presentation – No explanation	-	-	1	
SCIENTIFICALLY UNACCEPTABLE ANSWER	WRONG ANSWER	Wrong presentation – Wrong explanation	44	• The airflow removes harder in narrow places and the ball more gets up. But in wide areas, the air flows more comfortable, so the ball does not get up much. • Location on the tube is inversely proportional to the width of the tube. Air pressure is increased when the tube is narrowed and position of the ball on the tube will increase. • (They rise equal) When the air flow close up the balls, balls begins to rise upwards. • It is about the sizes of the holes.	18	• Airflow increases as the cross-sectional area is decreased. Thus, static pressure / pressure is also increased. Static pressure / pressure is greater where the height is maximum. • The first ball cannot jump upwards due to pressure created by the air stream when air flows inwardly into deadlock and starts to rotate. Other two balls jump up with the impact of the stream. • Because it will come up more quickly than with a narrow cross-section. Cross-sectional area than would be the now slower than larger ones. • Static pressure and dynamic pressure increase, this causes increase in speeds. • Air flow through the tube is much where it is the most narrow.
		Wrong presentation – No explanation	1	-	-	-
		Correct presentation - Wrong explanation	1	• Provides the hyperinflation of the ball for more air passes through the expanded location. In areas with narrow vice versa.	2	• Larger cross-sectional area causes more airflow. That's why the ball rises more above the big one. • As speed increases, the dynamic pressure is reduced. Decrease in dynamic pressure results in reduced height.
UNCODEABLE		Irrelevant answers	2	• The balls fall in. Gas in broad areas progresses and spreads more comfortable than in narrow areas. Thus, balls reach the balance so…	-	-
		Explanation and presentation irrelevant	1	• Where the pressure is less, speed is low.	-	-
UNANSWERED		No response	1	-	-	-
Total			**51**		**51**	

Considering the answers given in Table 7, the number of respondents, who gave correct answer, was one and eighteen in the pre and post tests respectively. The students responded that the narrower the cross sectional area, the bigger the speed of the air flow which would increase dynamic pressure and decrease static pressure on the walls of the tube and where the static pressure is high the ball rises more. The answers are more scientific and expository in the post test.

Partially correct answers category consists of five subcategories that are named in line with the responses of students as correct presentation-partially correct explanation, wrong presentation-correct explanation, no presentation-partially correct explanation, wrong presentation-partially correct explanation and correct presentation-no explanation. In the pre test, none of the students and in the post test thirteen students gave answers belong to these subcategories. Eight students made correct presentations and partially correct explanations. The explanations in this category are shallower than the explanations in the correct answer category.

Scientifically unacceptable responses of students have grouped in three subcategories. These are labeled as wrong presentation-wrong explanation, wrong presentation-no explanation and correct presentation-wrong explanation. The number of students who made wrong presentation-wrong explanation was fourty four and

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eighteen in the pre and post tests respectively.When the responses were analyzed, students mostly referred to narrowed cross-sectional area and increased rate of the air flow and the pressure as a cause of the balls rising upwards. Also, students seemed to make wrong explanations due to mixed or incorrect knowledge of the dynamic pressure and static pressure. Student 48 explained his opinion on this topic in the pre interview as follows:

> "The amount of the air is much, so the ball rises more. In the wide areas, balls rises more, because the pressure will be more."

When the students' opinions are examined, both correct and and wrong ideas are appeared. In large areas, the pressure is much more, but this pressure is called static pressure. The cause of the balls rising higher is not due to more air, because the filling is same in everywhere. The cause is decrease of the rate of flow and in dynamic pressure and increase in static pressure. In the pre test the same student's (48) idea is as follows:

> "In large areas, the air flow rate increases. When the rate increases, dynamic pressure increases and static pressure decreases. The static pressure effects to range of the wall, because of this, when the static pressure decreases, the ball rises more."

Also, the number of students who made correct presentation and wrong explanation was one and two in the pre and post tests respectively. When the students' responses were examined it was clear that students believed to the idea of 'when the cross sectional area was increased, the amount of air flow was increased too'.

Uncodeable answers category consists of two subcategories that are named in line with the responses of students as irrelevant answers and both explanation and presentation irrelevant. Only three students' answers were coded in these categories in the pre test. Also, only one student unanswered the question in the pre test.

Inquiry Skills Scale

Students' responses, which were given to inquiry skills scale before and after teaching, were compared. In doing this, paired samples t-test analysis was used. Findings showed that there was a statistically significant difference ($t_{(50)}$= 3.39; p<.05) between the pretest and posttest scores of the scale as can be seen in Table 8.

Table 8. The comparison of the answers of pre-service teachers to inquiry skills scale before and after teaching.

Inquiry Skills	N	Mean ($\overline{X}$)	SD	df	T	Sig.
Pretest	51	3.7519	.42264	50	3.390	.001*
Posttest	51	4.0003	.53403			

(t=3.390; p<0.05)

Considering the means that are given in Table 8, average of the pre-service teachers' answers in the post test (4.0003) is higher than it is in the pre test. In this study, inquiry skills are analized in three sub categories that are getting information, checking data and self-esteem. Prospective teachers' opinions on these subjects are as follows:

> "I am normally a quiet person. I'm not one who participated in a course. In the physics lab, I was the spokesman and made the conversations, so I've noticed that I've done and turned to. My self-confidence has increased." (self-esteem, student 28)

> "Throughout this course, I destroyed my prejudice against physics completely. I started to learn and love physics. Now I believe I'm going to be a better teacher." (Self-esteem, student 50)

> "We investigated the concepts and then, discussed in the groups. In discussions, I was able to say my ideas freely without being bored. At the end of the each lesson, the teacher helped us to see our shortcomings about the subject to understand it. It was very useful. I found opportunity to learn about myself in this course. I learned how to talk in the community, to explain ideas to other people and experiments were very useful when learning something." (Checking data, self-esteem, student 47)

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> "When we came to the classroom, we had some information about the course. Some were right, some were wrong. We learned new ideas from experiments, books and computers by ourselves in this course. Then our teacher went over the details of the subject. We had been provided to make brainstorming about different ideas by working together in our group and other groups. After investigation, we came together with other friends who were in different groups and discussed our opinions about the subject. It was nice to complete our incomplete opinions." (Getting information and checking data, student 49)

CONCLUSIONS

Active learning has been one of the most popular areas of research in recent years. The number of studies conducted on active learning is increasing day by day (Ün Açıkgöz, 2011). In this study, learning environment has been designed by using full studio approach which is known to be one of the active learning approaches. The reason for selecting full studio approach is that it covers course process as a whole compared to other active learning approaches and it is applicable to large classes. Learning process has been enriched with group works and active learning techniques which are aimed at developing inquiry skills in a learning environment that is prepared in accordance with full studio approach.

Several conducted studies showed that active learning techniques increased students' physics achievement, became more effective during the learning of physics concepts and caused students to be more active in classroom activities compared to traditional teaching (Gibson & Chase, 2002; Kalem & Fer, 2003). When students' responses given to the conceptual understanding test were examined it was found that the number of correct responses to the questions increased in the post test.

Active learning is a process in which a learner is responsible for his/her own learning and finds an opportunity to make a decision and observes the outcome of that decision. Curiosity, suspicion, learning by doing, investigation and practice substitute the concept of memorization in active learning (Bonwell & Eison, 1991). Learning environment is not restricted to a class. Inquiry-based learning and group works are the most important characteristics of the active learning (Bell, Uhrarne, Schanze & Ploetzner, 2013). When pre and post test scores of inquiry skills scale were compared it was found that full studio class was successful in improving pre-service teachers' inquiry skills. Also, interview data supported the findings obtained from conceptual understanding test in terms of the quality in students' responses.

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EFFECTS OF KNOWLEDGE ON EMPLOYMENT[1]

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ABSTRACT
The purpose of the study is to center on to what extent the apparatuses of knowledge age has left an impact on the employment which can be defined as "the usage of labour as a sort of input in the process of production". The Industrial Revolution was the sign of transformation from the manual oriented economy to the machine oriented ones also shifted the requirements of the human resource capital. After the Industrial Revolution, knowledge economics began to improve especially in the West World along with technological developments. In this context, the new terms about the work entered to the literature such as the time, wage, trade unions, working conditions, factories and so forth. This event called as industrialization as different from the period of agriculture isolated the work and family life from one another. During this process, the economic, sociological, and the political procedures resulted in the development as well as the importance of the knowledge and the knowledge economy. Today, the knowledge which is the particular indicator of knowing something and know-how is associated with the welfare and the power. With this framework, the main aim of the study is to analyze the changing perspectives of the knowledge economics on employment and the employees by referencing to the information centered society.

Key Words: Knowledge Economy, Knowledge Management, Talent Management, Knowledge, Knowledge Worker

INTRODUCTION

It is known that there has been an ongoing change all over the course of the history in every fields of the society, that is to say, politically, economically, scientifically and so forth. From this perspective, it can be argued that the change is the main dynamism of the world. Each member of the world is to renew themselves based upon this changed criteria perpetually. Concerning the developmental process of humankind, that is also the case. For example, the industrial revolution which is the root of the economic growth in the Western countries on technology and which results from the usage of useful knowledge and the interaction of the knowledge itself can be interpreted as the turning point in the life cycle of the humans. The reason is that the industrial revolution which was a kind of transition from hand made products to the industrial manufacture provided the productivity growth and the relative quality in the life (Mokry, 2003: 27, 28).

Over the last 200 years, almost every country accelerated its productivity via industrial standards. As an example, the countries that take advantage of scale economies through industrialized idea converted the sort of production of the manufactures were the ones that became rich; in the eighteenth century Britain as well as Korea and Japan in the twentieth century (Murphy, Shleifer & Vishny, 1989: 1003). No one denies the fact that industrialization has brought growth, but it is actually a big question mark concerning whether it has centered the 'quality" on the axis of life itself or not due to the fact that the developments occurred in the aftermath of this process were also regarded that the boom of industrialization unfortunately caused "poverty" particularly in terms of employees. In more explicit terms, it can be stated that industry, in other words industrialization has made capital the 'capital' of everything, but on the other hand labour has been doomed to "slavery" while the countries that did not succeed industrialization became poor as well (Murphy, Shleifer & Vishny, 1989: 1003; Yüksel, 2014a: 125-130).

Along with the development of industry, new terms such as factory, wage, trade unions, social policy implementations entered to the life and the life of one's own was isolated from the working place. The working hours occurred and the freedom of employees was submitted to the initiative of the employers in spite of the fact that the means of production did not belong to the employees which bring about the alienation to the work, to the employers and to the product that they manufactured. The gap between employees and the employers resulted in

[1] *This study is the extended and the revised form of paper named "The Knowledge as the Main Determinant on the Employment and the Employees' Profile" and introduced by us, in the symposium organized by Burch University in Bosnia Herzegova in 2013.*

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the clash, so to say, the clash of power on the manufacturing system. At the same time, the capitalism which can be taken into account as the social system in which "the means for producing and distributing goods (the land, factories, technology, transport system etc) are owned by a small minority of people." To put in another way, the capitalists are those who possess the capital. And the majority of the people who work for them are called the workers who sell their ability to work in return for a salary or wage. That's why, the ultimate effect of industrial revolution is the occurrence of the class of employees and the employers. But, the profile of the employees are too low, they are not so talented and they just serve for the capitalist idea which is profit driven. And the jobs are quite regular as well as monotonous, so there is no need for employees to utilize their mental capability, and the wages are too low for them to support their own lives (http://www.worldsocialism.org/spgb/what-capitalism Retrieved 15.04.2013).

The standard type of employees and the routine oriented occupations changed radically by means of knowledge age which lays a great emphasis on the production and the usage of the knowledge. In this age, the knowledge is synonymous with the power. Those who produce knowledge and those who use it have the power all over the world. In this term, the employment and the worker profile radically changed on account of the fact that the requirements of the employment and the worker altered too. Therefore, in this study, the ultimate objective is to focus on the significance of the knowledge economy on employment itself.

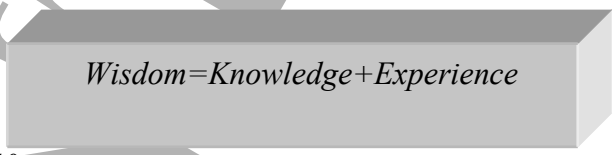
1.Theoretical Framework

1.1.Knowledge

Nonaka (1994: 14-38) notes that individuals and not organizations produce knowledge. That's why, "organizational knowledge production should be understood in terms of a process that 'organizationally' amplifies the knowledge created by individuals" (p. 17). He goes on to posit that "in the business organization, the field for (individual) interaction is often provided in the form of an autonomous, self-organizing 'team' made up of several members coming from a variety of functional areas" (p. 23). He further argues that "teams play a central role in the process of organizational knowledge creation" (p. 32). What this points to is the critical role that individual employees play in the process, especially when utilized in teams whose purpose is to expand the organization's knowledge base. Unfortunately, most of the books and articles on KM ignore the fact that the employees are the ones that make or break such initiatives. It is easier to focus at the system level when considering how to manage organizational knowledge, but success is determined "in the trenches." If the individuals directly involved in the enactment of knowledge creation and dissemination do not find such activities to be useful or do not see them as having positive effects, then these efforts tend to fail.

Knowledge that is regarded as the asset of the upcoming future is "understanding of or information about a subject that you get by experience or study, either known by one person or by people generally" or "the state of knowing about or being familiar with something" (Cambridge University Dictionary, http://dictionary.cambridge.org/dictionary/british/knowledge?q=knowledge Retrieved 15.04.2013). What about information, wisdom, data and the other terms? What are the differences of these terms with knowledge? Are they the same or similar? The equation among these terms can be revealed in the following formula (Botha, 2007: 10):

Figure 1: The Equation of Knowledge



Source: Botha, 2007, p. 10.

As seen in figure one, knowledge, along with the experience, equates the wisdom. In regards to hierarchy, wisdom ranks higher than knowledge which was followed by information and data. The knowledge can be put in order in this way:

- Data includes raw and fresh facts.
- Information is the facts given in a particular context.
- Knowledge is the information that targets action.
- Wisdom is to determine which knowledge can be used in which context and for what purpose. So, wisdom is the highest level of ranking.

So as to make these terms more concrete, a new example can be given. For instance, if someone says "30", this does not mean anything. It could be height, kilometer, kilogramme or something like that. So here the number 30 is the raw material. But, if someone says 30 Centigrade, everyone will understand that it is about temperature. This is the information which is used in contexts. Additionally, if someone says that 30 is the age when a person

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is productive most, this is called as knowledge. So, in a way knowledge is type of information that is accepted generally by everyone. Wisdom as the upper degree of knowledge is common feeling which is also tested with the experiences as well (Botha, 2007: 10). In a way, knowledge is something like a term that is neither data nor information but it is actually related to both. Maybe, knowledge "*is plural, heterogeneous phenomenon that comprises multiple rationalities, whose logics are not defined by a transcendental norm but relate to the pragmatics of contexts*." (Awad & Ghaziri, 2008: 56). There are some very particular developments that play a key role in the development of the knowledge as in the following (Cortoda, 1999):

a) The economic globalization that necessitate the firms adapt themselves to the innovation and the scientific improvement.
b) The increasing awareness concerning the value of specialized knowledge.
c) The increasing awareness on the knowledge as a distinct factor for production.
d) Computer networking.

As seen in the items, the knowledge taken into account as the value in 21th century does not occur all of a sudden. However, there are some turning points that contribute to the emergence of the knowledge such as industrial revolution, globalization and computer networking. All these things pave the way that the knowledge is the ultimate result concerning these development oriented issues.

1.2.Employment

Employment which is crucial for the lives of humans and for the sustainability of economies and the governments is a tool of social policy and economy. It is not a unique term that focuses on the production or the process of production, yet it is closely related to the earnings of humans to support their own lives, families, children and so forth. Therefore, employment means "wage", "statute", "prestige", and "a drive for motivation to work" for employed, but more than that employment signifies the continuation of stability, work peace, and the permanence of government for each countries. Most probably, the countries where the big protests and demonstrations take place are those that possess the problem of unemployment.

Employment derives from the word "employ" which is "having someone work or doing a job for someone and paying them for it." As for employment, it is the case that occurs "when someone is paid to work for a company or organization" (Cambridge Advanced Learners Dictionary, 2005: 408). According to Oxford Dictionary, it has four meanings: work, especially when it is done to earn money; the state of being employed (i); the situation in which people have work (ii); the act of employing somebody (iii); the use of something (iv) (Oxford Advanced Learners' Dictionary of Current English, 2010: 498). As in the following table, other than the word meaning, the definition of employment varies:

Table 1. Different Definitions of Employment in the Literature

Definition	Source
"refers to work under contractual arrangements involving material rewards."	(Jahoda, 1982: 8)
"is the source of income, it is also the basis of social standing and self esteem".	(Deacon, 2008: 311)
"the usage of labour in the production in a productive way, and in return for this value, the amount given to labour."	(Işığıçok, 2014: 30)
"Most treatises on the theory of value and production are primarily concerned with the distribution of a given volume of employed resources between different uses and with the conditions, which assuming the employment of this quantity of resources, determine their relative rewards and relative values of their products."	(Keynes, 2008: 4)
[…] is the practice that "were pioneered at the collective bargaining table, such as binding arbitration of contract disputes, cost of living allowance clauses, multiyear contracts, and supplemental unemployment benefits."	(Kaufmann, 1997: 3)
employment is synonymous with labour.	(Cihon & Castagnera, 2011: 1)

Source: (Jahoda, 1982: 8; Deacon, 2008: 311; Işığıçok, 2014: 30; Keynes, 2008: 4; Kaufmann, 1997: 3; Cihon & Castagnera, 2011: 1).

2.Age of Knowledge and Its Reflections on the Society

Rather than the theoretical basis of the knowledge, it is a kind of name that is associated with a particular period. Especially after the neoliberal policies in the world following the crisis of 1970, the world started to debate about the knowledge and its importance. The industry and all aspects of live started to be associated with the knowledge. The paradigms of the industrial revolution changed. Instead of physical inputs, the intellectual capabilities of the humans come to the fore (Powell & Snellman, 2004: 199; Kevük, 2006: 320-322). The knowledge is regarded as a sort of "unique attribute" and it is dealt with by humans through mental processes, awareness as well as intuition and can solely be transferred through learning activity (Amidon, 1997: 5).

Here, this age is named after information age, knowledge age, information society and ext. The developmental process is a little bit relative. Without any hesitation, the unique feature of this society is that these societies are driven by the creativities. It is an advantage for the economy but some people like Schumpeter argue that this is a period of "creative destruction." Yeah, it causes continuous economic growth and richness for the general society and it includes the public good but its identity of "profit" disorders the social norms and social orders (Hargreaves, 2003: 1). The availability of the knowledge in the internet erodes some of the professions and also the subject centered knowledge (Williams, 2007: 512).

The remains of the knowledge society dates back even before the industrial revolution. To put in an explicit term, it can be argued that the knowledge society is not the first experience of the humankinds in the nineteenth century. As an example, the Renaissance which can be interpreted as the rebirth of the Europe is well known for the scientific improvements in the Middle Ages. There were technological and communicative progresses that left a great impact on the society with the mass printing technologies that superseded the hand written manuscripts. In the period of Renaissance, the books are started to be published and they became more accessible. As in Renaissance, the knowledge society that is the upper advance stage of the knowledge production and the usage, electronic communications, software service providers, the internet, the mobile phones symbolize the extended form of the information. In each situation, the possession of the knowledge is viewed as the social and economic resource, in a way, commercial item. Both in the period of Renaissance and modern age, the knowledge has been practical if it is put into practice along with its theoretical side. All these things pave the way that there is not a single knowledge society but a few which changed the vision of the nations and broadened their perspectives (Adelstein, 2011: 9).

Table 2: The Comparison of the Knowledge Societies

Knowledge Society	Discursive Objects	Renaissance
Information technologies	The shift of communication	Script to printing
Computers	Technology	The development of the printing press
Electronic telecommunication systems	The spread of knowledge	Book publishers and the book sellers
Knowledge as a social and economic resource	Resource	Publishing as a social and political source
Knowledge as an accessible concept	Accessibility	Greater access to the written materials
Application of the knowledge as well as its practice	Not just theory but also practice	The theories are made a knowledge framework
New forms of organization that emphasizes knowledge frameworks	Advance	The progress in the translation
Electronic databases	The storage of the information	Printed books
Information society	Informing and to be informed	The transition to medieval to early modern
From elementary education to higher education	Educational shift	From oral to literature society
Global institutions, governments, and corporations	Institutional control	Church and the state
Knowledge society contributes to the development of the globalization.	Political effectiveness	The nation states and nationalism

Source: (Adelstein, 2011: 10; Arthur & Rousseau, 1996).

The age of knowledge brings communication technologies and the computer as the main directors of the labour and labour relations. Unlike from the agricultural and industrial revolution, the age of knowledge can be defined as the knowledge revolution as it causes radical changes in all the spheres of life. Especially those countries that adapt themselves to the knowledge based orientations get a competitive advantage over the other countries. Also, in this age, the knowledge means the power and the power means running and controlling the world (Law, 2000: 324).

The production and the use of the knowledge which adds plus value to the productivity and innovation (Peri, 2005: 308) are the indispensable parts of the knowledge age. All the paradigms of the society are shaped within the knowledge identity and learning such as lifelong learning that constitutes the core of the society and that paves the way for the development of the society as well. Here it can be discussed that it is impossible to isolate the knowledge age from the ongoing learning process. The learning is not teacher centered but in the stark contrast the learning is student centered. And also the learning as different from the classic idea is not just confined to the school and there are lots of sources to learn information. However, the function of the schools is to make the students teach how to learn (Hargreaves, 2003: 1, 3; Balay, 2004: 69).

In the age of knowledge, the production of the knowledge as well as using it has been paramount importance as the knowledge is taken into account as the power itself. The internet, the telecommunication systems, the computer are the prominent devices utilized for the production of the knowledge which pave the way that humans come closer and the world is smaller. This also fosters the globalization itself.
The information age in which organizational effectiveness gained momentum with the various management styles such as Total Quality Management (TQM), Strategic Human Resources Management (SHRM), Talent Management (TM) supported the competitiveness and also operational learning for the businesses (Mukherjee, Lapre & Wassenhove, 1998: 35). The old paradigms, the old management styles, and the traditional company concepts doom to change with this new trend as shown in the following table (Christensen, 2003: 10).

Table 3: The Difference Between Traditional Company and Knowledge Driven Company

Traditional Company	The Knowledge Driven Company
Procedures	Challenges
Centralized Management, Hierarchy	Self Management, Flexibility
External Allocation of Work	Ones of allocation of work
Resistance to the change	Ongoing change
Closed to the world	Open to the world
Supervision	Self supervision

Source: (Christensen, 2003: 10).

As seen in Table 3, with the knowledge oriented concept, the businesses commenced to alter their strategies, and they reshaped their ideas concerning the knowledge itself. The new age made the companies bend the rules and they put the flexibility into the center. The companies in this age are open to change and open to the world. So, they used these kinds of motives and methods to capture the attention of the knowledge workers and to adapt these new era as illustrated in Table 4 (Christensen, 2003: 17).

Table 4: The Motives and the Methods That the Knowledge Companies To Use

Motives	Methods
Adapting a management style that is quite modern for the knowledge workers.	Informing the public concerning the engagement of the company in the knowledge management.
Searching new knowledge.	Allowing the staff to produce new knowledge and making them to be productive.
Learning from the experience of the company.	Spending so much time on the projects that the company developed well in advance.
Improving the knowledge of the staff concerning the company.	Establishing a network that provides to the each staff what they are doing about the company.
Guaranteeing the independence of the staff	Documenting the knowledge of the employees which will decrease the vulnerability effect of the company when the staff leaves from the work.
Finding a way to retain the staff as they possess invaluable knowledge.	Offering better opportunities to the staff which will motivate them.
Encouraging the staff to improve knowledge sharing.	Developing the dialogue among the staff to share their knowledge on the staff.

Source: (Christensen, 2003: 17).

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The companies in the age of knowledge are to use some motives and methods to increase the dynamism of them. For example, they should adapt flexible management, they should find a way to search for new knowledge, they should get lessons from their past experiences, they should give utmost importance to free mobility of the employees, they should learn to retain the staff and so forth. These new organizational ways of the knowledge companies are to be competitive and it is to strengthen the organizational culture of them which is the sinequanon of the information age. In this context, considering that the information age is effective in all parts of society, the reflections of the knowledge on the society as a whole not just on the businesses can be summarized in the following items.

- The improvement of the knowledge in the society can be regarded as a kind of revolution as it ends with radical transformations.
- In the age of knowledge, the society is started to be shaped concerning information production and its usage.
- The fundamental paradigms of the industrial society were left and the codes of the community were reshaped within the idea of innovation.
- The knowledge means economic, politic and cultural power all over the world.
- The classical management styles also changed as in personnel management. Instead of all these, new and modern ones were replaced like human resource management, strategic human resource management, talent management and so on.
- The hierarchical mechanisms of the working environment were left and flexibility was put into practice. At the same time, flexible working such as tele-work, part time work, homework entered to the working.
- The devices of the knowledge society such as internet and telecommunication accelerated the process of globalization.
- New concepts in the education like lifelong learning, distance learning occurred. So, the learning process went beyond the school environment and a particular age period owing to the fact that the information becomes old and obsolete in a short period of time, and it is to be updated. All these arguments pave the way that the learning turns into a paradigm which something like from “cradle to grave”.
- The profiles of the employees changed as well. This means that the requirements of the workers are needed to be updated within the context of the knowledge age. Otherwise, the companies do not increase their competitive advantage as the human resource is their assets.
- The e-mail, google, facebook, messenger as the products of the social media are the other outputs of the information age. Through these equipments, the world come closer and the people get in touch with one another easily.
- The modern education techniques like computer assisted learning and also the technological devices like smart boards, overhead projectors, computer labs altered the vision of the education.

3.Knowledge Management

The internal infrastructure of the companies and the increasing complexity of the environment make them invest in innovation and the scarcity of the resources brings the knowledge to the fore as the success of the businesses. From this perspective, it can be mentioned that knowledge is taken into account as the crucial factor that surpasses the other production factors such as labor, capital, land, and so forth. Here, knowledge management occurred “as a label for consciously perceiving and addressing the issues raised by the importance and availability of knowledge.” Knowledge management can be addressed as a sort of management that manages the knowledge as the source. It is also concerned with managing the knowledge related concepts such as knowledge workers on the basis of creating and maintaining plus value concerning knowledge. Knowledge management as its perspective is so wide, it includes business studies, sociology, psychology, educational science, computer science, cognitive science, and so forth (Rollett, 2003: 6).

Knowledge management in other words is a new, interdisciplinary concept that puts the knowledge on the center of the organizational processes. Knowledge as it provides the ultimate competitive advantage for the firms; it involves different factors like technology, people, organizational processes, and knowledge (Awad & Ghaziri, 2008: 26, 27).

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Figure 1. The Sinequanons of Knowledge Management



Source: (Awad & Ghaziri, 2008: 26, 27).

Figure 1 reveals that knowledge management is the main framework of the management in the organizations rooted in the production of the knowledge including knowledge, people as human resource, technology and organizational processes. According to the knowledge management, the organizations use accessible knowledge from outside resources, stores knowledge in business products, represents the knowledge in various databases as well as documents, promotes the knowledge improvement by means of organizational culture and the other incentives, transfers and shares the knowledge among the different parts of the organizations and assess the value of the knowledge (Awad & Ghaziri, 2008: 27).

3.1.Talent Management within the Context of Knowledge Management

Talent, the definition of which has been exposed to shift etymologically for thousands of years is used to refer to the "ability" of someone (Tansley, 2011: 266, 267). As for talent management, it is a new term in the literature of human resources management (HRM) and is too arduous to define (Hughes & Rog, 2008: 743). Actually, it is the upper stage that HRM has reached in related to the knowledge driven society and worker. As comprehended from the word itself, talent management centers upon the talent of the workers. As the sets of the activities and the processes, talent management can be defined as the system based identification of the strategic positions in the organizations which considerably contribute to the organizations' competitive advantage, the emergence of a talent pool of sophisticated leaders to carry out their roles for the assurance of their commitments to the organization itself (Colligs & Mellahi, 2009: 304; Yüksel, 2014b: 282). From here, it can be understood that talent management is a strategic initiative in the organizations concerning the modification of the employees in their best positions that enhance the competitive advantage of the businesses and that render the employees productive. For safe and secure settlement of motivational apparatuses (Miner, 1977: 412), concerning human resource, talent management is a systematic approach that includes the processes of recruitment, leading, specific decision making, which are in line with the human resources procedures and the ideologies of entrepreneurship (Lewis & Heckman, 2006: 140). In the literature, some rules are identified with the implementation of talent management ideologies in the businesses (Khadri et al., 2010: 39, 40; Yüksel, 2014b: 283).

Rule 1: Make an Investment to the Optimization of the Results: The talent management practices are goal oriented via the optimal usage of human resource in the positions that are in coordination with their abilities.

Rule 2: Measurement of Business Impact is Desirable: The results that play a crucial role for the successes of the organizations are the sorts of parameters that measure the outcomes in the businesses.

Rule 3: Use Statistics for Driving Talent Decisions: In the organizations, the statistics are the ways that give an idea of their performance as well as the management of the organizational culture.

Rule 4: Render the staff According to the Ongoing Changes: The perpetual changes in the organizations are the inevitable parts of business cycle. As an example, the fluctuations in the economy, so to say, the economic crisis or some problems in the organizations make the staff be ready for the rapid changes.

Rule 5: Adapt Performance Management Strategies Instead of Goal Oriented Idea: Rather than the objectives, effective performance management strategies shape the organizations in a positive way concerning the use of talent.

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As in knowledge management, talent management practice also affects the version of employment procedures on account of the fact they cannot be isolated from the ultimate parameters of information age like (Wellings, Smith & Erker, http://www.ddiworld.com/DDIWorld/media/whitepapers/ninebestpracticetalentmanagement_wp_ddi.pdf Retrieved 07. 01. 2013; Gia, 2008: 7; Yüksel, 2014b: 284, 285);

- ✓ "The determination of the current and future strategies of the organizations.
- ✓ Definition of the talent practices that will bring the organizations to the success.
- ✓ The effective implementations of the talent management in compatible with the strategic objectives of the organizations.
- ✓ Using the correct strategies in the recruitment.
- ✓ Overlapping individual and the organizational objectives, defining the expectations and including the feedback processes.
- ✓ Application of the talent management practices further in every time for the increase of the business performance.
- ✓ Utilizing all the strategies not only for talent management practices but also for the effective use of talent management practices.
- ✓ Assessing the efficiency of the labour force for keeping them updated as always."

4.Knowledge Economy

Knowledge economy which will be "complemented by a set of organizational mechanisms that encourage and promote the sharing/reuse of organizational knowledge" (Kulkarni, Ravindran & Freeze, 2007: 311) can be defined as a term that plays a key role in the production as well as the services based knowledge intensive activities that contribute to the technological scientific progress besides the quick obsolescence. This means that in the knowledge based economy, the primary thing to be taken into account is the knowledge itself and it is to be updated perpetually. Additionally the key component of the knowledge economy is the dependence on the mental in other words intellectual capabilities of a particular person rather than the physical strength or the natural resources. The main arguments mentioned here are the results of the leading sides of the economy especially in the developed countries which is actually driven by the technology and technological devices centered on the knowledge production and spread (Powell & Snellman, 2004: 199).

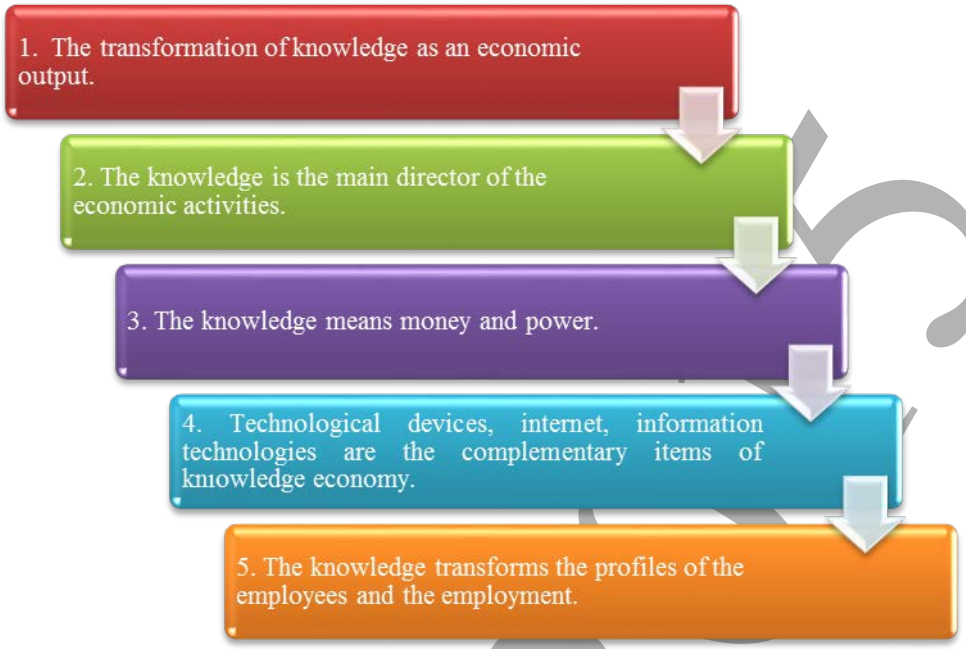
The concept of knowledge economy is the direct results in the development of the new technologies which starter to emerge in the late 1950s and gained momentum with the advance in the personal computers and then systematically become so widespread through the use of email and the internet technology (Powell & Snellman, 2004: 199). All these things make the knowledge as the main important factor in the development of the economy as a result of the high technology investments and high technology industries (OECD, 1996: 7).

The usage of the knowledge economy dates back to the OECD report from 1996 and also the Lisbon strategy in the European Union from 2000 in spite of the fact that the debates about the central role of the concept for productivity and the competitiveness commenced so earlier. The knowledge economy entails the production of the knowledge as a sort of must for the countries along with the innovation. These requirements also necessitate the transformation of the employment policies as well as the employees' profiles (Westeren, 2012: 1, 6).

The emergence of the knowledge economy is the indicator of the human development. It ruins the particular parameters of the agricultural and industrial period. For example, in the agricultural economy, the key source is the land while in industrial economy, natural resources like coal or iron ore as well as the labour are of great significance. On the other hand, in the knowledge economy the key resource is the knowledge which plays an important role in the development of the economy which is not a new idea actually. At the same time, it is to be demonstrated that knowledge is not a peculiar concept to the knowledge economy or knowledge age, contrarily; it has been used since the period of Industrial Revolution. However, the intensity of the knowledge and its main significance increased in the age of knowledge and it becomes the main dynamics of the economy as well which means that there is a rise in the knowledge intensity of the economic activities and the concept of globalization process (Houghton & Sheehan, 2000: 1, 2).

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Figure 2. The Dynamics of Knowledge Economy



Source: (Houghton & Sheehan, 2000: 1, 2).

5.The New Worker Profile: Knowledge Worker

The importance of the knowledge also has a deep impact on the worker and employment profiles. Knowledge worker is the output of the knowledge society who emphasizes the significance of the knowledge. The progress in the knowledge didn't just transform the society, education but also it affected the worker profile and the employment policies. The knowledge skills are quite different from the industry or agriculture skills which can be assessed that the employment tactics of the twentieth century are not the case for the organizational innovation in the age of information. As in the management skills of the organizations, the requirements of the workers strikingly changed. As an example, the basic skills like reading, writing become so irrelevant and inadequate when we enter the twenty first century as the main parameters to be focused in this period is the continual learning oriented knowledge production. Even the skills like computer programming, system analysis and system design have to be redefined again by taking into account the critical in the society (Amar, 2002: 10).

The knowledge workers are quite distinctive from the other workers in regards to their task structures and skill requirements that bring them creative use, manipulation, and the extension of the knowledge. Moreover, The requirements of the knowledge workers are those: continuous job learning, partly formal education, the capability to use modern technology, information and the communication technologies. The knowledge workers also do not work alone they work in teams. Based upon all these, the knowledge workers can be defined as the groups of workers or wage earners whose job meet these criteria: "(1) the use of information technology; (2) independent design of important aspects of the job; and (3) at least upper intermediate vocational training (a college degree) (Pyöria, Melin & Blom, 2005: 14). The differences between knowledge workers and the workers in the industrial revolution are stated below.

- The knowledge workers rely upon their intellectual capabilities while the industrial workers depend on their physical strengths.
- The knowledge worker focuses on innovation but the industrial workers centers on production.
- The knowledge workers are goal oriented. The industrial workers are wage oriented.
- The knowledge workers' objective is the production of the knowledge. However, the industrial workers aim at the production of the commodities.
- There is no time and space limitation for the knowledge workers, but that is not the case for industrial workers on account of the fact that their works are carried out in a limited area, that is, the factory.
- The knowledge workers are educated and skilled but this is not the point for the industrial workers. For example in the early years of the industrialization, the workers are low skilled.

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- The instruments of the knowledge workers to produce the knowledge are strikingly different from the industrial workers. Knowledge workers use computers, information technologies whereas the industrial workers utilize the machines in the factory.
- The knowledge workers have the bargaining power as they cannot be replaced easily, but this is not so in industrial workers.
- The knowledge workers view the work as a time demanding activity while the industrial workers regard it as a type of time consuming activity. This means that their perception of the work is quite different.
- The added value of the product of knowledge workers are higher than the others because the knowledge that can be used in the real life is something like the money itself.

CONCLUDING REMARKS

The change is the main paradigms in all societies. Throughout history, there are various events that cause radical transformations in the society like renaissance, industrial revolution, French revolution, knowledge revolution and so on. Particularly from the perspective of industrial relations and labour economics, it can be stated that the knowledge economy shifted the employment procedures as well as the employees' profile. In a way;

- Knowledge revolution increased the standards of the employees.
- An increase in the ability of employees also brought about an increase in the standards of human resource applications, so the talent management practices are to be discussed.
- The employment policies changed as the information become so obsolete in a short period of time. Thus, the employees are to update their talents depending upon the employment conditions. Perhaps, life-long learning activities which adopt the principle of education "from cradle to grave" can be a possible solution.
- The employee characteristics changed as they turn into the workers who produce knowledge and the knowledge is regarded as added value for the economy.
- The knowledge also means money and the power despite some arguments.

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ÇEVRE SORUNLARINI VE EYLEMLERİNİ ARAŞTIRMA VE DEĞERLENDİRME MODELİNİN (IEEIA) 7. SINIF ÖĞRENCİLERİNİN ÇEVRE KONUSUNDA KAVRAM ÖĞRENMELERİNE VE KAVRAMSAL GELİŞİMLERİNE ETKİSİ[1]

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ÖZET

İnsan ve çevre birbirleriyle sürekli etkileşim halindedir. Çevrenin doğal ya da insani müdahalelerle değişmesi o bölgede bulunan tüm canlı faaliyetlerini etkilemektedir. Dolayısıyla çevre sorunlarının ortaya çıkmasında büyük bir etkisi olan insanoğlunun çevre bilincine ulaşabilmesi çevrenin tüm ögelerini kavramasıyla mümkün olacaktır. Bu ise anlamlı öğrenmeyi sağlayacak öğrenciyi bilgi hamallığından kurtaran, aktif hale getiren ve öğrencinin bilişsel becerilerini geliştiren öğretim yaklaşımlarının kullanılmasını gerekli hale getirmektedir. Bu çalışmada Ortaokul 7. Sınıf öğrencilerinin "Çevre ve İnsan" Ünitesindeki kavramları öğrenmeleri ve kavramsal gelişimleri üzerine "çevre sorunlarını ve eylemlerini araştırma ve değerlendirme modelinin (IEEIA)" etkisini incelemek amaçlanmıştır. Bu amaç doğrultusunda araştırmanın problem cümlesi "IEEIA modelinin ortaokul 7. Sınıf öğrencilerinin kavram öğrenmelerine ve kavramsal gelişimlerine etkisi var mıdır?" olarak belirlenmiştir. Çalışmada öntest-sontest kontrol gruplu deneysel desen kullanılmıştır. Çalışma grubu deney ve kontrol gruplarında 23'er kişi olmak üzere 7. Sınıfta öğrenim gören toplam 46 öğrenciden oluşmaktadır. Deney grubunda uygulama IEEIA modeline göre hazırlanan etkinliklerle yapılırken, kontrol grubunda ise müfredatta mevcut eğitim öğretim faaliyetleri ile öğretim sürdürülmüştür. Her iki gruba da uygulama öncesinde ve sonrasında kavramsal öğrenmeyi değerlendirmek için Çevre ve İnsan Ünitesi'nde bulunan kazanımlar dikkate alınarak hazırlanan 21 açık uçlu soru; kavramsal gelişimlerini değerlendirmek için ise çevre konusunda küçük bir hikâye şeklinde hazırlanan bir metin uygulanmıştır. Açık uçlu soruların değerlendirilmesinde Abraham ve diğerlerinin (1992) kavrama düzeyi gruplandırması kullanılmıştır. Elde edilen bulgular grafiklendirilerek yorumlanmıştır. Kavramsal gelişim metnine verilen cevaplar ise metnin içinde bulunan çevre sorunlarıyla ilgili öğrencilerin bulduğu kavramlar ve bu kavramların doğru, eksik veya yanlış tanımlanmalarına göre puanlandırılarak tablolar halinde sunulmuştur. Çalışma sonucunda; deney ve kontrol grubunun açık uçlu sorulara verdikleri cevaplar incelendiğinde, deney grubu öğrencilerinin kavram öğrenmedeki başarısının kontrol grubuna göre daha fazla olduğu, daha az kavram yanılgısı yaptıkları bulunmuştur. Benzer şekilde deney grubundaki öğrencilerin çevre konusundaki kavram gelişimlerinin kontrol grubundan daha fazla olduğu tespit edilmiştir. Dört hafta süren bu uygulamayla öğrencilerin kendilerini 'İnsan ve Çevre' ünitesindeki çevresel sorun ve eylemlerin bir parçası olarak gördükleri, bu sebeple uygulama boyunca merak ve ilgi isteklerinin arttıkları gözlemlenmiştir. Bu çalışmanın çıktıları da göz önünde bulundurulduğunda IEEIA modelinin çevre konularında uygulanması önerilmektedir.

Anahtar Kelimeler: Fen eğitimi, Çevre Sorunlarını ve Eylemlerini Araştırma ve Değerlendirme Modeli, Kavramsal Anlama

[1] Bu bildiri 'Çevre Sorunlarını ve Eylemlerini Araştırma ve Değerlendirme Modelinin 7. Sınıf Öğrencilerinin Çevre Okuryazarlığına Etkisi' başlıklı yüksek lisans tezinin bir parçasında oluşturulmuştur.

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ABSTRACT
A continuous interaction exists between humans and environment. Changes in environment arising from by natural or human interventions influence activities of all living beings in the affected area. Humankind, which plays a significant part of in the occurrence of environmental problems, will need to understand all the elements of its environment in order to reach a true environmental consciousness. And this requires the adoption of those educational approaches which will enable a meaningful learning, save students from an overload of information, activate them and improve their cognitive skills. This study aimed to analyze the effects of the model of "investigating and evaluating environmental issues and actions" (IEEIA) on Secondary School 7th grade students' learning of the concepts in the course unit of "Environment and Humans" and on their conceptual development. For this purpose, the problem statement selected for the study was "Does the IEEIA model have any effect on 7th grade students' learning of concepts and on their conceptual development?" The pretest-posttest control-group design was utilized in the study. The study group consisted of 46 7th grade students including 23 each in the experimental and control groups. The application in the experimental group was performed by activities that were prepared according to the IEEIA model while ordinary curricular education was proceeded with in the control group. Before and after the application, both of the groups were administered 21 open-ended questions that were prepared based on the gains contained in the course unit of Environment and Humans in order to assess conceptual learning and a short written story on environment was utilized in order to assess their conceptual development. The comprehension level grouping of Abraham et al. (1992) was used to assess open-ended questions. The data obtained was graphed for evaluation. The answers given to the conceptual development text, on the other hand, were scored before tabularization based on correct, deficient or incorrect answers of the students regarding the concepts contained by the text. In the end of the study, when the answers given by the experimental and control groups to the open-ended questions were analyzed, the success of the experimental group students in learning concepts was found to be higher and that they made less conceptual errors when compared with the control group students.It was determined, similarly, that the conceptual development of the experimental group regarding environment was higher than that of the control group. It was observed based on this application that lasted for 4 weeks that students considered themselves as a part of the environmental problems and activities discussed in the "Human and Environment" unit, and that, therefore, their curiosity, interest and enthusiasm increased during the application. Taking the results of this study into consideration, we suggest that the IEEIA model should be applied to the environmental issues.

Keywords: Science Education, Investigating and Evaluating Environmental Issues and Actions, Conceptual Development

1.GİRİŞ

Fen günlük hayatımızın bir parçası olduğundan, bütün insanlar hayatımızı yöneten fenin temel prensiplerini öğrenmek istemektedirler. Özellikle 6-14 yaş, en meraklı, en araştırmacı olunan yaşlardır.Bu yaşlarda en çok merak edilip, soru sorulan konular fen konularıdır (Gürdal, 1992). İlköğretimde fen ve teknoloji dersi diğer derslere oranla daha fazla kavram içerdiğinden bu ders için kavram öğretimi çok önemlidir. Kavramlar bilgiyi tanımlama, açıklama, zihinde sınıflandırma ve bilginin düzenlenmesini sağlayan yapıtaşlarıdır (Koray ve Bal, 2002). Kavram öğretimi tam olarak gerçekleştirilmeden üst düzey öğrenimlerin gerçekleştirilmesi daha zor olacaktır.

Yapılan araştırmalarda öğrencilerin fen ve teknoloji dersinde öğrendikleri kavramları eksik ya da yanlış anladıkları, edindikleri bilgilerin kalıcı olmayıp sadece gerekli olduğu zamanlarda örneğin sınav zamanları gibi durumlarda ezberleyip daha sonra unuttukları, bu bilgileri günlük hayatta etkili bir şekilde kullanamadıkları gözlenmiştir (MEB, 2006). Maalesef birçok öğretim yöntemi öğrencilerde kavram yanılgılarının oluşmasına engel olamamaktadır. Öğrencilerin öğrenim yaşantılarının daha ilk yıllarından itibaren kavram yanılgılarına, yanlış anlamalara sebebiyet vermeyecek etkinlikleri içeren öğretim programları bu sorunun giderilmesini sağlayacaktır. Bu sebeple daha etkili bir fen eğitimi için eğitim sistemlerinde yeni fen öğretim programları uygulanmaya başlanmıştır.

Fen eğitiminin gelişen ve değişen dünyamızda en çok karşımıza çıkan alanı çevre eğitimidir. Ülkemizde 90'lı yıllardan sonra örgün eğitimde yer almaya başlamasına rağmen, çevre eğitimine özgü öğretim programı henüz hazırlanmamıştır (Erol ve Gezer, 2006; Ünal, 2011). Çevre eğitimiyle ilgili kavramlar fen ve teknoloji dersinde mevcut müfredatta yürütülen öğretim programının içinde bir ünite olarak yer almaktadır. YÖK Ulusal Tez Merkezi incelendiğinde ülkemizde çevre konusunda kavram öğrenme ve kavramsal gelişimle ilgili öğretim yöntemleri ve etkiliğine yönelik çalışmaların sayısı oldukça azdır. Bu çalışmalar aşağıda özetlenmiştir.

Yörek (2006) yaptığı çalışmada yapılandırmacı kuram ışığında, öğrencilerin canlıların sınıflandırılması, canlıların çeşitliliği, ekosistem öğeleri gibi biyolojik çeşitlilikle ilgili bazı kavramlar ve canlılık kavramını nasıl yapılandırdıkları araştırmıştır. Bu amaçla açık uçlu sorulardan oluşan bir biyolojik çeşitlilik kavramsal anlama testi geliştirilmiş ve İzmir'de bulunan yedi değişik lisede toplam 191 lise 1.sınıf öğrencisine uygulanmıştır.

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Kavramsal anlama testinden elde edilen bazı cevapların açıklığa kavuşması ve bazı konularda da daha detaylı bilgi almak için yarı- yapılandırılmış bir görüşme formu hazırlanmış ve çalışmaya katılan öğrencilerden 14'üne uygulanmıştır. Ayrıca, yedi okulun her birinde testin uygulandığı yedi sınıf öğretmenine öğretim stilleri ve testte öğrencilerin verdiği bazı cevapların nedenlerini ortaya çıkarmak için geliştirilen yarı-yapılandırılmış öğretmen görüşme formu uygulanmıştır.Çalışma sonunda öğrencilerin canlılara ve doğaya bakışının bütüncül (holistik) anlayışa uygun olmasına rağmen beslenme ilişkileri ve enerji akışı kavramlarını yapılandıramadıkları, ayrıca insanı doğanın merkezine koyan (antroposantrizm) düşünme biçiminin yaygın olduğu tespit edilmiştir. Canlılık kavramının yapılandırılmasıyla ilgili bir animist-antroposantrik kavramsal yapı modeli'geliştirilmiştir.

Solmaz (2010) ‘ın çalışmasında, kavramsal anlamaya dayalı işbirlikli öğrenme yönteminin; öğrencilerin kavramsal anlama düzeylerine, çevre farkındalıklarına, kavramsal anlama ve çevreye yönelik tutumlarıyla ilgili kalıcılıklarına etkisini araştırmıştır.Uygulama, 2008- 2009 yılı bahar döneminde, İzmir ili Buca İlçesi Mehmet Emin Yurdakul İlköğretim Okulu, 7. sınıfında deney grubu olarak 29 öğrencinin bulunduğu 7/B ve kontrol grubu olarak 30 öğrencinin bulunduğu 7/C sınıflarında yürütülmüştür. Yaklaşık, 4 hafta boyunca, deney sınıfında fen ve teknoloji dersi işbirlikli öğrenme yoluyla kavramsal anlamaya dayalı olarak işlenirken, kontrol sınıfında ise Fen ve Teknoloji programına uygun olarak işlenmiştir. Veri toplama aracı olarak araştırmacı tarafından geliştirilmiş; kavramsal anlama düzeyi belirleme testi, kavramsal anlamaya dayalı işbirlikli öğrenme görüşme formu kullanılmıştır. Uygulama öncesinde ve sonrasında her iki sınıfa da kavramsal anlama düzeyi belirleme testi uygulanmıştır. Her iki sınıftan 5'er öğrenci ile uygulama öncesinde ve sonrasında araştırmacı tarafından geliştirilen çevre farkındalığı görüşme formu kullanılarak çevre farkındalığı konusunda ve ayrıca uygulama sonunda deney grubunda yer alan 5 öğrenci ile kavramsal anlamaya dayalı işbirlikli öğrenme görüşme formu kullanılarak işlem boyunca sürdürülen yöntem konusunda yarı yapılandırılmış görüşmeler yapılmıştır. Araştırmada, deney ve kontrol sınıfı öğrencileri arasında kavramsal anlama düzeyi açısından deney grubu lehine anlamlı farklılıklar olduğu görülmüştür. Araştırma sonucunda işbirlikli öğrenme yoluyla kavramsal anlamaya dayalı öğretimin yürürlükte olan fen ve teknoloji programına göre kavramsal anlamayla ilgili kalıcılığı sağlamada daha etkili olduğu sonucuna ulaşılmıştır.

Özden (2012) çalışmasında ilköğretim 5. sınıf Canlılar dünyasını gezelim, tanıyalım ünitesinde öyküleştirme yönteminin öğrencilerin başarılarına ve kavramsal öğrenmelerine etkisinin araştırmıştır. Araştırmanın çalışma grubunu 2010-2011 eğitim-öğretim yılında İstanbul İli'nin Beyoğlu ilçesindeki bir devlet okulunda öğrenim gören 5. sınıf öğrencilerinden 48'i deney ve 48'i kontrol grubu olmak üzere toplam 96 öğrenci oluşturmuştur. Deney grubunda, öyküleştirme yöntemine dayalı hazırlanan ünite planı ile öğretim yapılırken, kontrol grubunda Milli Eğitim Bakanlığı'nın ilköğretim programına dayalı bir öğretim yapılmıştır.Araştırmada veri toplama aracı olarak öğrencilere başarı testi uygulanmış, deney ve kontrol gruplarının her birinden 10'ar öğrenci olmak üzere toplam 20 öğrenci ile görüşme yapılmıştır. Araştırmada elde edilen ön test ve son test puanlarının analizi için bilgisayar ortamında SPSS Paket Programı (SPSS 11,5) kullanılmıştır. Deney ve kontrol gruplarının ön test son test uygulamaları arasındaki farkın anlamlılığını test etmek için Bağımsız grup t testi yapılmıştır. Deney grubuna ait ön test- son test arasındaki farkı belirlemek için de İlişkili Grup t testi uygulanmıştır. Araştırma sonucunda öyküleştirme yöntemine dayalı öğretim etkinlikleri uygulanan deney grubuyla, sadece günlük öğretim planlarında yer alan etkinliklere katılan kontrol grubu arasında bağımsız t testi puanı açısından anlamlı bir farklılık bulunmuştur. Bu sonuçlara göre öyküleştirme yöntemine göre hazırlanan bir öğretim planının çocukların öğrenmeleri üzerinde anlamlı bir ilerleme sağladığı görülmüştür.

Altunkara (2013) ekoloji konusunda geliştirilen kavram karikatürlerinin kavramsal anlamaya etkisinin araştırmıştır. Araştırmada kontrol gruplu ön test-son test modeline uygun deneysel desen uygulanmıştır. Deney grubuna ders işlenirken araştırmacı tarafından geliştirilen kavram karikatürleri içeren çalışma kâğıtları verilmiş, kontrol grubuna ise düz anlatım yöntemi uygulanmıştır. Veri toplama aracı olarak yine araştırmacı tarafından geliştirilen kavramsal anlama testi çalışma yapılmadan önce ön test ve çalışma sonrası son test olarak uygulanmıştır. Toplanan veriler SPSS programında Independet Samples T testi yapılarak değerlendirilmiştir. Akademik başarılar ve tutumlar karşılaştırıldığında kavram karikatürleri kullanarak ders işlenen deney grubunda, akademik başarıda anlamlı bir fark saptanmıştır. Ayrıca öğrencilerin bir kısmı yapılan çalışma sonucunda yarı yapılandırılmış mülakata tabi tutulmuştur.Araştırma sonucunda elde edilen bulgular, kavram karikatürlerini kavramsal anlamayı arttırıcı bir etki göstermiştir.

Kıryak (2013) araştırmasında su kirliliği konusunda Ortak Bilgi Yapılandırma Modeli (OBYM) ‘nin 7. sınıf öğrencilerinin kavramsal anlama düzeylerine etkisini incelemiştir. Çalışmanın örneklemini, Bursa ili Yenişehir ilçe merkezindeki bir ilköğretim okulundan seçilen 25 7. sınıf öğrencisi oluşturmaktadır. Karma metodolojinin kullanıldığı bu çalışmanın verileri kelime ilişkilendirme testi (KİT), kavramsal anlama testi (KAT) ve yarı yapılandırılmış mülakattan elde edilmiştir. KİT ve KAT uygulamadan bir hafta önce öntest ve uygulamadan sonra sontest olarak uygulanmıştır. Yarı yapılandırılmış mülakatlar ise, kavramsal anlama düzeylerine göre seçilen 6 öğrenci (iyi, orta ve düşük) ile yürütülmüştür. Araştırmanın bulguları, 7. sınıf öğrencilerinin su kirliliğinin sebepleri, sonuçları ve önlenmesiyle ilgili bilgi sahibi olduklarını ancak bu bilgilerin eksik ya da

alternatif kavramlar içerdiğini göstermiştir. Sonuç olarak, OBYM ile gerçekleştirilen ders süreci öğrencilerin kavramsal anlamalarının artırılmasında ve su kirliliği ile ilgili sahip oldukları alternatif kavramların giderilmesinde etkili olmuştur.

1.1 Çevre Sorunlarını ve Eylemlerini Araştırma ve Değerlendirme (IEEIA) Modeli

Ramsey ve Hungerford'un geliştirdiği bu program müfredatın tamamlayıcısı olarak değil müfredatın içerisinde merkez olması için yapılandırılmıştır (Benzer, 2010). Program ilköğretim ikinci kademe seviyesinde kullanılmak üzere bir dönemlik bir zaman için düzenlenmiştir. Ayrıca program çevre ve fen-teknoloji-toplum olmak üzere iki alanda kullanılabilecek duruma getirilmiştir. Programda belirlenen değişikliklerle program aynı zamanda lisede de kullanılabilir hale gelmiştir. Program bölümler halinde yapılabileceği gibi örnek olay halinde de uygulanabilir. Yalnız örnek olay şeklinde uygulanacak programlar IEEIA başlangıç programı olarak belirli konular çevresinde (tehlikede olan türler, katı atık sorunu.. gibi) yapılandırılır (Ramsey ve Hungerford, 2002; akt. Benzer, 2010). Materyal örnek olaylar ve özgün çevresel tartışmalardan yapılmış alıntılardan, karikatürlerden, fotoğraflardan ve tablolardan harmanlanmıştır. IEEIA modelinde yer alan bölümler 'Sonuçlar ve çıkarımlar(tahminler) arasındaki farklılıklar, konuyu ikincil kaynaklardan araştırma, inançlara bağlı değerleri fark etme, bilginin planlanması ve sunulması' şeklinde sıralanırken (Hungerford ve diğerleri, 1998) model daha sonra geliştirilip 6 bölüm halinde uygulanmaya başlanmıştır. Bu modelin güçlü yönleri tablo 1 de yer almaktadır.

Tablo 1: IEEIA modelinin güçlü yönleri (Hungerford ve diğerleri, 1998)

Anahtar Sözcükler	Güçlü Yönleri
Tarafsızlık ve doğruluk	Örnek olaylar bilginin kaynağını referans alıyor, farklılıkları yansıtıyor.
Derinlik	Farkındalığı arttırıyor. Öğrencileri kendi inançlarını keşfetmeleri için teşvik ediyor.
Beceri geliştirme	Konuyla ilgili eleştirel düşünme becerileri kazandırıyor.
Olay uyumu	Probleme farklı bakış açıları ve konuya yansımaları vurgulanıyor.
Eğitsel geçerlilik	Amaçlar ve hedefler açıkça belirtilmiş.
Kullanılabilirlik	Kulanıma uygun. Yönergeler açık ve kısa.

Bölüm 1: Çevre problemlerini çözme: Bireysel olarak çevre problemlerini anlama ve çözmek için gerekli olan becerileri geliştirmek için gerçek çevre sorunlarını derste kullanmayı gerektirir. Bu beceriler; olaylar, sorunlar ve problemler arasındaki farkı görebilmeyi ve sorunların oluşmasında inanış ve değerlerin rolünü anlayabilmeyi içerir. Bir sorunu tüm boyutlarıyla, farklı bakış açılarıyla ortaya çıkarma becerisine giriş yapılır ve bu beceriler uygulanır. İnsan etkinlikleri ve doğanın birbiriyle olan bağlantısından bahsedilir, gösterilir ve uygulanır. Belirli bir bilgi veya görüş bütününe bağlı kalmaktan ziyade çevre sorunlarının karmaşıklığını inceleyebilmek ve çözebilmek için öğrencilere gerekli olan beceriler üzerine odaklanılır.

Bölüm 2: Sorunu araştırmaya başlama: Bu ders, bir sorunu araştırmaya başlamak için gerekli becerilerle başlar. Öğrenciler sorunları tanımlar, araştırma soruları yazar, ikincil kaynaklardan bilginin nasıl elde edileceğini, bilgi kaynaklarının nasıl karşılaştırılacağını ve değerlendirileceğini öğrenir. Bu dersler sorunlar hakkında ikincil kaynaklardan bilgiyi bulma, çözümleme ve değerlendirmeye odaklanır.

Bölüm 3: Çevre araştırmalarında ölçme araçlarını kullanma: Öğrenciler bir araştırma yapmanın en temel yöntemlerini kullanarak nasıl bilgi edileceğini öğrenirler. Bireysel olarak, ölçme araçlarının nasıl geliştirilebileceğini öğrenirler. Sonrasında, örnekleme tekniklerini, veri toplama işini nasıl yöneteceklerini ve verileri nasıl kayıt edeceklerini öğrenirler. Bu dersler çevresel inanış, tutum ve davranış bağlamında sosyo bilimsel sorgulama becerileri üzerine odaklanır.

Bölüm 4: Elde edilen verileri yorumlanma: Öğrenciler yorum ve çıkarımları nasıl yapacaklarını ve nasıl öneriler oluşturacaklarını öğrenirler. Aynı zamanda öğrenciler grafik oluşturma ve yorumlamayı da öğrenirler. Bu dersler öğrencileri çevre sorunlarıyla ilgili verileri kullanarak bulgulardan çıkarım yapma ve bunları paylaşmaya hazırlar.

Bölüm 5: Bir çevre sorununu araştırma: Öğrenciler bağımsız bir şekilde bir çevre sorununu seçerler ve araştırırlar. Bu aşama şimdiye kadar öğrenilen becerilerin uygulanmasını ve sentezlenmesini içerir. Bu bölümde öğrencilerin araştırmalarının sınıfta kendi arkadaşlarına sunmaları önerilir. Programın bu bölümünde öğrenciler

öğretmenin görevini devralır, ve öğretmen tarafından kolaylaştırılan ve onaylanan gerçek bir çevre sorununu sorgulamayı üstlenir.

Bölüm 6: Çevre eylemi stratejileri: Öğrenciler vatandaş olarak yapması gereken temel eylemleri öğrenir, bireysel hareket etmenin grupla hareket etme karşısındaki etkisizliğini çözümler, çevre sorunlarını çözmeye yönelik eylem planları geliştirir. Bu eylem planı sosyal, kültürel ve ekolojik davranış uygulamalarını belirlemek için daha önceden düzenlenen bir dizi davranışla değerlendirilir. Bu eylem planı eğer öğrenciler isterse değerlendirilebilir. Öğrenciler, araştırmalarının altında yatan sorunun çözümüne yönelik bir vatandaş olarak olası katılımı sağlamak adına bir plan oluşturmak için kendi araştırma verilerini kullanırlar.

Öğretmenler programın sonucunda öğrencilerin aşağıdaki kazanımları edinebilmeleri için onlara imkan vermelidirler (Ramsey ve Hungerford, 2002, akt. Benzer, 2010):

- Önemli olarak belirlenen çevre problemlerini başarılı bir şekilde araştırma,
- Toplumda sorumluluk sahibi bir vatandaş olarak kendini gösterme
- Çevre sorunlarını başarılı bir şekilde çözümleme
- Yüksek düşünme becerilerini kullanma
- Sorunlarla ilgili alternatif durumlar açısından etkili düşünme

Bu çalışmada Ramsey ve Hungerford (2002) 'un geliştirdiği Çevre Sorunlarını ve Eylemlerini Araştırma ve Değerlendirme-IEEIA modeli kullanılmıştır. Bu yöntem, öğrencileri sorunlarla tanıştırma, bilgiyi elde etme ve işleme, sorunları araştırma/inceleme ve sorunun çözümü için gerekli sorumlu vatandaşlık becerilerini kullanmada disiplinler arası bir nitelik taşımaktadır. Bu amaç doğrultusunda "İnsan ve Çevre" ünitesi kapsamında IEEIA Modeli ile uygulanan fen ve teknoloji dersinin öğrencilerin çevre konusundaki kavramları öğrenmelerine ve kavramsal gelişimlerine etki edeceği düşünüldüğünden bu çalışma yürütülmüştür. Çalışmanın problem cümlesi "IEEIA modelinin ortaokul 7. Sınıf öğrencilerinin kavram öğrenmelerine ve kavramsal gelişimlerine etkisi var mıdır?" sorusu olarak belirlenmiştir. Araştırma soruları ise şu şekildedir:

IEEIA modeli ortaokul 7. Sınıf öğrencilerinin kavram öğrenmelerine etkisi var mıdır?

IEEIA modeli ortaokul 7. Sınıf öğrencilerinin kavramsal gelişimlerine etkisi var mıdır?

2.YÖNTEM

Çalışmada 7.sınıf öğrencilerine Çevre Sorunlarını ve Eylemlerini Araştırma ve Değerlendirme (IEEIA) modelinin kullanılmasının öğrencilerin çevre konusunda kavram öğrenme ve kavramsal gelişimlerine etkisi araştırılmıştır. Araştırma, öntest-sontest kontrol gruplu deneysel desen modeline göre tasarlanmıştır. Araştırmanın bağımlı değişkenini *kavram öğrenme ve kavramsal gelişim*, bağımsız değişkenini ise *çevre sorunlarını ve eylemlerini araştırma ve değerlendirme modeli* oluşturmaktadır. Deney grubunda IEEIA modeli uygulamaları yapılmış, kontrol grubunda ise mevcut eğitim öğretim faaliyetleri sürdürülmüştür. IEEIA modeli özünde bir eğitim öğretim dönemi boyunca çevre dersinde uygulanırken, bu araştırmada IEEIA modeli çevre ünitesie ayrılan 4 haftalık zaman diliminde uygulanmıştır . 'İnsan ve Çevre' ünitesinin ekosistemler, biyolojik çeşitlilik ve çevre sorunları konularında kullanılmak üzere yönteme uygun 6şar modül hazırlanmıştır. IEEIA modelinin deney grubunda uygulanmasına yönelik çevre sorunları ve etkileri konusundaki bir örneğe aşağıda yer verilmiştir:

Konu	Çevre Sorunları ve Etkileri
Anahtar Kelimeler	Çevre kirliliği, Küresel ısınma,Asit yağmuru,Sera etkisi
Kazanımlar	9.Ülkemizdeki ve dünyadaki çevre sorunlarından bir tanesi hakkında bilgi toplar, sunar ve tartışır.10.Dünyadaki bir çevre probleminin ülkemizi nasıl etkileyebileceğine ilişkin çıkarımlarda bulunur.11.Ülkemizdeki ve dünyadaki çevre sorunlarına yönelik is birliğine dayalı çözümler önerir ve faaliyetlere katılır.
Hazırlık Çalışması	Öğrenciler küresel ısınmayı önlemek için yapılan çalışmalar hakkında bilgi toplar.
Süre	4 ders saati

UYGULAMA
Bölüm 1: Verilen bilimsel hikaye ile öğrenciler problemin farkına varır.

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Süre	1.ders: 15dakika

ŞEHİRDEN KASABAYA

Ömer ve kardeşi Selim küçük bir kasabada yaşıyorlardı. Burada her yer yemyeşildi. İnsanlar sıkıldığında çaydanlığını alır bir ağacın kenarında oturup mutlu bir şekilde çaylarını içerlerdi. Kuşların sesi insana huzur verir, her çocuk kasabadaki hayvanların isimlerini bilirdi.

Ömer ve Selim'in kuzeni Berkcan ise büyük bir sanayi şehrinde yaşıyordu. Burada ağaçlar, pırıl pırıl akan dereler yoktu. İnsanlar pikniğe gitmek yerine alış veriş merkezlerine gidiyorlardı. Çünkü dışarıda şehrin gürültüsü ve kalabalık vardı. Çocuklar hayvanların isimlerini bilmek bir yana sokakta gezen köpeklerden korkup yollarını değiştirirdi. Burada insanlar mis gibi dağ havası yerine egzoz kokuları çekerlerdi ciğerlerine. Yol kenarlarına atılan pet şişeler, kağıtlar, çöpler de ayrı bir sorundu tabi…

Ömer ve Selim bir hafta sonu kuzenlerini ziyarete gitmişlerdi. Heyecan içindeki kuzenler birbirleriyle doya doya hasret giderdiler. Ömer ve Selim yemekten önce ellerini yıkamaya gittiklerinde suların kesilmiş olduğunu fark ettiler. Berkcan da kuraklık sebebiyle yaz aylarının susuz geçmemesi için belediyenin ara sıra su kesintisi yaptığını söyledi. Vakit ilerledikçe üç çocuğun canları sıkıldı. Bu yüzden oyun oynamaya karar verdiler. Berkcan elinde birkaç bilgisayar oyunu ile kuzenlerine yöneldi. Kardeşler ise şaşkındı. Çünkü onlara göre oyun demek dışarıda körebe, saklambaç, dokuztaş oynamaktı. Ömer dışarıda oyun oynamayı teklif etti. Fakat dışarıda rahatça oyun oynayacak yerler yoktu. Selim bunun üzerine Berkcan'a kasabada oynadıkları oyunları ve kasabayı anlatmayı teklif etti. Selim anlattıkça Berkcan duyduklarına inanamadı, en yakın zamanda kasabaya gidip kuzenlerini ziyaret edeceğine dair söz verdi.

Yukarıdaki olayda hangi problemler dikkat çekmektedir?

Yukarıdaki olayla ilgili olarak araştırma soruları belirleyiniz.

Yaşadığınız çevreye baktığınızda hikayedeki hangi karakterin yerinde olduğunuzu düşünüyorsunuz?

Berkcan'ın yerinde olsaydınız, şehirdeki problemleri çözmek için neler yapardınız?

Bölüm 2: Problemi tanımlar ve 2.kaynaklardan bilgi toplar.
Süre: 1.ders: 25 dakika
ÇALIŞMA KAĞIDI

INTE 2015



1) **Yukarıdaki resimde etkilerini gördüğünüz çevre sorunu nedir?**
2) **Bu çevre sorununun en önemli sebebi nedir?**
3) **Bu çevre sorununu bir problem olarak görüyorsanız niçin bir problem olduğunu açıklayınız.**
4) **Bu sorunu önlemek için neler yapabiliriz? Çözüm önerinizi destekleyici kanıtları yazınız.**

Bölüm 3: Öğrenciler bir çevre sorunuyla ilgili anket maddeleri oluşturur ve anketi uygular.
Süre: 2.ders: 20dakika
Öğrenciler hazırlık çalışması aşamasında elde ettikleri bilgileri paylaştıktan sonra istedikleri bir çevre sorunuyla ilgili anket oluşturur. Öğrenciler oluşturdukları anketleri öğrencilere, ailelere ve çevresindeki insanlara sorabilir.

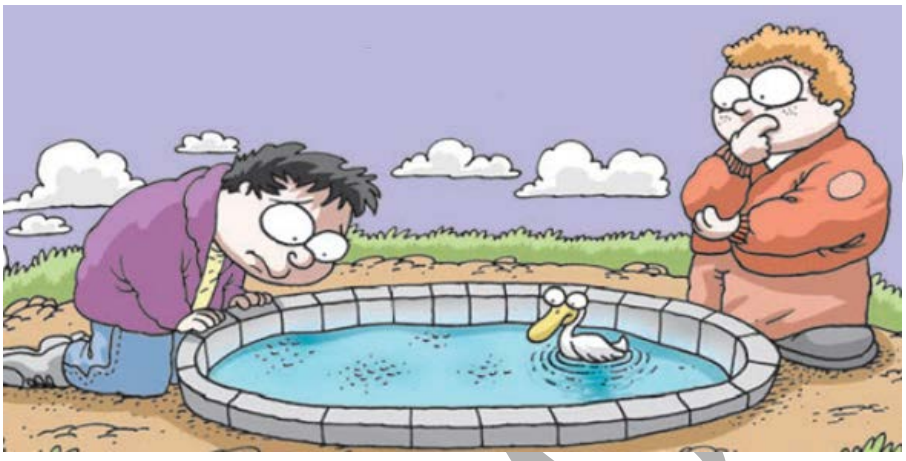
Bölüm 4: Öğrenciler uyguladıkları anketlerin grafiğini çizer ve değerlendirmesini yapar.
Süre: 3.ders: 20 dakika

Bölüm 5: Öğrenciler bir çevre sorunu üzerinde araştırma yapar. Öğrencilere çalışma kağıdı dağıtılır.Grup çalışması yöntemiyle öğrenciler problemlerin çözümlerini verilen sürede tartışır ve grubun yazmanı bu çözümleri yazar. Öğrencilerin bu çözümleri uygulayabilmeleri için ph kağıdı, su, sirke, tebeşir gibi gerekebilecek malzemeler, sınıfta temin edilmiş olacaktır.
Süre: 2.ders: 20 dakika

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ÇALIŞMA KAĞIDI

Asit Yağmurlarının Bir Su Kaynağını Etkileyip Etkilemediğini Nasıl Anlarsınız?



Mert bir doğa projesi yapmak istiyor.Ama bir türlü konu bulamıyor. Soyu tükenen hayvanlar, çevre kirliliği, küresel ısınma…Aslında bir çok konu geliyor aklına ama hangi konuda proje yapmalı? Karar veremiyor. Arkadaşı Can'a tam bunu anlatırken aklına parlak bir fikir geliyor: 'Buldum! Bu havuzdaki suyu asit yağmuru etkilemiş mi? Bunu araştıracağım!'

Can soruyor: 'Peki bunu yapacaksın? Suda asit olup olmadığını nasıl anlayacaksın? İkisi de havuza bakakalıyor.

*Evet buluşçular, Mert ve Can'ın sizin desteğinize ihtiyaçları var! Söyleyin bakalım, Asit yağmurlarının bir su kaynağını etkileyip etkilemediğini nasıl anlarsınız?

Deneyin Adı:

Problem cümlesi:

Malzemeler:

Deneyin Yapılışı:

Sonuç ve Yorum:

Bölüm 6: Öğrencilerle birlikte 'Çevre Sorunlarına Dikkat' konulu metinden yola çıkarak çeşitli çevre sorunları belirlenir. Öğrenciler grupça seçecekleri bir çevre sorunuyla ilgili eylem planı hazırlar. Ünite sonunda öğrencilerden Çevre Panosu, Afiş, Broşür, Slogan hazırlamaları ayrıca özdeğerlendirme formunu doldurmaları istenir.

Süre: 3.ders: 20 dakika

Çevre Sorunlarına Dikkat

Bir gün servisle okuldan eve gelirken, sokakların atıklarla dolu olduğunu fark ettim. Hava, taşıtların egzozlarından çıkan gaz kokuyordu. İnsanların çevrelerine özen göstermemeleri nedeniyle dünyamızın büyük bir sorunla karşı karşıya olduğunu düşündüm. Bu konuyu araştırınca hava kirliliğinin sera etkisine neden olduğunu öğrendim. Havadaki zararlı gazlar güneş ışınlarını emerek dünyanın ısınmasına neden oluyormuş. Bunun bir etkisi de buzullar üzerineymiş. Buzullar eriyormuş. Bunları öğrenince bir kez daha çevremizi temiz tutmanın önemini anladım.

INTE 20

1.Yukarıdaki metinde yer alan çevre sorunları nelerdir?

2.Dünyamızda bunlardan başka hangi çevre sorunları olabilir?

3.Belirlediğiniz çevre sorunlarından birini seçerek, bu çevre sorununu önlemek için yapılabilecek bir eylem planı oluşturunuz.

2.1 Araştırma Grubu

Araştırma; İstanbul'daki 75. Yıl Cumhuriyet Ortaokulu'ndan rastgele seçilen iki farklı 7. Sınıfta öğrenim gören toplam 46 öğrenciden oluşmaktadır. Deney ve kontrol grubu 23'er kişiden oluşmaktadır. Araştırmada 7. Sınıf öğrencilerinin seçilmesinin sebebi konu itibariyle "İnsan ve Çevre Ünitesinin" 7. Sınıf müfredatının içerisinde bulunmasıdır.

2.2. Veri Toplamada Kullanılan Araçlar

Her iki gruba da uygulama öncesinde ve sonrasında kavramsal öğrenmeyi değerlendirmek için Çevre ve İnsan Ünitesi'nde bulunan aşağıdaki kazanımlar dikkate alınarak hazırlanan 21 açık uçlu soru yöneltilmiştir.

7. sınıf 'İnsan ve Çevre' ünitesi kazanımları (MEB, 2006);

Organizmaların yaşadıkları alanlar ve bu alanlara insan etkisi ile ilgili olarak öğrenciler;

Kazanım 1:Tür, habitat, popülasyon ve ekosistem kavramlarını örneklerle açıklar. (Soru 1-2-3-4)

Kazanım 2:Bir ekosistemdeki canlı organizmaların birbirleriyle ve cansız faktörlerle ilişkilerini açıklar. (Soru 5-6-7)

Kazanım 3:Farklı ekosistemlerde bulunabilecek canlılar hakkında tahminler yapar. (Soru 8)

Kazanım 4:Ekosistemleri canlı çeşitliliği ve iklim özellikleri açısından karşılaştırır. (Soru 9)

Kazanım 5:Ekosistemdeki biyolojik çeşitliliği fark eder ve bunun önemini vurgular. (Soru 10-11)

Kazanım 6:Ülkemizde ve dünyada nesli tükenme tehlikesiyle karsı karsıya olan bitki ve hayvanlara örnekler verir. (Soru 12-14)

Kazanım 7:Ülkemizde ve dünyada nesli tükenme tehlikesinde olan bitki ve hayvanların nasıl korunabileceğine ilişkin öneriler sunar. (Soru 13-15)

Kazanım 8:Çevresinde bulunan bitki ve hayvanlara sevgiyle davranır. (Soru 16)

Kazanım 9:Ülkemizdeki ve dünyadaki çevre sorunlarından bir tanesi hakkında bilgi toplar, sunar ve tartışır. (Soru 17-18)

Kazanım 10:Dünyadaki bir çevre probleminin ülkemizi nasıl etkileyebileceğine ilişkin çıkarımlarda bulunur. (Soru 19)

Kazanım 11:Ülkemizdeki ve dünyadaki çevre sorunlarına yönelik is birliğine dayalı çözümler önerir ve faaliyetlere katılır. (Soru 20)

Kazanım 12:Atatürk'ün çevre sevgisi ile ilgili uygulamalarına örnekler verir. (Soru 21)

Kavramsal gelişimlerini değerlendirmek için ise çevre konusunda bir hikâye şeklinde hazırlanan 'Değişen Dünya' isimli bir metin deney ve kontrol grubuna öntest ve sontest olarak uygulanmıştır. Öğrencilerden bu metinde yer alan çevre ve çevre sorunlarıyla ilgili kavramları bulmaları ve bu kavramları kendi cümleleriyle tanımlamaları istenmiştir.

Açık uçlu sorular hazırlanırken seçilen ünitedeki kazanımlar göz önünde bulundurulmuş ve tüm kazanımlara yönelik soruların olmasına dikkat edilmiştir. Bu bağlamda bir fen bilgisi öğretmeni ve fen eğitiminde uzman bir akademisyen soruların içerdiği kavramlar ve ünite kazanımlarının birbirleriyle örtüşüp örtüşmediğini incelemişlerdir. Sorular hazırlandıktan daha sonra iki fen eğitimi uzmanı soruların içerik bakımından anlaşılırlığına, bir dil uzmanı ise cümlelerin ve soru ifadelerinin netliğine ve açıklığına bakmıştır. Kavramsal

gelişimleri değerlendirmek için hazırlanan hikâye ise içerik geçerliliği için iki akademisyene ve dil bakımından anlaşılırlığı için bir dil uzmanına gösterilmiştir. Ölçme araçları uygulanmadan önce 75 kişilik 8. sınıf öğrencilerinden oluşan bir gruba pilot uygulama yapılmıştır.

Pilot uygulama sonucunda öğrencilerin cevaplarından ve geri dönütlerden hareketle; Kazanım 1'e yönelik resimli boşluk doldurma sorusu yerine değerlendirilmesini kolaylaştırmak için yapılandırılmış grid kullanılmıştır. Kazanım 5'e yönelik soruda yanlış anlaşılmaya neden olan biyolojik çeşitlilikle ilgili karikatür çıkartılıp yerine bu kavramı ifade eden resim konulmuştur. Hava kirliliğinin sebebine yönelik soru coğrafi kavram içerdiğinden öğrenciler tarafından anlaşılmamış bunun yerine çevre sorunlarıyla ilgili 2 farklı resim verilip kazanım 9'a yönelik sorular sorulmuştur. Çevre sorunları ve etkileriyle ilgili verilen eşleştirme sorusu öğrencilerin üst düzey düşünme becerilerini tam olarak ortaya koyamadığı için bu soru yerine Örnek olay verilmiştir. Sorular genel olarak öğrencilerin kavramlarla ilgili yorum yapabilme becerilerini ortaya çıkarmaya yönelik hazırlanmıştır.

2.3. Veri analizi

Açık uçlu soruların değerlendirilmesinde Abraham ve diğerlerinin (1992) kavrama düzeyi gruplandırması kullanılmıştır (Tablo 1). Elde edilen bulgular grafiklendirilerek yorumlanmıştır. Kavramsal gelişim metnine verilen cevaplar ise metnin içinde bulunan kavramları öğrencilerin doğru, eksik, yanlış veya boş cevaplandırmalarına göre puanlandırılarak tablolar halinde sunulmuştur.

Tablo 1: Abraham ve Diğerlerinin Kavrama Düzeyi Gruplandırması(Abraham ve Diğerleri, 1992)

Anlama Düzeyi	Puanlama Kriteri	Puan
Tam anlaşılmış	Geçerliliği olan cevabın bütün yönlerini içeren cevaplar	4
Kısmen anlaşılmış	Geçerli olan cevabın bir yönünü içeren fakat bütün yönlerini içermeyen cevaplar	3
Kısmen anlaşılmış, yanlış kavram var	Cevaplar kavramın kısmen anlasılmasını gösteren fakat aynı zamanda bir kavram yanılgısını da içeren cevaplar	2
Yanlış kavram var	Bilimsel olarak yanlıs olan cevaplar	1
Anlaşılmamış	*Bos bırakma, bilmiyorum, anlamadım seklindeki cevaplar *Soruyu aynen tekrarlama *İlgisiz ya da açık olmayan cevap verme	0

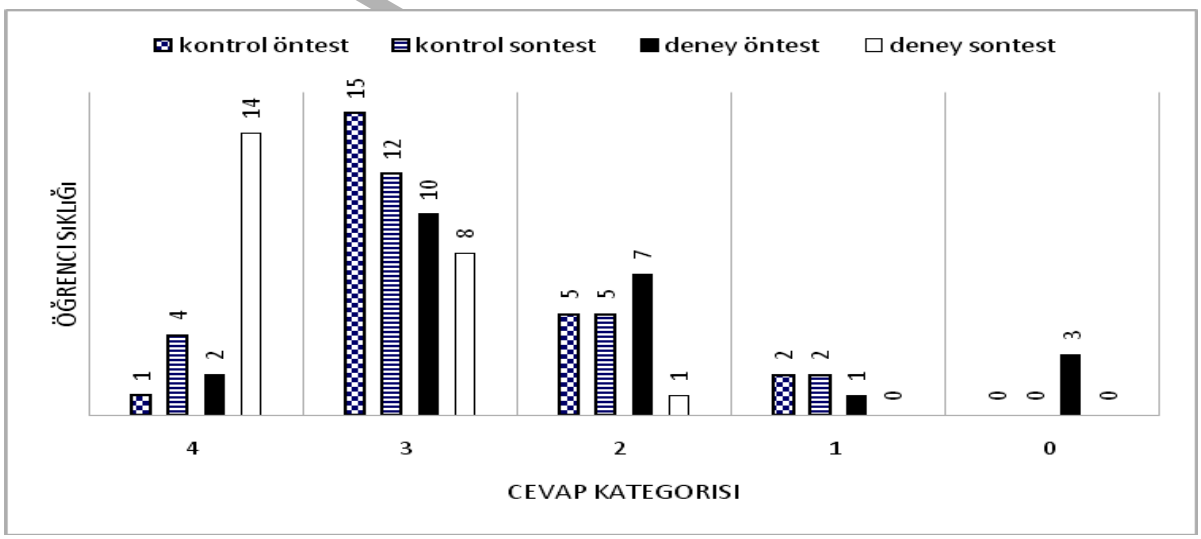
3. BULGULAR

3.1 Kavram Anlamaya Yönelik Bulgular

IEEIA modeli ortaokul 7. Sınıf öğrencilerinin kavram öğrenmelerine etkisi var mıdır?

araştırma sorusuna uygun olarak, deney grubuna 'İnsan ve Çevre' ünitesi kapsamındaki kazanım ve kavramlara yönelik 21 açık uçlu soru sorulmuştur.

Grafik 1:Tür kavramına yönelik 1. Açık uçlu sorudan elde edilen bulgular

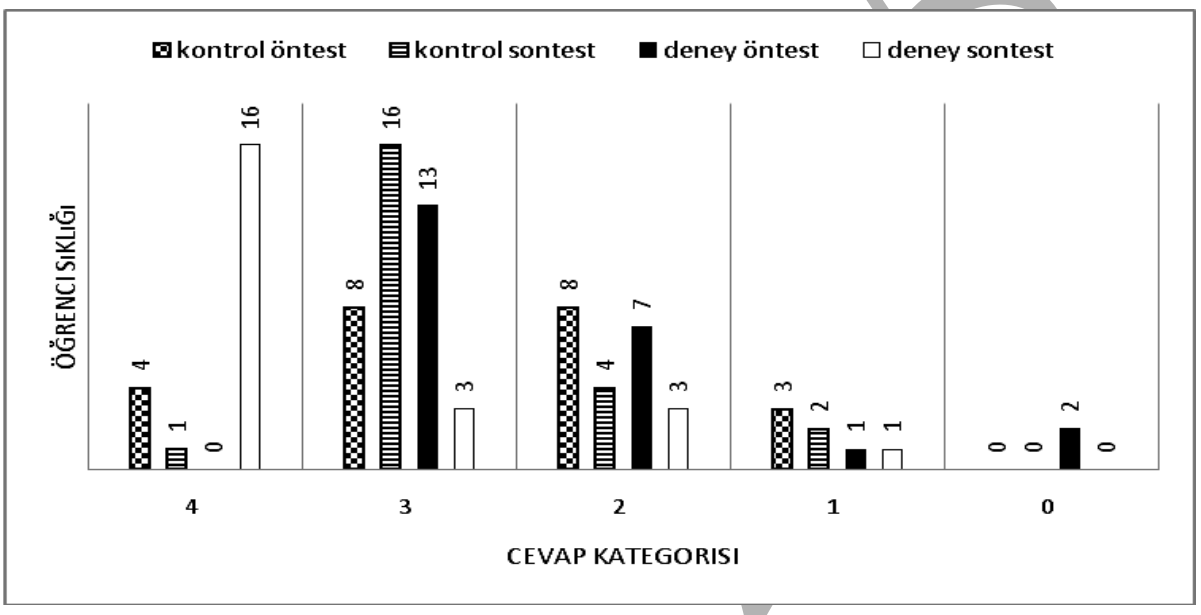


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Ortalama Puanlar: Kontrol ön : 2,65 Kontrol son: 2,78 Deney ön: 2,30 Deney son: 3,56

Grafik 1'e göre öntestte deney ve kontrol grubundaki öğrencilerin büyük çoğunluğu 'kısmen anlamış' grupta yer almaktadır. Sontestte ise kontrol grubunda belirgin bir değişiklik olmayıp deney grubunda tam anlamış kişi sayısı 2 den 14'e çıkmıştır. Ortalama puanlara bakıldığında kontrol grubunda 0.13 puan artışı olurken, deney grubunda 1.26 puan artışı olmuştur.

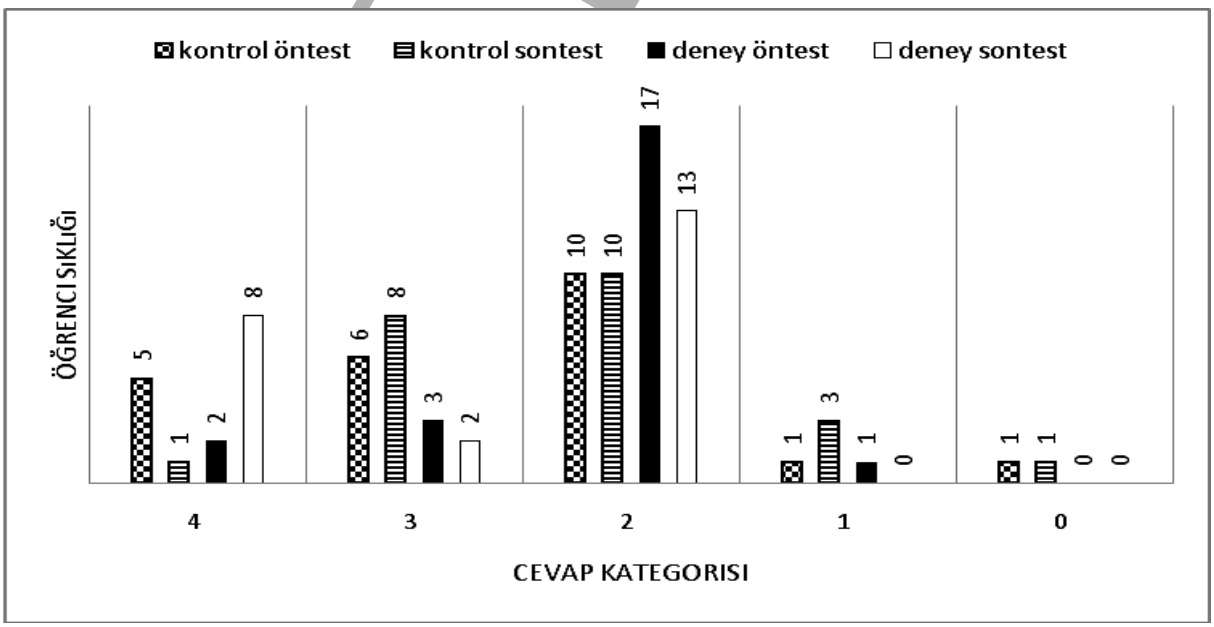
Grafik 2: Habitat kavramına yönelik 2. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön: 2,56 kontrol son: 2,69 deney ön: 2,35 deney son:3,48

Grafik 2'ye göre öntestte deney ve kontrol grubundaki öğrencilerin büyük çoğunluğu 'kısmen anlamış' ve 'kısmen anlamış yanlış kavram var' grupta yer almaktadır. Sontestte ise kontrol grubunda bir değişiklik olmamıştır. Deney grubunda ise tam anlamış kişi sayısı 0 den 16'ya çıkmıştır. Ortalama puanlara bakıldığında kontrol grubunda 0.13 puan artışı olurken, deney grubunda 1.13 puan artışı olmuştur.

Grafik 3: Ekosistemde cansız faktörlere yönelik 3. Açık uçlu sorudan elde edilen bulgular

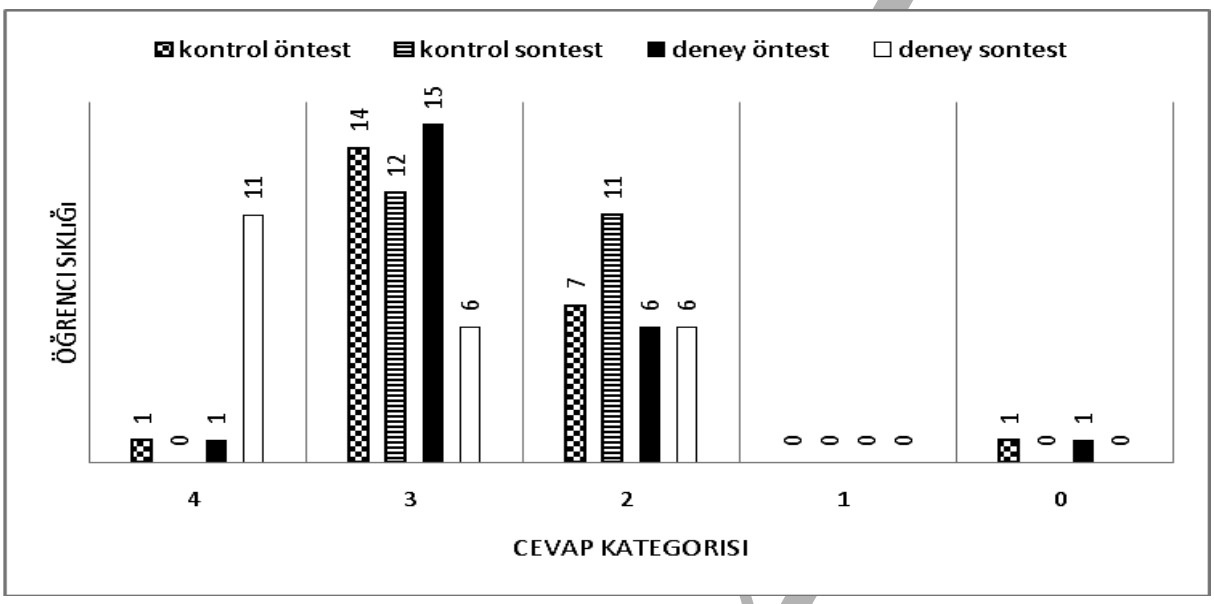


Ortalama Puanlar: Kontrol ön:2,56 kontrol son:2,22 deney ön:2,26 deney son:2,78

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Grafik 3'e göre ön testte deney grubunda 17 kontrol grubunda 10 öğrenci 'kısmen anlamış yanlış kavram var' grubunda yer almaktadır. Son testte ise kontrol grubunda bir değişiklik olmayıp deney grubunda bu sayı 17'den 13'e düşmüştür. Ortalama puanlara bakıldığında kontrol grubunda 0.34 puan azalış olurken, deney grubunda 0.52 puan artış olmuştur.

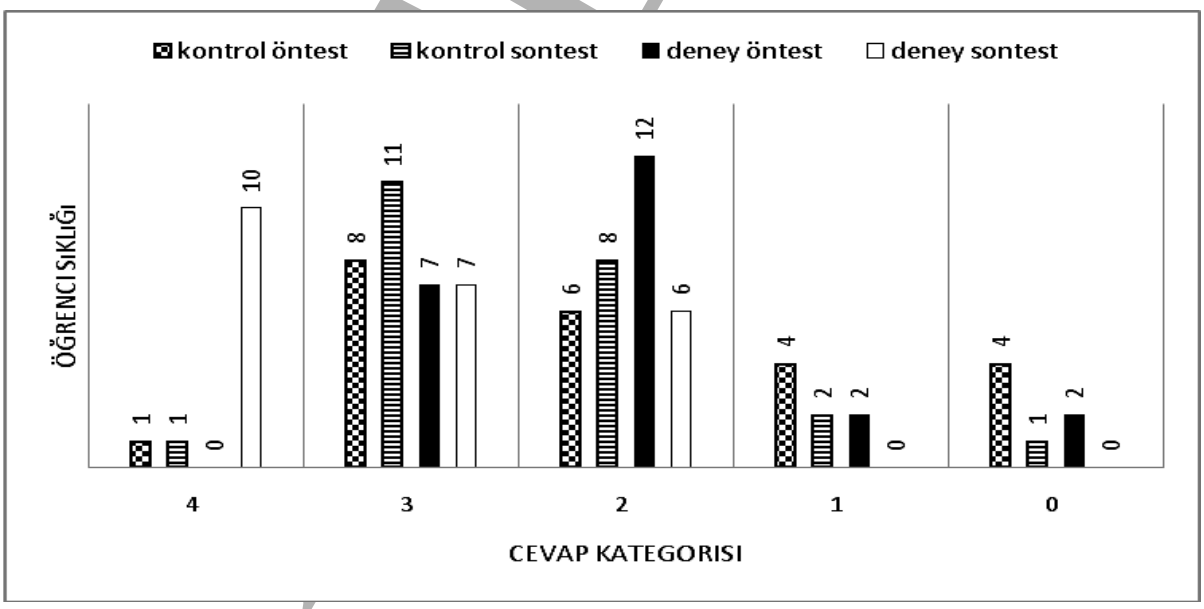
Grafik 4: Ekosistem kavramına yönelik 4. Açık uçlu soru için elde edilen bulgular



Ortalama Puanlar: Kontrol ön:2,61 kontrol son:2,52 deney ön:2,65 deney son:3,22

Grafik 4'e göre öntestte deney ve kontrol grubunda 1'er öğrenci 'tam anlaşılmış' düzeyde yer alırken sontestte kontrol grubunda belirgin bir değişiklik olmayıp deney grubunda tam anlamış kişi sayısı 1 den 11'e çıkmıştır. Ortalama puanlara bakıldığında kontrol grubunda 0.09 puan azalış olurken, deney grubunda 0.57 puan artışı olmuştur.

Grafik 5: Ekosistemde canlıların birbirleriyle ilişkisine yönelik 5. Açık uçlu sorudan elde edilen bulgular

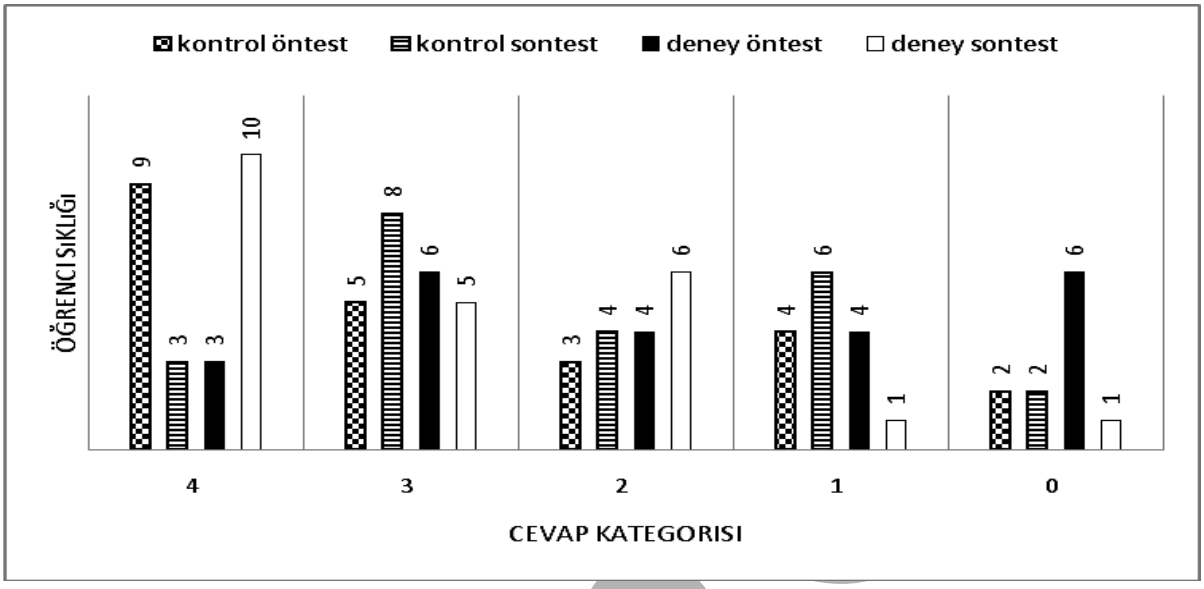


Ortalama Puanlar: Kontrol ön:1,91 kontrol son:2,39 deney ön:2,04 deney son:3,17

Grafik 5'e göre deney grubunda 'tam anlaşılmış' düzeyde yer alan öğrenci sayısı 0'dan 10'a çıkıp, kontrol grubunda bir değişiklik olmamıştır. Ortalama puanlara bakıldığında kontrol grubunda 0.48 puan artış olurken, deney grubunda 1.13 puan artış olmuştur.

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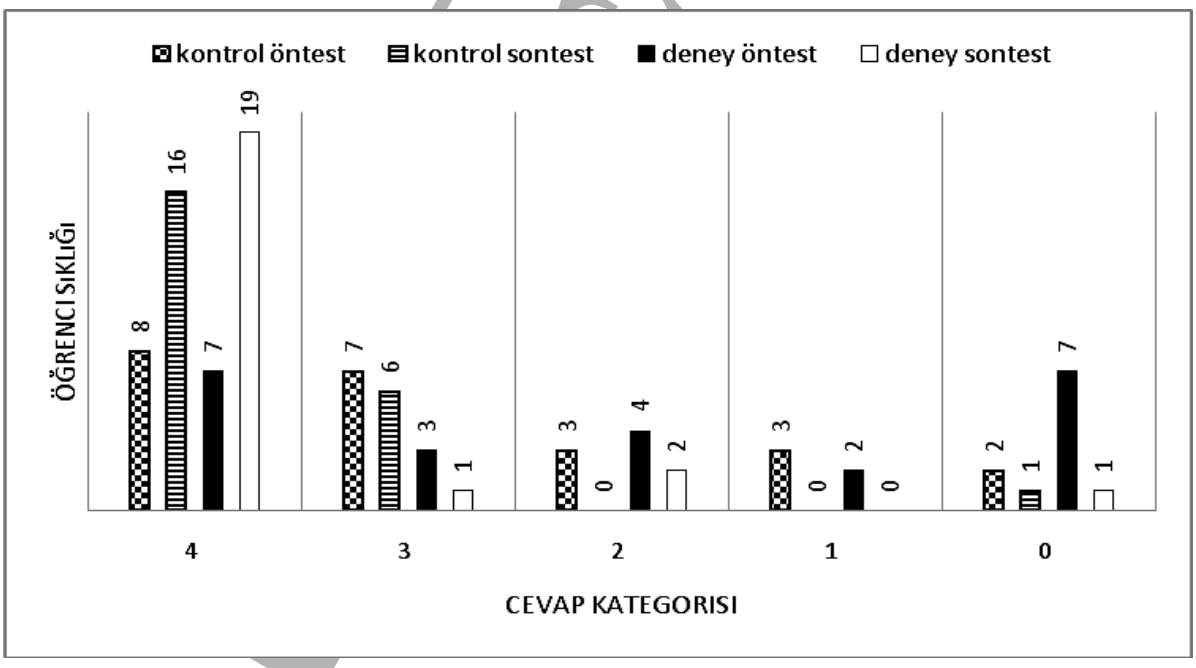
Grafik 6: Besin zincirine yönelik 6. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:2,65 kontrol son:2,17 deney ön:1,82 deney son:2,96

Grafik 6'ya göre kontrol grubunda 'tam anlamış' kişi sayısı 9'dan 3'e düşerken, deney grubunda bu sayı 3'ten 10' a çıkmıştır.

Grafik 7: Ekosistemde canlı-cansız faktörlerin ilişkisine yönelik 7. Açık uçlu sorudan elde edilen bulgular

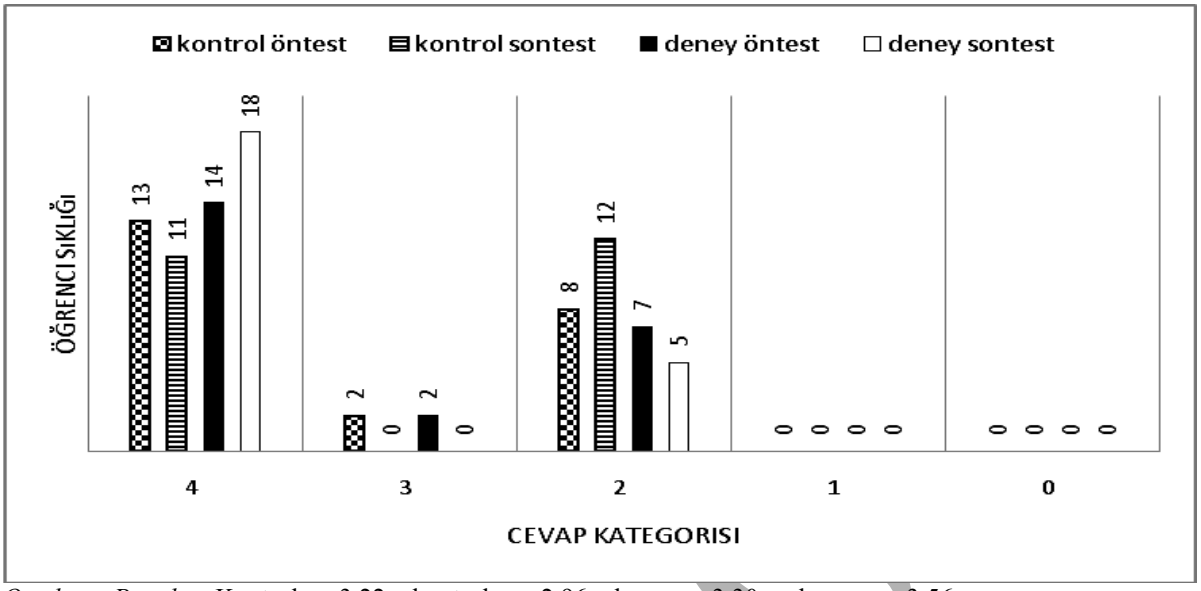


Ortalama Puanlar: Kontrol ön:2,69 kontrol son:3,56 deney ön:2,04 deney son:3,61

Grafik 7' ye göre kontrol ve deney grubunda öntestte tam anlaşılmış düzeydeki öğrenci sayıları benzerken, son testte bu sayı kontrol grubunda 8, deney grubunda 12 kişi artmıştır. Ortalamalarda kontrol grubu 0.87, deney grubu 1.57 puan artış göstermiştir.

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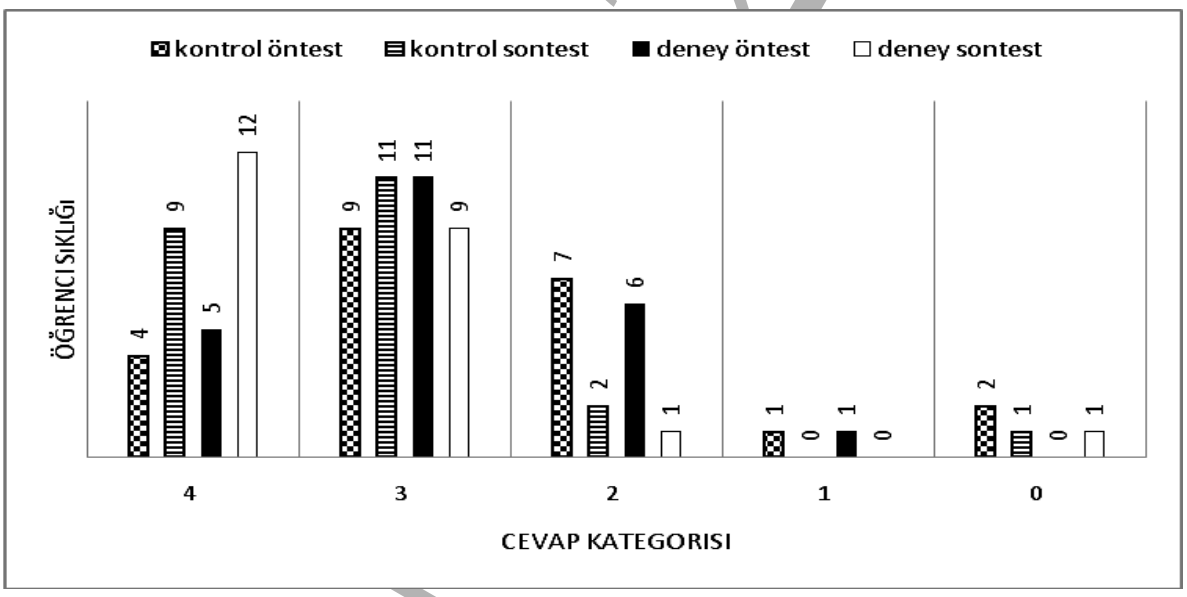
Grafik 8: Farklı ekosistemlerde yaşayan canlılara yönelik 8. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:3,22 kontrol son:2,96 deney ön:3,30 deney son:3,56

Grafik 8'e göre deney ve kontrol grubundaki öğrencilerin çoğunlu 'tam anlaşılmış' düzeyde yer alırken, kontrol grubunda bu düzeydeki öğrenci sayısı 13'ten 11'e düşerken, deney grubunda bu sayı 14'ten 18'e çıkmıştır.

Grafik 9: Canlı çeşitliliğine etki eden faktörlere yönelik 9. Açık uçlu sorudan elde edilen bulgular

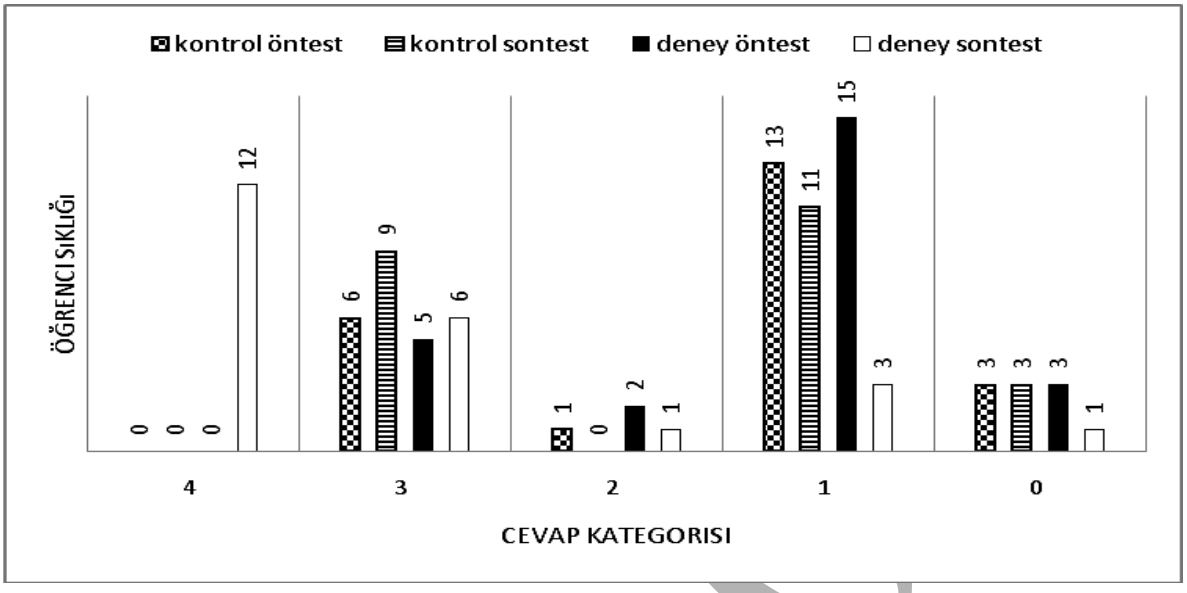


Ortalama Puanlar: Kontrol ön:2,52 kontrol son:3,17 deney ön:2,87 deney son:3,35

Grafik 9'a göre kontrol grubunda sontestte 'tam anlaşılmış' düzeydeki öğrenci sayısı 5 kişi artarken, deney grubunda 7 kişi artmıştır. Kontrol grubunun ortalaması 0.65 artarken, deney grubu 0.48 puanlık artış göstermiştir.

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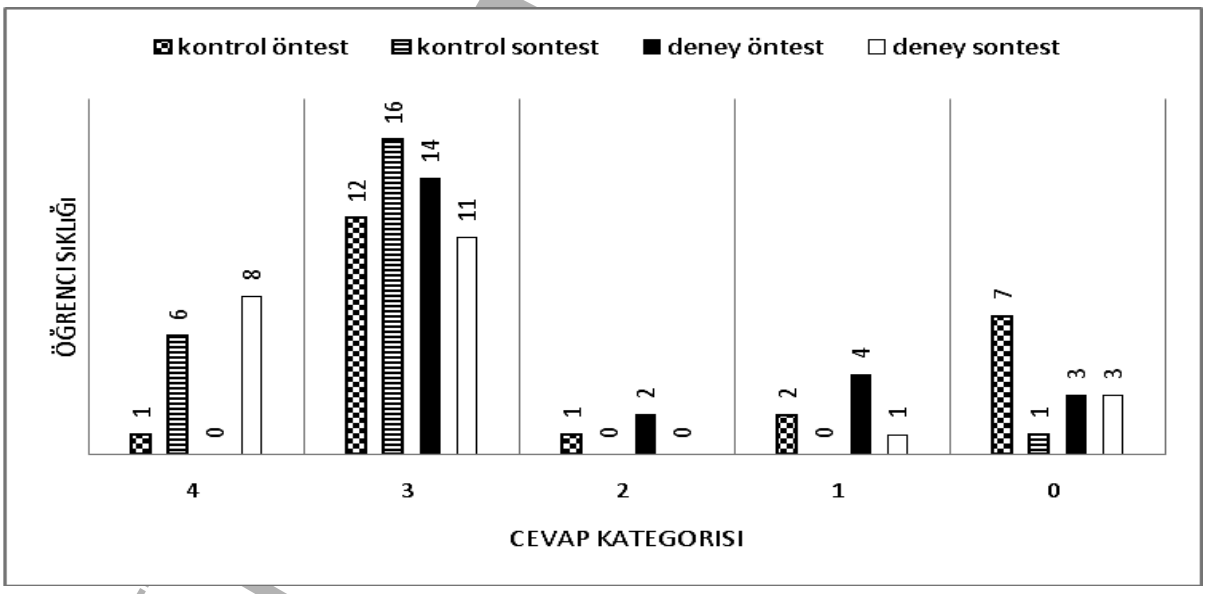
Grafik 10: Biyolojik çeşitlilik kavramına yönelik 10. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:1,44 kontrol son:1,65 deney ön:1,39 deney son:3,09

Grafik 10'a göre öntestte öğrencilerin yarıya yakını 'yanlış kavram var' grubunda yer alırken, sontestte kontrol grubunda belirgin bir değişiklik olmayıp kontrol grubunda 12 kişi 'tam anlaşılmış' düzeyde yer almıştır.

Grafik 11: Biyolojik çeşitliliğin önemine yönelik 11. Açık uçlu sorudan elde edilen bulgular

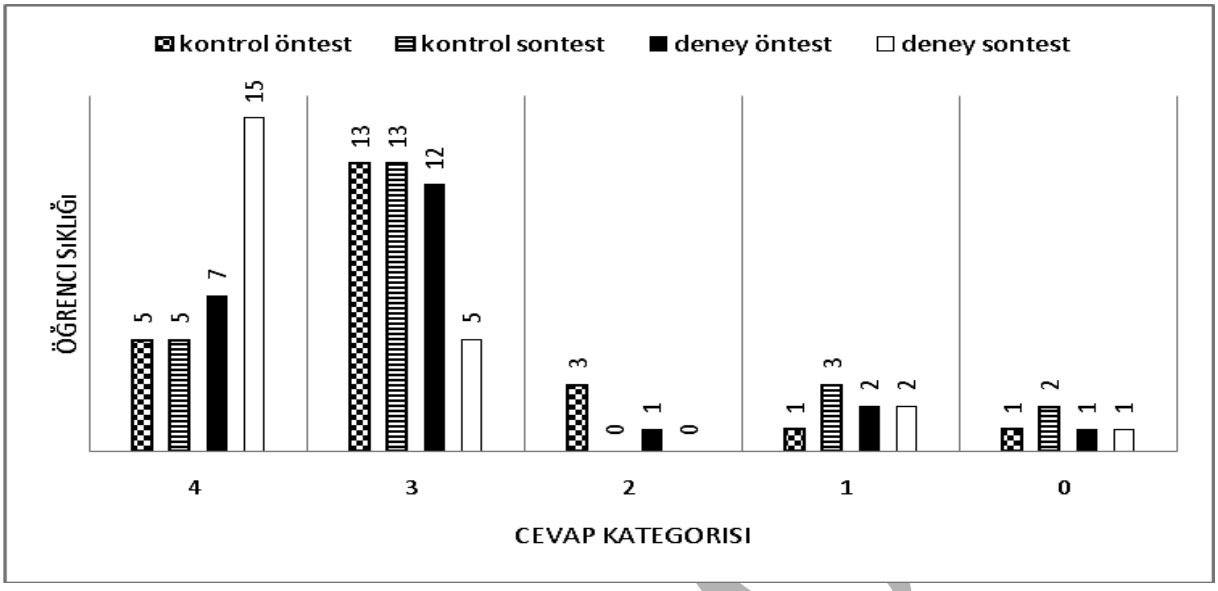


Ortalama Puanlar: Kontrol ön:1,91 kontrol son:3,13 deney ön:2,17 deney son:2,87

Grafik 11'e göre ortalamalara bakıldığında sontestte kontrol grubunda 1.22 puan artmış, deney grubunda ise 0.70 puan artmıştır.

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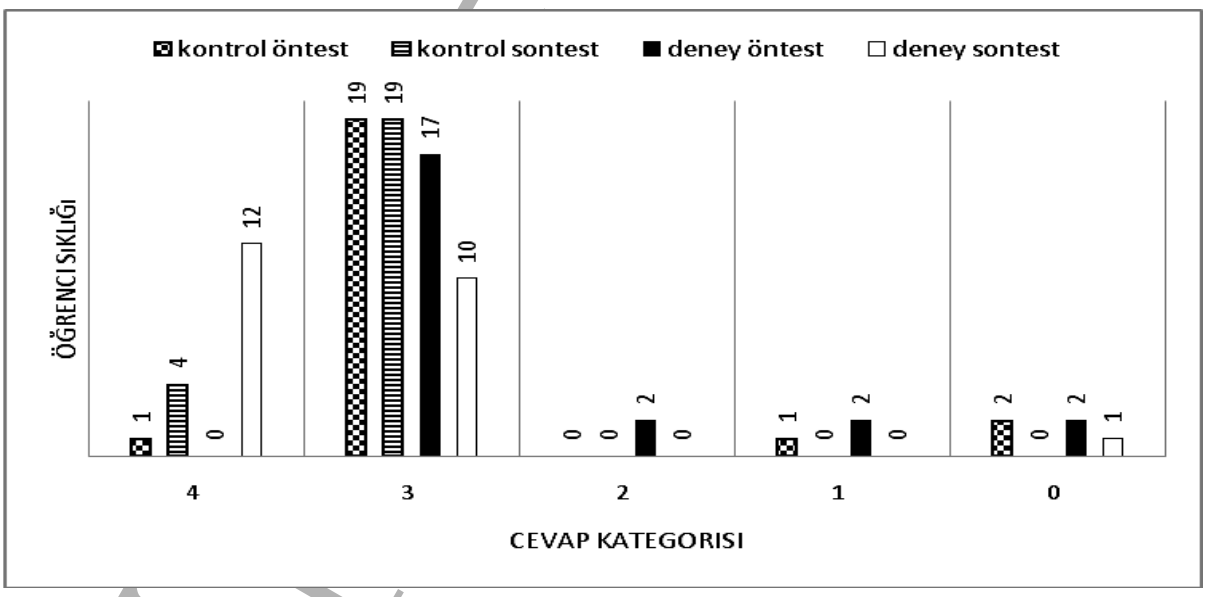
Grafik 12: Nesli tükenme tehlikesinde olan hayvanlara yönelik 12. Açık uçludan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:2,87 kontrol son:2,69 deney ön:2,96 deney son:3,35

Grafik 12'ye göre sontestte 'tam anlaşılmış' düzeydeki öğrenci sayısı kontrol grubunda değişmezken, deney grubunda bu sayı 7'den 15'e çıkmıştır. Bu soruda kontrol grubunun ortalaması 0.18 puan düşerken, deney grubu ortalaması 0.39 artmıştır.

Grafik 13: Hayvanların neslinin tükenmemesi için alınabilecek önlemlere yönelik 13. Açık uçlu sorudan için elde edilen bulgular

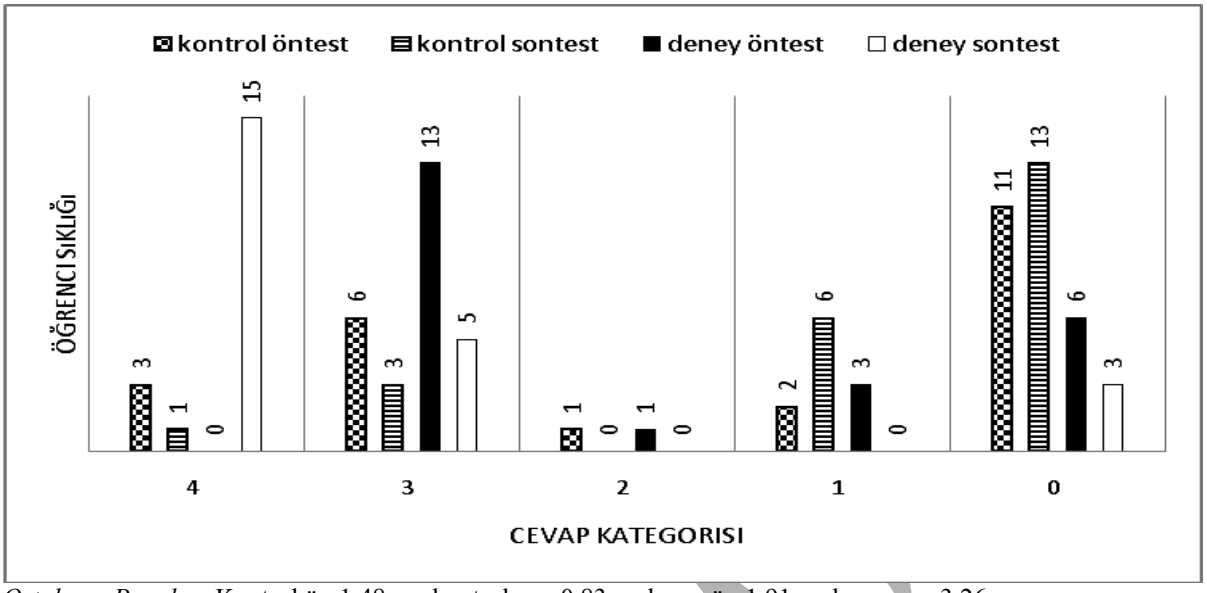


Ortalama Puanlar: Kontrol ön:2,69 kontrol son:3,17 deney ön:2,48 deney son:3,39

Grafik 13'e göre 'tam anlaşılmış' düzeydeki öğrenci sayısı deney grubunda 12kişi artmıştır. Kontrol grubunda ise 3 kişi artmıştır. Sontestte 'Kısmen anlaşılmış' düzeydeki öğrenci sayısı kontrol grubunda değişmemiş, deney grubunun lehine bir azalış meydana gelmiştir.

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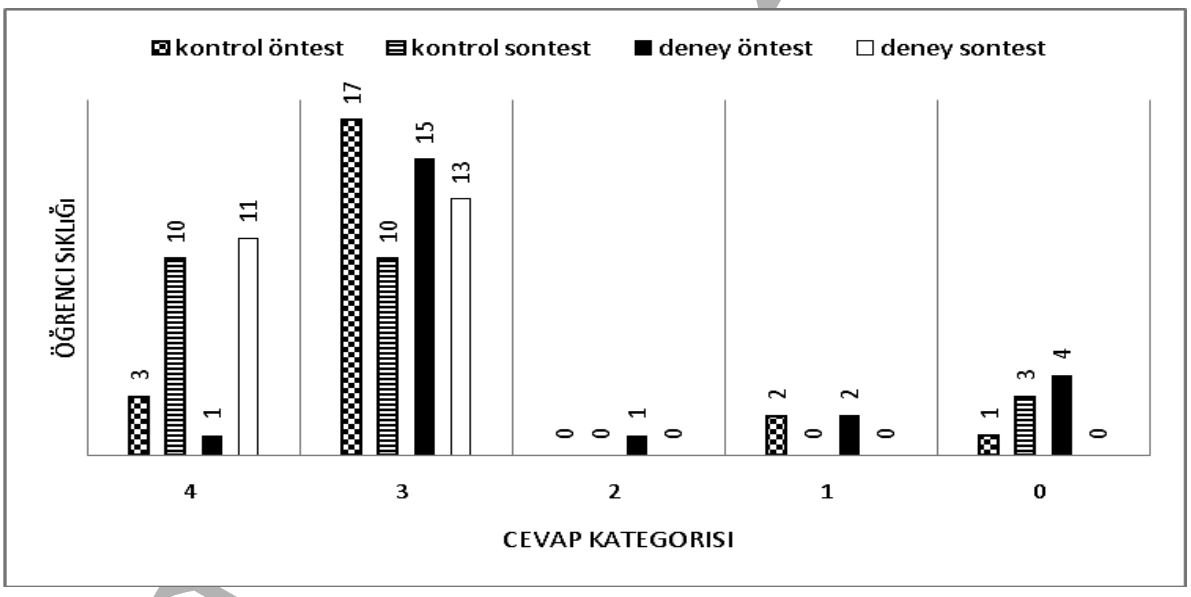
Grafik 14: Nesli tükenme tehlikesinde olan bitkilere yönelik 14. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:1,48 kontrol son:0,83 deney ön:1,91 deney son:3,26

Grafik 14'e göre sontestte deney grubundaki öğrencilerin %65'i , kontrol grubundaki öğrencilerin %4'i 'tam anlaşılmış' düzeyde yer almıştır. Sontestte kontrol grubunun %56'sı 'anlaşılmamış' düzeyde yer almaktadır.

Grafik 15: Bitkilerin neslinin tükenmemesi için alınabilecek önlemlere yönelik 15. Açık uçlu sorudan elde edilen bulgular

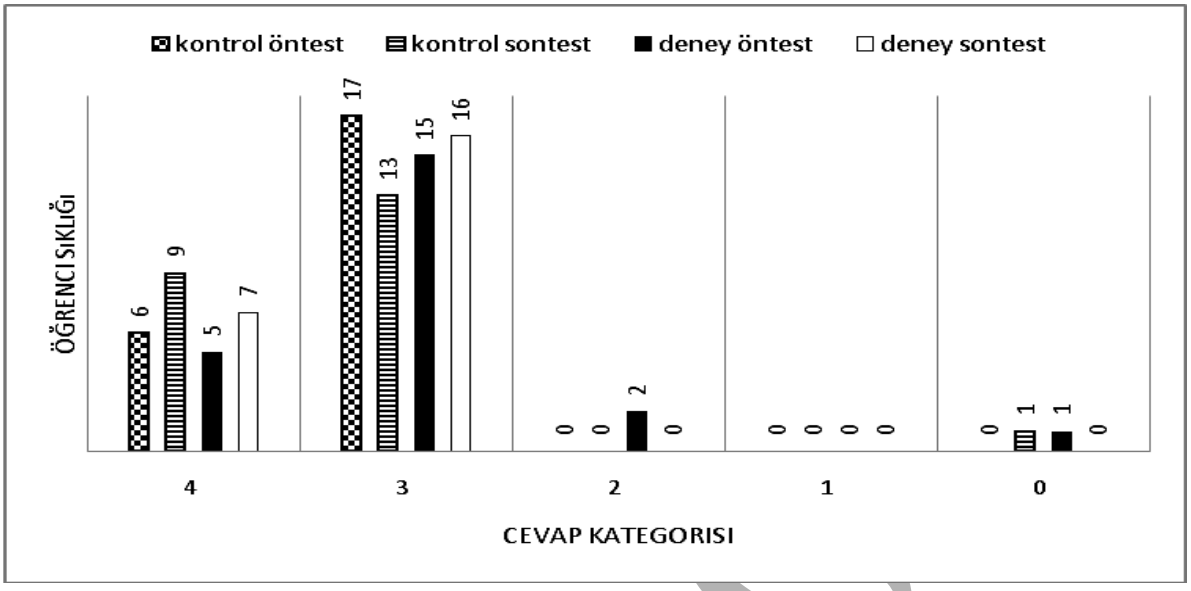


Ortalama Puanlar: Kontrol ön:2,83 kontrol son:3,04 deney ön:2,30 deney son:3,44

Grafik 15'e göre ortalama puanlarda kontrol grubunda 0.21, deney grubunda 1.14 puan artış olmuştur.

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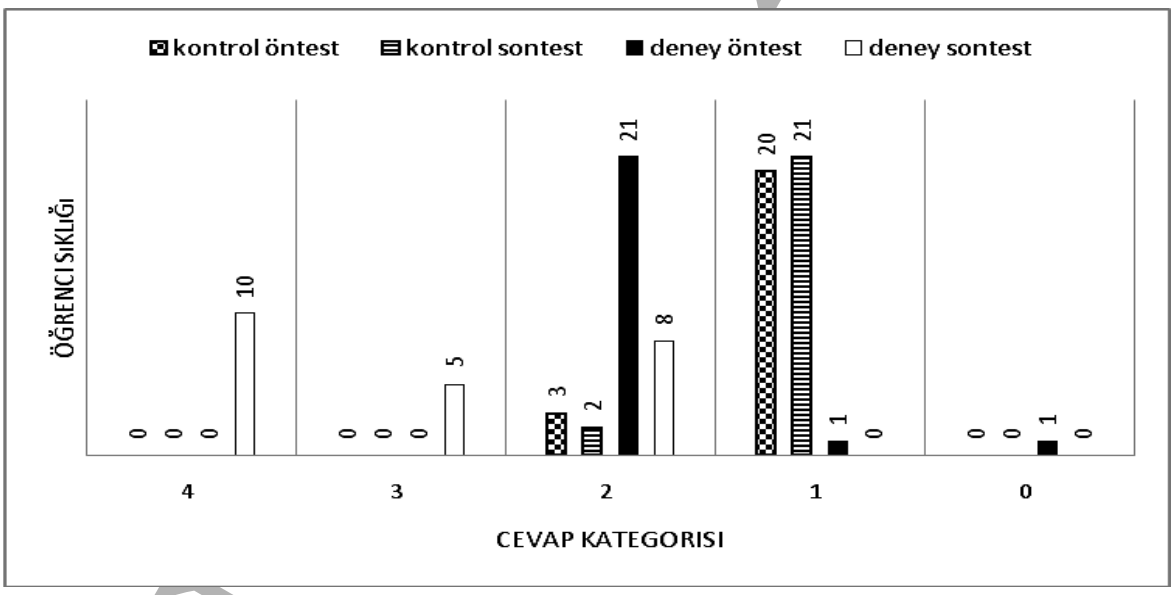
Grafik 16: Bitki ve hayvanlara nasıl davranılacağına ilişkin 16. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:3,26 kontrol son:3,26 deney ön:3,00 deney son:3,30

Grafik 16'ya göre kontrol grubunun ortalama puanında hiçbir değişiklik olmazken, deney grubunda 0.30 puanlık artış olmuştur. İki grupta da sontestlerde öğrencilerin tamamına yakını 3.ve 4.düzeyde yer almıştır.

Grafik 17: Asit yağmuru kavramı ve etkisine yönelik 17. Açık uçlu sorudan elde edilen bulgular

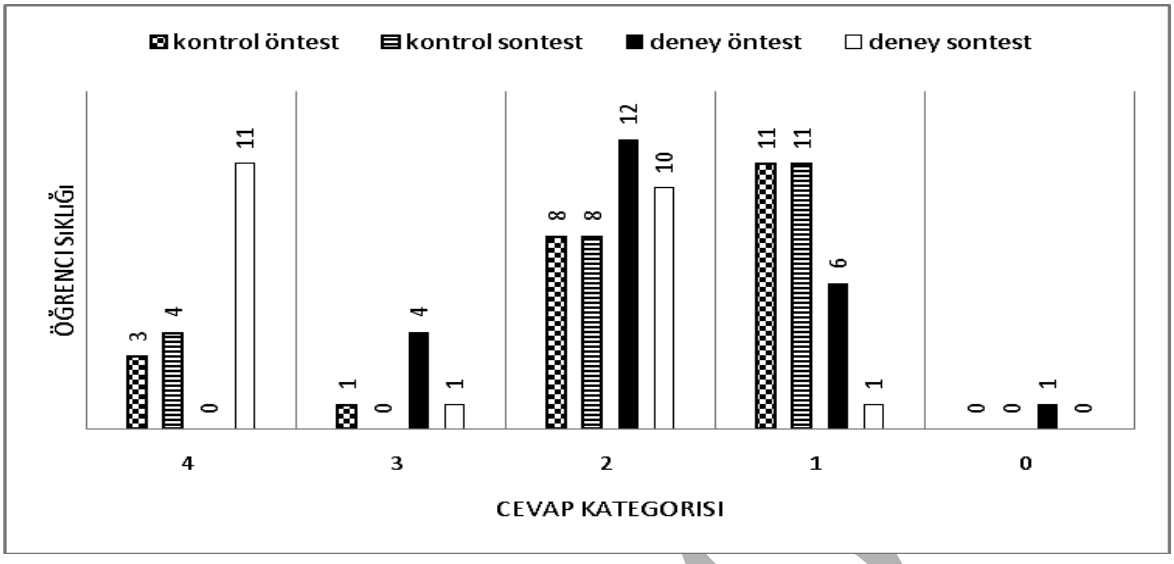


Ortalama Puanlar: Kontrol ön:1,13 kontrol son:1,09 deney ön:1,87 deney son:3,09

Grafik 17'ye göre sontestte kontrol grubundaki öğrencilerin tamamına yakını 'yanlış kavram var' düzeyinde yer alırken, deney grubunda 10 öğrenci 'tam anlaşılmış' düzeyindedir.

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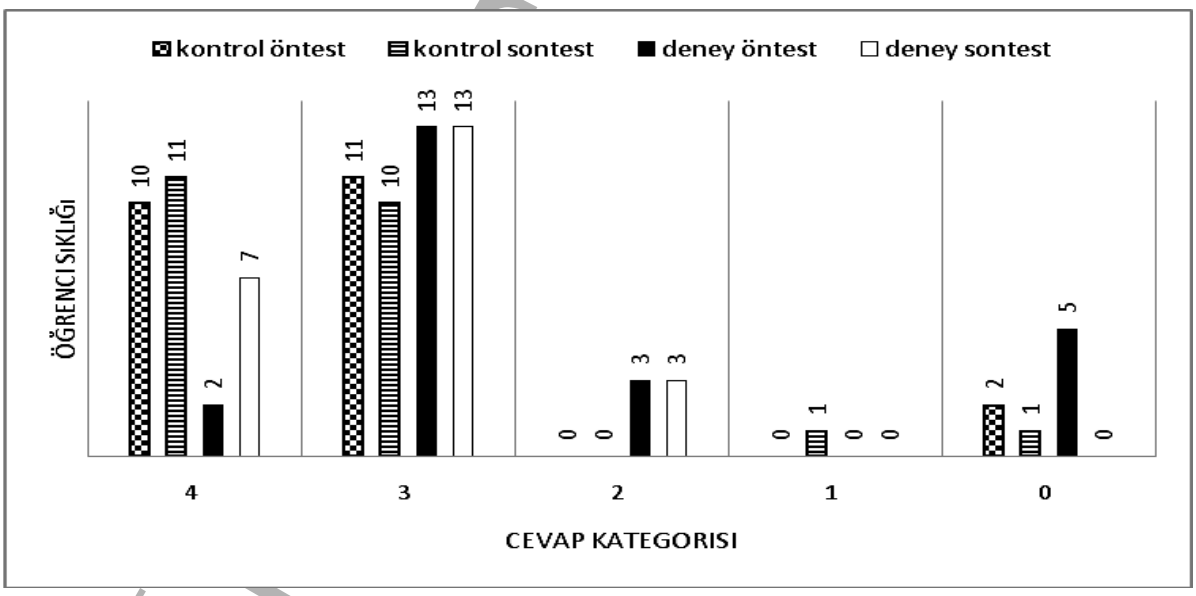
Grafik 18: Küresel ısınma kavramı ve çözüm önerilerine yönelik 18. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:1,83 kontrol son:1,87 deney ön:1,83 deney son:2,96

Grafik 18'e göre sontestte 'tam anlaşılmış' düzeyde yer alan öğrenci sayısı kontrol grubunda 1 kişi artarken, deney grubunda 10 kişilik artış meydana gelmiştir. Ortalama puanlara bakıldığında kontrol grubunda anlamlı bir değişiklik olmazken, deney grubunda 1.13 puanlık artış olmuştur.

Grafik 19: Dünyadaki bir çevre probleminin ülkemizi nasıl etkileyebileceğine ilişkin 19. Açık uçlu sorudan elde edilen bulgular

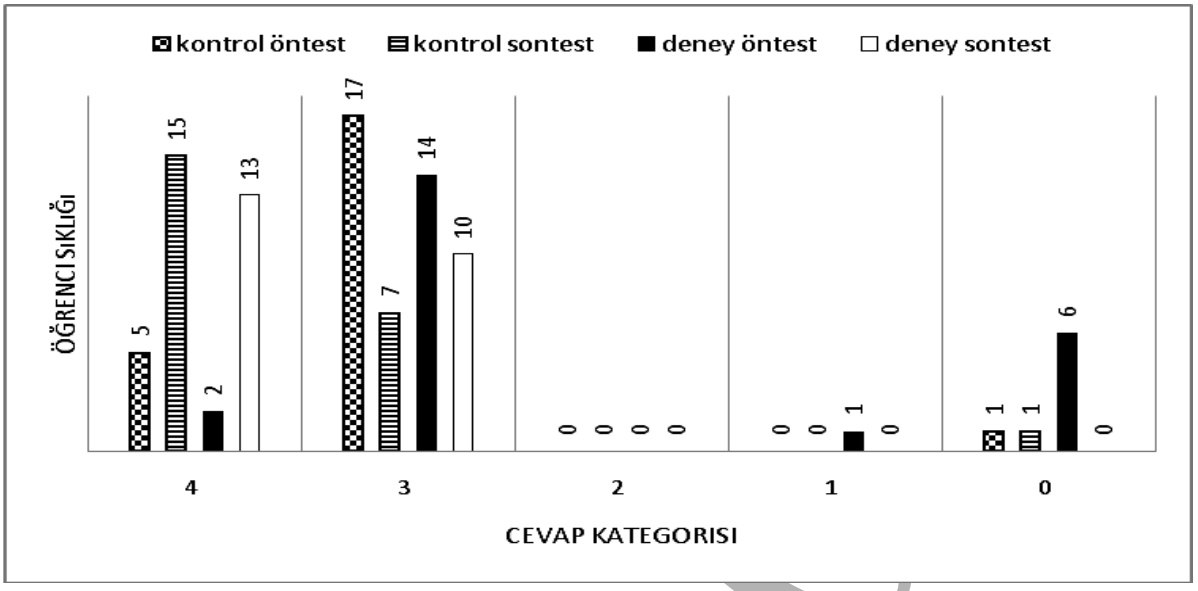


Ortalama Puanlar: Kontrol ön:3,17 kontrol son:3,26 deney ön:2,30 deney son:3,17

Grafik 19'a göre öntest ve sontestte kontrol ve deney grubunda 2.ve 3.düzeyde yer alan öğrenci sayılarında belirgin bir değişiklik olmazken, ortalama puanlarda deney grubunda 0.87 puanlık artış olmuştur.

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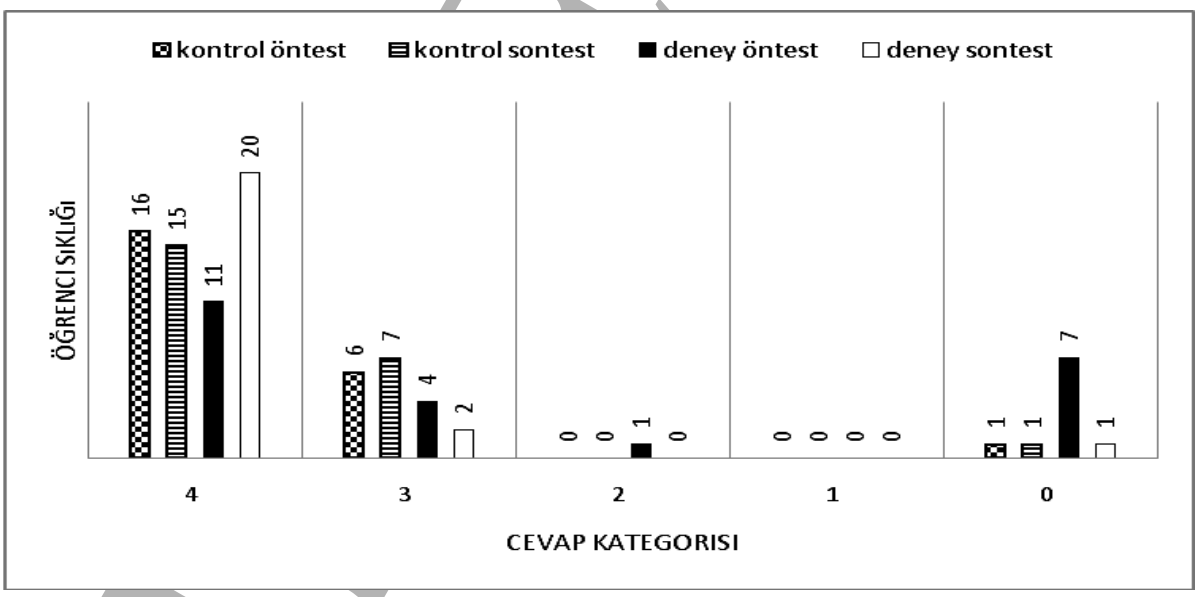
Grafik 20: Ülkemizdeki bir çevre sorununa çözüm önerileri bulmaya yönelik 20. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:3,09 kontrol son:3,52 deney ön:2,22 deney son:3,56

Grafik 20'ye göre öntest sontest sonucunda deney ve kontrol grubunda 'tam anlaşılmış' düzeyde yer alan öğrenci sayılarındaki artış birbirine yakınken, ortalamalara bakıldığında kontrol grubunda 0.43, deney grubunda 1.34 puanlık bir artış olmuştur. Sontest sonucunda iki grupta da öğrencilerin yarıya yakını soruya tam olarak doğru cevap vermişlerdir.

Grafik 21: Çevre sevgisiyle ilgili uygulamalara yönelik 21. Açık uçlu sorudan elde edilen bulgular



Ortalama Puanlar: Kontrol ön:3,56 kontrol son:3,52 deney ön:2,52 deney son:3,74

Grafik 21'e göre 'tam anlaşılmış' düzeyde yer alan öğrenci sayısı kontrol grubunda belirgin bir değişiklik göstermezken, deney grubunda 9 kişilik bir artış meydana gelmiştir. Sontest sonucu iki grupta da öğrencilerin yarısından çoğu 'tam anlaşılmış' düzeyde yer almıştır.

3.2 Kavramsal Gelişime Yönelik Bulgular

Aşağıdaki tablolar öntest ve sonteste doğru, eksik, yanlış ve boş cevap veren öğrenci sayıları baz alınarak oluşturulmuştur.

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Tablo 2: Kontrol grubu öğrencilerinden elde edilen kavramsal gelişime yönelik bulgular

	KAVRAMLAR	Kontrol grubu öntest				Kontrol grubu sontest			
		doğru	yanlış	eksik	boş	doğru	yanlış	eksik	boş
1	Temiz su kaynağı	6		1		2			
2	Habitat	13		3		13		2	
3	Tür		1			1	2	1	
4	Asit yağmuru	2	1	5	1	2		2	1
5	Küresel ısınma		1	7	1	1	4	9	
6	Ozon tabakası	6	1	1	1	9	2	2	
7	Zararlı atık	12				9			
8	Bilinçsizlik	6				1			
9	Doğal kaynak	6				1		1	
10	Tasarruf	7	1			5	1		
11	Dünya	2		1		3			
12	Canlı	6			1	3		3	
13	Hayvan	1			1	1		1	
14	Bitki	1		2		1		2	
15	Biyolojik çeşitlilik					1			
16	Çevre sorunu					2			
17	Tehlike altındaki canlılar	1				3			

Tablo 2'ye göre ön testte; öğrenciler tarafından en çok doğru cevaplanan kavramlar habitat ve zararlı atık, en çok eksik tanımlanan kavram küresel ısınmadır. Kontrol grubunda öğrencilerden 13'ü habitat, 12'si zararlı atık, 6'sı ise temiz su kaynağı, ozon tabakası, bilinçsizlik, doğal kaynak, canlı kavramlarını doğru cevaplamıştır. 1'er öğrenci tür, asit yağmuru, küresel ısınma, ozon tabakası kavramlarını bulmuş fakat yanlış tanımlamışlardır. 7 öğrenci ise küresel ısınma 5 öğrenci ise asit yağmuru kavramını eksik tanımlamıştır.
Son testte; öğrenciler tarafından yine en çok doğru cevaplanan kavram habitat, en çok eksik cevaplanan kavram küresel ısınma olup belirgin bir değişiklik meydana gelmemiştir. Ozon tabakası, çevre sorunu ve tehlike altındaki canlılar kavramlarını doğru cevaplayanların sayısı artmış fakat bu artış önemli bir oranda meydana gelmemiştir. Tür 4, asit yağmuru 5, küresel ısınma 14, ozon tabakası 13, biyolojik çeşitlilik kavramı 1 öğrenci tarafından fark edilmiştir.

Tablo 3: Deney grubu öğrencilerinden elde edilen kavramsal gelişime yönelik bulgular

	KAVRAMLAR	Deney grubu öntest				Deney grubu sontest			
		doğru	yanlış	eksik	boş	doğru	yanlış	eksik	boş
1	Temiz su kaynağı	10		3		4			
2	Habitat	9	2	6	1	16		5	1
3	Tür	1		2		16			
4	Asit yağmuru	1		6	2	17		1	
5	Küresel ısınma		3	7	2	12	1	8	1
6	Ozon tabakası	5	2	3		9	5	3	2
7	Zararlı atık	9				10			1
8	Bilinçsizlik	4				8			
9	Doğal kaynak	5				6			
10	Tasarruf	6				6			
11	Dünya	2				1			
12	Canlı	1				2			
13	Hayvan	1				1			
14	Bitki					1			
15	Biyolojik çeşitlilik					14	1	2	3
16	Çevre sorunu					3			
17	Tehlike altındaki canlılar					4		1	

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Tablo 3'e göre öntestte; öğrenciler tarafından en çok doğru cevaplanan kavramlar temiz su kaynağı ve habitat, en çok eksik tanımlanan kavram küresel ısınmadır. Deney grubu öğrencilerinin 10'u temiz su kaynağı, 9'u habitat ve zararlı atık, 6'sı tasarruf, 5'i ozon tabakası ve doğal kaynak kavramlarını doğru cevaplamıştır. 2'şer öğrenci habitat ve ozon tabakası, 3 öğrenci küresel ısınma kavramını yanlış cevaplamıştır. 6 öğrenci habitat ve asit yağmuru, 7 öğrenci küresel ısınma kavramını bulmuş fakat eksik cevaplamıştır.

Sontestte; öğrencilerin tarafından en çok doğru cevaplanan kavramlar asit yağmuru, habitat, tür, biyolojik çeşitlilik ve küresel ısınma, en çok eksik tanımlanan kavram küresel ısınmadır. Öğrencilerin yarısından çoğu habitat, tür, asit yağmuru kavramlarını doğru cevaplamıştır. Kontrol grubunda biyolojik çeşitlilik kavramını doğru cevaplayan öğrenci sayısı 1 iken, deney grubunda bu sayı 14'tür.

Deney ve kontrol grubunda öntest-sontest kavram gelişimi karşılaştırması sonucunda kontrol grubunda belirgin bir farklılık meydana gelmezken, deney grubunun yarısından fazlası sontestte daha fazla kavramı daha yüksek oranla doğru cevaplamışlardır.

4. SONUÇ

Deney grubunun 1, 2, 3 ve 4. Açık uçlu sorulara verdiği cevaplar grafiklere göre incelendiğinde IEEIA modeline göre işlenen 'İnsan ve Çevre' ünitesinin öğrencilerin cevaplarında belirgin bir farklılık yarattığı, özellikle Abraham ve diğerlerinin (1992) kavram anlama düzeyine göre 'tam anlaşılmış' düzeyde olan öğrenci sayısının sontestte büyük ölçüde arttığı görülmektedir.

Uygulama öncesinde elde edilen veriler incelendiğinde her iki gruptaki öğrencilerin kavramsal anlama düzeyleri puan ortalamaları arasında belirgin bir fark bulunamazken (Grafik 1-21), uygulama sonrasında ortalama puanlar açısından deney grubu öğrencilerinin lehine bir fark tespit edilmiştir. Bu sonuçlara bakılarak kavramsal anlamaya yönelik IEEIA modelinin öğrencilerin çevre kavramlarını anlamalarında etkili olduğu söylenebilir. IEEIA modelinde çevresel eylem stratejilerinin kullanılması, sorumlu çevresel davranış, bilgi ve becerilerin artmasını sağlamıştır (YoungSook, 2004). Kontrol grubu öğrencilerinin kavramsal anlama düzeyi son test puan ortalamaları ön test puan ortalamalarına göre sınırlı artış göstermiştir. Kontrol grubunda meydana gelen sınırlı artışın nedeni uygulanmakta olan yapılandırmacı yaklaşıma dayalı Fen ve Teknoloji programında (MEB, 2006) yer alan öğretim yöntem ve tekniklerinin öğretimsel yönlerden yeterince yapılandırılmaması olabilir.
Uygulama sonunda deney grubu öğrencilerinin kontrol grubu öğrencilerine göre; canlılar arasındaki beslenme ilişkilerini çizimlerine daha doğru şekilde yansıttıkları (Grafik 7), besin ağında meydana gelecek değişiklikler hakkında daha üst düzeyde yorum yaptıkları (Grafik 6) görülmüştür. Deney grubu öğrencilerinin kontrol grubu öğrencilerine göre; dünyada ve Türkiye'de nesli tükenmekte olan canlılara daha fazla örnek sunarak, bu canlılar hakkında daha fazla bilgi verdikleri (Grafik 12-14), nesli tehlike altında olan canlıların bu duruma gelmesindeki insan etkilerini konusunda daha yüksek düzeyde farkındalığa sahip oldukları, bu canlıların neslini korumak adına daha üst düzeyde çözüm önerileri sundukları tespit edilmiştir (Grafik 13-15). Uygulama sonunda deney grubu öğrencilerinin kontrol grubu öğrencilerine göre; nükleer santrallerin neden olduğu çevre problemleri ile ilgili daha üst düzeyde yorum yapabildikleri (Grafik 19), çevre sorunlarına engelleme konusunda daha çeşitli çözüm önerileri sundukları görülmüştür (Grafik 18-20). Bu veriler IEEIA modelinin temelini oluşturan 'issue investigation and action training' eğitiminde yer alan öğrencilerin, bu çalışmaya katılmayan öğrencilere oranla daha çok çözüm getirici çevresel davranışlar sergilemeye eğilimli olduğu sonucuyla tutarlıdır (Ramsey, 1993)
Ön test ve son testten elde edilen veriler özetlendiğinde; uygulama öncesinde her iki grup arasında belirgin farklılık olmazken, uygulama sonunda deney grubundaki öğrencilerin kontrol grubundaki öğrencilere göre tür, habitat, popülasyon, ekosistem, biyolojik çeşitlilik gibi temel kavramları daha iyi yapılandırdıkları; canlılar arasındaki beslenme ilişkileri ile nesli tehlike altında olan canlıları daha derinlemesine öğrendikleri ve çevre sorunlarına karşı daha yüksek sorumluluk gösterdikleri görülmüştür. Ramsey (1993) yapmış olduğu çalışmalarda bu modelin sadece çevre eğitiminde değil bilim, teknoloji ve sosyal eğitimde de yer alması gerektiğini belirtmiştir. Ne yazık ki bilim ve çevreyle ilgili yöntemlerin çoğu, sorunun temel bileşenlerini içermemektedir. Araştırmadan elde edilen veriler, IEEIA'nin okul müfredatına katılmasıyla çevre sorunlarını düzeltmede rol alacak vatandaşların kazanılacağını göstermektedir (Ramsey,1993)

'Değişen Dünya' isimli kavram gelişim metninin son testinde deney grubunda kavramları bulan ve doğru tanımlayan öğrenci sayısında belirgin bir artış görülürken kontrol grubunda gözle görülür bir farklılık oluşmamış, bulunan kavramların ise çoğunda eksik ve yanlış tanımlamalar devam etmiştir. IEEIA modeli insanların birbirleriyle ve çevreyle doğrudan etkileşim kurmasını sağlayıp, insanlara sorun ve olaylarla ilgili kavramları fark etme becerisi kazandırır (Paul, 2001) Ayrıca öğrencilerin uygulama boyunca özellikle çevre eylem planı oluşturma ve uygulama aşamasında toplumda daha fazla aktif olma isteği duyduğu, çevre problemlerini çözmede meraklı ve istekli olduğu gözlemlenmiştir. Deney grubunda yer almayan izleyici olarak

katılan (diğer öğrenciler, veliler, vatandaşlar) kişilerde uygulama boyunca yapılan eylem planlarıyla ilgili memnuniyetlerini ifade etmişlerdir. Paul ve Volk'un (2002) çalışmasında öğretmenler IEEIA modelinin kullanılmasının öğrenciler, yöneticiler, iş arkadaşları ve veliler üzerinde olumlu etki oluşturduğunu söylemiştir.

Bu sonuçlara bakılarak IEEIA modelinin bir gereği olarak;

- bireysel olarak çevre problemlerini anlama
- gerçek çevre sorunlarını kullanma
- problemler arasındaki karmaşık ilişkileri görüp neden sonuç ilişkisi kurabilme
- ikincil kaynaklardan bilgi edinebilme
- diğer vatandaşların inanç ve tutumlarını araştırma
- araştırma soruları yazabilme
- çevre sorunlarına yönelik hem bireysel hem toplumsal eylem planı hazırlayabilme
- sorumlu vatandaş olabilme

becerilerini öğrencilerin etkili bir şekilde kullanması onların çevre kavramlarını anlamalarında ve kavramsal gelişimlerinde etkili olduğu söylenebilir.

5.ÖNERİLER

Dünyamız her geçen gün yeni çevre sorunlarıyla karşı karşıya kalmaktadır. Çevre sorunlarının çözümü için de çevre eğitimine özgü bağımsız bir modüler programın geliştirilmesi gereklidir. Böyle bir programın varlığıyla, bireylere daha iyi bir çevre eğitiminin verileceğini, karşılaşılan zorlukların ve sorunların en aza ineceğini ve bireylerin çevreye karşı sorumlu vatandaşlık becerilerinin geliştirileceği düşünülmektedir.
Bu amaçla araştırmada elde edilen sonuçlara yönelik öneriler üç başlık altında belirtilmiştir.

5.1 Öğretmenlere Yönelik Öneriler

Çevre kavramlarının öğrenciler tarafından doğru yapılandırılması ve çevre sorunlarının neden ve sonuçlarının öğrenciler tarafından iyi algılanması için öğretmenler öğrencileri doğru bilgi kaynağına nasıl ulaşabileceği konusunda yönlendirmelidirler.
Bu araştırmada IEEIA modelinin etkililiğinin artması için öğretmenin öğrenme sürecine yaptığı katkıların önemli olduğu görülmüştür. Bu yüzden öğretmen, sürecini iyi planlamalı, öğrenci ve konunun özelliğine göre uygun örnek olaylar seçmeli, öğrencilerin çevre sorunlarında diğer vatandaşların tutumlarının önemini anlamaları için okul dışında da aktif olmalarını sağlamalıdır.
Öğrencilerin çevreye yönelik eylem planlarını gerçekleştirebilmeleri için belli başlı sosyal vatandaş becerilerine sahip olmaları gerekmektedir. Bu bağlamda öğrencilere çevreyle ilgili çeşitli vakıf ve kurumlar hakkında bilgi vermesi ve yönlendirmesi faydalı olabilir.
Araştırmada IEEIA modelinin çevre kavramlarını anlama düzeylerini artırdığı görülmüştür. IEEIA modeli öğretmenler tarafından diğer fen kavramlarının öğrenilmesinde de kullanılabilir. Çalışmalar öğretmenler tarafından sınıf dışı etkinliklerle de desteklenerek öğrencilerin çevre bilgisinde daha yüksek bir artış sağlanabilir.

5.2 Araştırmacılara Yönelik Öneriler

Araştırmada geliştirilen ölçme araçları ilgili diğer çalışmalarda ve ilgili konuların öğretiminde kullanılabilir.
Çalışmada, IEEIA modelinin öğrencilerin çevre konularında kavram öğrenme ve kavramsal gelişimleri üzerine etkisi incelenmiştir. IEEIA modelinin çevre duyarlılığı,tutum, başarı vs. üzerine etkisi incelenebilir.

Öğrencilerin çevreye yönelik tutumlarında oluşabilecek değişikler daha uzun süreli çalışmalarla ortaya konulabilir.

5.3 Program Geliştiricilere Yönelik Öneriler

2005 Fen ve Teknoloji Programı incelendiğinde program, IEEIA modelinin içinde yer alan bazı etkinlikleri içerse de etkinlikler içerisinde, çevre eğitiminin tüm boyutlarıyla ele alınarak gerektiği gibi yapılandırılmadığı görülmüştür. Bu nedenle programda IEEIA modeliyle ilgili etkinlikleri içeren modüller ele alınarak yeniden yapılandırılması sağlanabilir.
2005 Fen ve Teknoloji Programı çevreye yönelik kazanımlarda aktif öğretime dayalı sınıf dışı uygulamalarla desteklenmelidir.
Öğrencilerin çevreye yönelik sorumlu vatandaşlık becerisi geliştirmesini sağlayan IEEIA modelinin eylem planını gerçekleştirme modülüne uygun ortamlar sağlanabilir.

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EĞITIM BILIMLERINDE OLAY GEÇMIŞI ÇÖZÜMLEMESI

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Olay Geçmişi Çözümlemesi (OGÇ), doğum, ölüm, boşanma, evlilik, ayrılma gibi olayların süresi ile ilgilenmektedir. Klasik istatistiksel yöntemlerden farklı olarak parametrik olmayan, yarı-parametrik ve parametrik modeler kullanılmaktadır. Son yıllarda, eğitim bilimlerindeki uygulamalar (Willet & Singer, 1991; Huff & Fang, 1999; Boonzaaier, 2000), özellikle hem öğrenci ve hem de okul açısından öğrencilerin ayrılması/mezuniyeti, önem kazanmıştır. Ayrıca, Radcliffe v.d. (2006) atletlerin, Chimka v.d. ((2007) ve Nicholls v.d. (2009) mühendislik öğrencilerinin, Finch v.d. (2009) sözleşmeli okullarda eğitim gören öğrencilerin ve Reibnegger (2012) tıp öğrencilerinin özelliklerini OGÇ kapsamındaki modeller ile incelemiştir. Bu çalışmada ise, OGÇ ile eğitim bilimleri alanına ait farklı yaklaşımlar verilecek ve yeni gelişmeler tartışılacaktır.

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Event History Analysis in Educational Sciences

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Abstract:

Event History Analysis (EHA) deals with the duration of events such as births, deaths, divorves, marriages, retentions, etc. Nonparametric, semi-parametric and parametric models different from the classical statistical methods used in the concept of the EHA. In recent years, the applications on educational sciences (Willet & Singer, 1991; Huff & Fang, 1999; Boonzaaier, 2000) especially on student retention/graduation have gained importance at both school and students perspectives. Further, Radcliffe et al. (2006), Chimka et al. (2007), Nicholls et al. (2009), Finch et al. (2009) and Reibnegger (2012) analyzed the retention/graduation of students by the EHA models. In this study, several approaches in the EHA is given and new developments are discussed.

Keywords: Censoring; Cox regression model; Event History Analysis; Graduation; Duration time.

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Keywords: Durdurma; Cox regresyon modeli; Mezuniyet; Olay geçmişi Çözümlemesi; Olay süresi

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THE COGNITIVE STRUCTURES OF STUDENTS IN FACULTY OF EDUCATION REGARDING THE CONCEPT OF 'UNIVERSITY'

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ABSTRACT
In this study, it is aimed to reveal how students studying in the Faculty of Education perceive the concept of university. Case study design, qualitative research approach, was used in this study. The working group is comprised of students, a total of 85, studying in the Faculty of Education in Siirt University during 2014-2015 academic year. In this study, it is strived to reveal and analyze how the students in Faculty of Education construct the concept of 'university' in their mind through the use of a 'Word Association Test'. The data obtained in this study were analyzed according to content analysis. Suggestions were made in accordance with the findings.

Keywords: University, Faculty of Education, Candidate Teachers

INTRODUCTION

The origin of the word 'university' is "Universitas", a word meaning *'a community of people which have common interests and independent legal identity'* in Latin. Until the 19th century, the fundamental functions of the universities were education and training. Until this time, universities in Europe were institutions where only the children of the rich and nobles could study. Higher education was regarded as an endeavor which contributes the privileged people to get knowledge by means of its cultural, artistic and scientific disciplines, to improve and mature spiritually. Universities underwent a rapid development period both in quality and quantity in the 19th century. After these years, the need for reforms in higher education was appeared and research function was also added to education and training activities. This approach, which marked the 19th century higher education system, continued in the first half of the 20th century as the scientific and technological research and development dimension were included (Tural, 2011: 7-8). Universities of the 21st century have begun to be original and privileged as they are producing knowledge, and to share the knowledge acquired for the development and welfare of the society (Sahin and Yildiz, 2005). The concept of '*university*' today means "a community of scientists and students, which has its foundations on science, universality, unity and unitary elements" (Ataunal, 1998).

Since they play a prominent role in individual and social change, universities have to provide societies with both a global perspective and an understanding of the world. In other words, universities play a key role in all information production processes, namely production, testing, sharing, publishing and implementation processes. Universities are considered to be social mobility devices by each of the social sectors. Universities are the main frequency to obtain free, autonomous and individual identity and create a living practice (Sahin and Yildiz, 2005).

Universities have four essential functions, (i) producing information, (ii) teaching, (iii) presenting information and (iv) spreading information. Universities realize the production function through research and development activities, teaching through educational activities, presenting information function by providing counseling service to the community and spreading information through scientific publications (Gunay, 2004). Researches in the literature also emphasize these functions of the university. For instance, Yucel (2006) purports universities' missions are to follow scientific research, to monitor what has been done and to contribute to the development of science at an international level. Ortas (2004) advocates that universities are environments which prioritize mental processes to emotional processes in a philosophical discussion, and places to enable people to realize events by observation and discussion. The Head Council of Research, Planning and Coordination (2002) enumerates the objectives of the university as (a) to educate and raise students in accordance with their interests and abilities according to manpower needs of the society at high level and at different levels, appropriate for the country's science policy, (b) to do research in scientific fields, (c) to publish any kind of publications to disseminate research – analysis results and contribute to the progress of science and technology, and (d) to finalize research, investigations and analyses ordered by the government and then provide expert opinion on them. According to Wasserburg (2002) is a scientific and rational educational institution where knowledge is produced and transferred, and learners are taught skills and how to use technology.

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University education, an important step in the education and training process, is of paramount importance since it constitutes society's intellectual capital, pioneers the society and raises the labor force of the future. The vital qualities of the universities are to raise highly qualified students, to provide labor supply in line with the economic needs, and to compete in national and international market. A university which has the essential infrastructure, physical spaces appropriate for training, the social services departments which contribute to socialization and qualified teaching staff can directly affect achievement performance in students' lives (Orer, 2006).

Faculties of Education in universities also draw attention with their excessive number of students, as well as training staff for a very basic profession, teaching, to raise future generations. During a period of rapid change taking place in universities, the importance of Faculties of Education is increasing day by day, rather than decreasing. University students' perspectives regarding university or how they perceive it seems important. In this study, through the use of a 'Word Association Test', it is strived to reveal and analyze how the students in Faculty of Education construct the concept of 'university' in their mind. It can be said that findings are of great importance because they reveal a panorama of the current situation.

METHODOLOGY

Research Design

Case study design, a qualitative research approach, was utilized in this study. A case study is a research method which identifies a phenomenon within its natural and real living framework and examines cases up-close, in-depth, and systematically (Yin 2003; McMillan, 2000; Verma & Mallick, 1999; Cohen & Manion, 1997). In a case study, it is highly important to present data as detailed, direct and supported by participants' own statements as possible (Punch, 2005; Kus, 2003). In this study, however, data concerning the cognitive structures of students in faculty of education regarding the concept of 'university' are analyzed as detailed as possible.

Working Group

Eighty-five volunteer students studying in the Faculty of Education in Siirt University, during 2014-2015 academic year, constitute the working group. However, phenomena 17 students wrote down concerning the key word provided and sentences they structured were considered to be 'irrelevant' and excluded. 31 participants were females and 37 were males, a total of 68 participants.

Data Collection

Independent word association test is one of the most widely used techniques to analyze individuals' cognitive structure and associations among concepts, namely the information network, in this structure, and to reveal whether the associations among concepts in long-term memory are sufficient or not (Hovardas & Korfiatis, 2006; Atasoy, 2004; Bahar & Ozatli, 2003; Cardellini & Bahar, 2000). This technique is based on an assumption that an individual should independently respond in relation to a stimulant-word, without limiting the ideas that come to mind (Bahar, Johnstone & Sutcliffe, 1999; Sato & James, 1999). Data are collected in two stages.

In the first stage; the participants have to respond the first five words that the stimulus word brings to their mind within a certain period of time (30 seconds) in the independent word association test. Thereby, the risk of chain response can be prevented. Because, if a student does not revisit the key concept for each response, instead of the key concept, he/she will write down the words that are reminded by the words he/she has written down. In the second stage; though, the participants are asked to construct sentences concerning the key concept within a certain period of time (30 seconds). Sentences related to the key concept in response may also be products of associations, not only associated with the key concept at the level of recall. (Ercan, Tasdere & Ercan, 2010).

Data Analysis

In the analysis of WAT (*Word Association Test*), response words every student provided for each key word are identified one by one. Similar response words obtained are combined and categorized according to the topics. Words considered as irrelevant, many words unrelated to other words and words repeated many times are not included in the evaluation. It is calculated how many times the words under each category are repeated and frequency table is prepared. The data obtained from the independent word association test are analyzed using word count, number of responses and semantic relationship techniques (Atasoy, 2004). The words answered to have the same meaning are classified under the most frequently repeated words. The words are categorized using the semantic relationship criterion and frequencies of the words in each category are calculated (Kurt, 2013; Kostova & Radoynovska, 2010; Kostova & Radoynovska, 2008; Daskolia, Flogaitis & Papageorgiou, 2006).

Another method used to analyze data obtained from WAT is the cut-off point (CP) technique introduced by Bahar, Johnston and Sutcliffe (1999) and creating conceptual network. In the light of frequency tables, 3-5 numbers down the maximum response words for any key concept was used as cut-off points. Concepts and response words over

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this frequency were associated by means of interconnection lines and the first part of the conceptual network was created. Afterwards, the cut-off point was lowered step by step and this procedure lasted until all the key words appeared on the conceptual network (Ercan, Tasdere & Ercan, 2010). Each cut-off point interval indicates response words provided by candidate teachers, as many as that number, in response to the key concepts. By establishing links between these concepts and response words, conceptual networks were revealed in the interval regarding that cut-off point.

FINDINGS

The findings obtained in this study are presented by making use of tables and figures. Words produced in relation to the concept of 'university' and frequencies are given in Table 1. In the second stage, the conceptual networks were created by using cut-off technique with respect to these data.

Table 1. Categories regarding the concept of university, words and their frequencies

Categories	Concepts in categories	Frequencies of the concepts (f)	Concepts in categories	Frequencies of the concepts (f)	Total frequencies (f)
Education Environment	Academician	*18*	Learning	*6*	*113*
	Knowledge	*15*	Lesson	*5*	
	Education	*13*	Self-realization	*5*	
	Book	*13*	Responsibility	*4*	
	Examination	*11*	Department	*3*	
	Student	*9*	Ability	*2*	
	Institution	*9*	---	---	
Getting a Profession	Profession	*9*	Student	*5*	*70*
	Expertise	*8*	Status	*5*	
	Education	*6*	Future	*4*	
	Freedom	*6*	Higher Education	*3*	
	Finance	*6*	Examination	*3*	
	Work	*5*	Life	*3*	
	Learning	*5*	Hope	*2*	
A Place for Social Life	Freedom	*8*	Entertainment	*3*	*43*
	Friend	*7*	Student	*3*	
	Socialization	*7*	Money	*3*	
	Happiness	*5*	Dreams	*2*	
	Activity	*3*	Love	*2*	
Free Speech Environment	Free Thought	*7*	Education	*3*	*22*
	Science	*4*	Development	*3*	
	Achievement	*3*	Skill	*2*	
Difficulties Encountered	Financial difficulties	*3*	Labor	*2*	*7*
	Conflict	*2*	---	---	
Total	***24***	***182***	***23***	***73***	***255***

Education environment: When responses of the students of Faculty of Education with respect to the key concept 'University' are analyzed, it is observed that "Education environment" (f=110) stands out as the dominant category. It is revealed that the most frequently repeated concept is 'Academician' (f=18). This concept is followed by "Knowledge" (f=15), "Education" (f=13), "Book" (13), "Examination" (f=11), "Student" (f=9), "Institution" (f=9), "Learning" (f=6), "Lesson" (f=5), "Self-realization" (f=5), "Responsibility" (f=4), "Department" (f=3) and "Ability" (f=2). "Success", "Resource", "Modernity", "Laboratory", "Discussion", "Talent", "Higher Education Institution" and "Time" are examples for concepts which are not presented in Table 1 since they were stated only once. In this category devoted to the educational environment, it is observed that a majority of students associate the concept of "University" with elements that make up the university education, while fewer students do it by associating with their individual skills and development.

Sample opinions in this category are as follows:

"Universities are places for modern education where students are provided with high-level information by academic staff, also by making use of various textbooks." (S3)

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"It is a high-level educational institution in which individuals can improve themselves and people have to fulfil their responsibilities."(S26)
"University is a place home to education, where individuals are placed in accordance with their capabilities, take courses and have oppotunity to self-realize themselves." (S51)
"It is an educational institution in which students continue their education in departments they are placed according to their exam results." (S56)

Getting a profession: When responses to the key concept 'University' are analyzed, it is observed that "Profession" (f=9) was repeated most and "Expertise" (f=8) was ranked as the second in this category where perspectives with respect to getting a profession come into prominence. These concepts are followed by "Education" (f=6), "Freedom" (f=6), "Finance" (f=6), "Work" (f=5), "Learning" (f=5), "Student" (f=5), "Status" (f=5), "Future" (f=4), "Higher education" (f=3), "Examination" (f=3), "Life" (f=3) and "Hope" (f=2) respectively. Sample concepts which are not presented in Table 1 since they are repeated only once are "Make-up exam", "Studying", "Difference", "Opportunity", "Human resources", "Career", "Combat", "Maturation", "Money" and "Project". Under this category devoted to a profession, the concept of "University" is associated with the facts that social status is increased and future anxiety is disappeared since people become financially independent as a result of getting a profession.

Sample opinions in this category are as follows:
"An institution in which individuals are provided education and training in order to get a job and be more successful in their careers." (S11)
"An institution which takes on important tasks to prepare individuals for the future, make them become financially independent and consequently heighten their social status by means of the education service it provides." (S14)
"A higher education which trains staff for business life" (S36)
"The only hope on the point of getting a job, obtained through exams." (S46)

A Place for Social life: It is observed that "A place for Social Life" (f = 43) has been associated in third place regarding the concept of "University". "Freedom" (f = 8) was repeated most, and the concepts of "Friend" (f = 8) and "Socialization" (f = 7) seem to be second and third respectively. These concepts of "Happiness" (f =5), "Activity" (f =3), "Entertainment" (f =3), "Student" (f =3), "Money" (f =3), "Dreams "(f =2) and" Love "(f =2) follow these concepts. "Perspective", "Education", "Travelling", "Relationship", and "Environment" are the concepts repeated only once and so not included in the table. In this category oriented towards a place for social life, it is revealed that students put an emphasis on financial freedom along with the individual freedom, and associate with socialization through friendship and fun events in general.

Sample opinions in this category are as follows:
"The university environment is one of the freest environments available to students. We have the opportunity to realize our dreams through this freedom. "(S6)
"Our university is a place of love, fun and happiness. University days are the most beautiful days of human life. "(S33)
"It is a place home to education where because of freedom, socialization and fun activities we do not realize how fast time passes. We also achieve happiness despite financial difficulties." (S49)

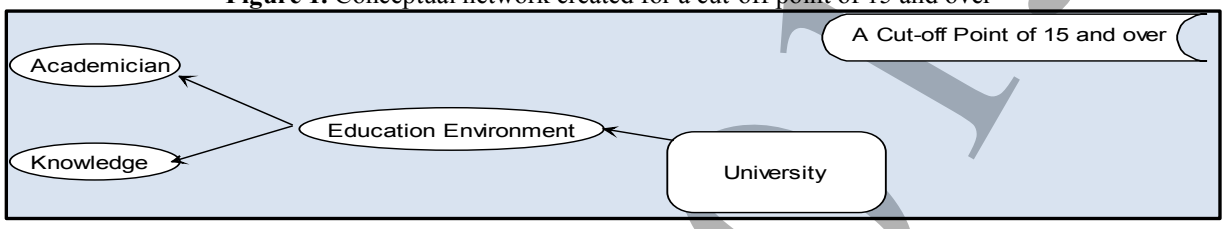
Free Speech Environment: In this category (f=22), in which the concept of "University" and "Free Speech Environment" are associated, it is observed that the concept "Free Thought" (f=7) was repeated most. This concept is followed by "Science" (f=4), "Achievement" (f=3), "Education" (f=3), "Development" (f=3) and "Skill" (f=2) respectively. "Good manners", "Speech", "Maturation", "Culture" and "Style" were found to be sample concepts which are not presented in Table 1 since they are repeated only once. In this category, students emphasize the importance of education in terms of knowledge, skills and development within a process of free speech along with a free thought environment.

Sample opinions in this category are as follows:
"... University is an environment in which free thought exists." (S15)
"It is a free thought environment where students are informed and improved their skills." (S19)
"It is a community of mature and cultivated people who can express themselves freely." (S43)
"It is an environment where people have opportunities to know themselves and improve their skills." (S53)
Difficulties Encountered: In this category (f=22), in which the concept of "University" and "Difficulties Encountered" (f=7) are associated, it is observed that "Financial Difficulties" (f=3), "Conflict" (f=2) and "Labor" (f=2) are repeated. Some concepts which are not included in Table 1 since they were stated only once in this category are "Exams", "Responsibility", "Caprice", "Obligation", "Absenteeism", "End-point" and "Time". In

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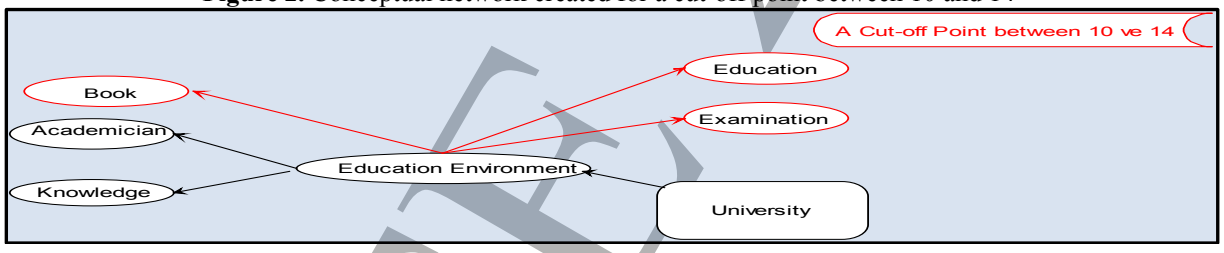
this category, students associate financial difficulties and conflicts they experience in friendship environment. In addition, it is inferred that students need excessive labor to fulfil expectations.
Sample opinions in this category are as follows:
" I thought that I would get rid of the Transition to Higher Education Examination (YGS in Turkish) for which I had made a great and intense effort, spend time to the fullest, make good friends, be upgraded as a knowledgeable person and have fun when I had come to the university. But, financial difficulties I had turned everything upside down. "(S21)
"Individuals inherently have different views and many people do not accept these differences. Therefore, conflict environment occurring from time time to time creates disappointment to me." (S45)
The associations between the key concepts and words produced are presented according to cut-off points. The conceptual network created for a cut-off point of 15 and over is displayed in Figure 1.

Figure 1. Conceptual network created for a cut-off point of 15 and over



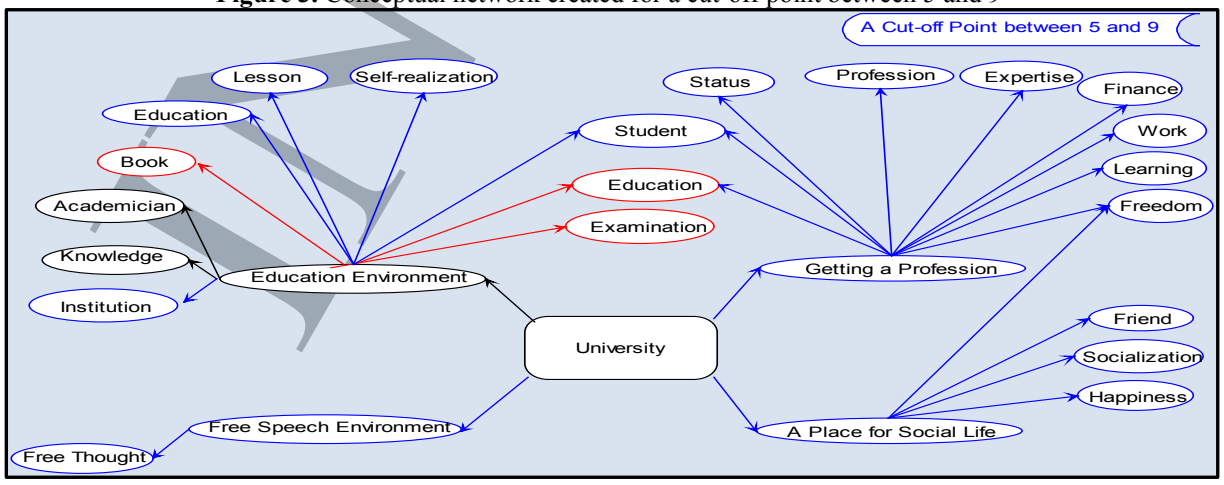
A Cut-off Point of 15 and over: As displayed in Fgure 1, students have produced sentences, regarding university, only towards the category 'Education Environment' in this interval. Therefore, only the education environment category was included in the conceptual network. Students associated the education environment with the words 'Academician' and 'Knowledge'.
The conceptual network created for a cut-off point between 10 and 14 is displayed in Figure 2.

Figure 2. Conceptual network created for a cut-off point between 10 and 14



A Cut-off Point between 10 ve 14: As displayed in Figure 2, it is worth noticing that students have only produced sentences towards the category 'Education Environment' although there seems an increase in the number of the words produced in this interval. Here, different aspects of the educational environment begin to emerge in this interval. The words 'book', 'education' and 'exam' are associated with the educational environment in this category.
The conceptual network created for a cut-off point between 5 and 9 is displayed in Figure 3.

Figure 3. Conceptual network created for a cut-off point between 5 and 9

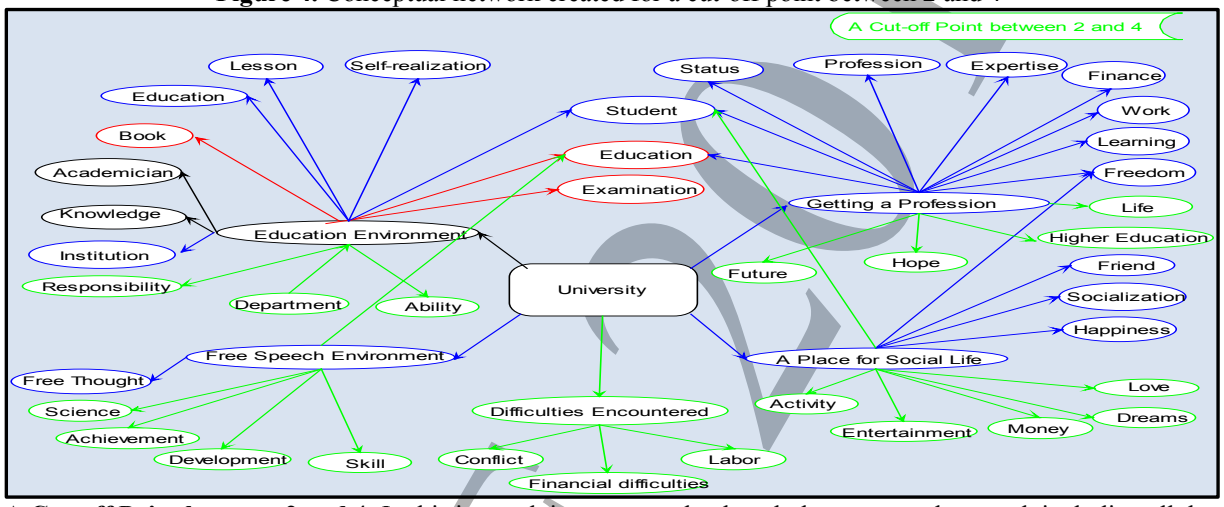


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A Cut-off Point between 5 and 9: As displayed in Figure 3, sentences towards the categories 'Getting a profession', 'Social Life' and 'Free Speech Environment' along with 'Education Environment' were also constructed by the students in this interval. The word 'Student' is associated with both 'Education Environment' and 'Getting a profession' while the word 'Freedom' is associated with both 'Getting a profession' and 'Social life' categories in this interval.

In the category 'Education Environment', the words, which seem to be not associated with other categories out of education environment, are institution, learning, lesson and self-realization respectively. Profession, expertise, finance, work, learning and status are the words associated with only the category 'Getting a profession'. The words only associated with the category 'Social life' are friend, socialization and happiness. In the category 'Free Speech Environment', however, free thought is the only word associated with this category.
The conceptual network created for a cut-off point between 2 and 4 is displayed in Figure 4.

Figure 4. Conceptual network created for a cut-off point between 2 and 4



A Cut-off Point between 2 and 4: In this interval, it appears to be the whole conceptual network including all the words regarding the concept of 'university'. In this case, it is found out that the word 'education', associated with the categories 'Education environment' and 'Getting a profession' before, is also associated with 'Free Speech Environment' and likewise the word 'Student' previously associated with 'Getting a profession' and 'Education environment' is associated with 'A place for Social Life.' Likewise, the word 'Examination' previously associated with 'Education Environment' has also been associated with 'Getting a Profession' in this case.

In this interval, responsibility, department and talent are the words only associated with 'Education Environment'. Future, higher education, life and hope are associated with the category towards getting a profession. The words associated with the category 'A Place for Social Life' are activity, entertainment, money, dreams and love respectively. Achievement, education, development and skills are associated with 'Free Speech Environment' while financial difficulties, conflict and labor are associated with the category 'Difficulties Encountered.'

DISCUSSION, CONCLUSION and RECOMMENDATIONS

In this study was examined the cognitive structures of students of Faculty of Education regarding the concept of 'university' by utilizing a word association test.

With reference to the words candidate teachers have significant associations, a total of 47 concepts were identified under categories 'Education Environment', 'Getting a profession', 'A place for Social Life', 'Free Speech Environment' and 'Difficulties Encountered'. The most sentences were produced for the category 'Education Environment'. The concepts which students significantly associated in this category are academician (f = 18) and knowledge (f = 15). On the conceptual network created for a cut-off point between 10 and 14, it appeared to be the category 'Education Environment' only and the associations of the concepts 'Education', 'Book' and 'Examination' draw attention in this category. With reference to these two networks aforementioned, it is inferred that students attribute to university as an educational environment. On the concept map created for a cut-off point between 5 and 9, though, three new categories appeared. The concepts 'Student' and 'Education' are the common points of the categories 'Education Environment' and 'Getting a Profession' while the concept 'Freedom' is a common point associated in both 'Getting a Profession' and 'A Place for Social Life' categories. These categories draw our attention to different functions of the universities. The associations appeared here are that the universities

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are environments where anyone can express himself/herself freely, they cause changes in students' life by its social activities, and a profession is obtained as a result of university education. On the conceptual network created for a cut-off point between 2 and 4, however, even if new associations for each category appear, it is worth noticing that financial difficulties students have in university, conflicts based on diversity of views and excessive labor because of constant study, all categorized under 'Difficulties Encountered'. This category is of great importance as it indicates how essential the counselling services for university students are.

When the conceptual networks created are evaluated as a whole, the educational dimension and vocational dimension of the university rise into prominence and rank first and second, respectively. 'A Place for Social Life', 'Free Speech Environment', and 'Difficulties Encountered' are other dimensions arise. Korkmaz and Bagcesi (2013) reached similar conclusions in their study. Their research concluded that students perceived 'university' concept as the expression of freedom, space, process, future, cultural diversity and pessimism.

It can be considered as a negative condition that 'University as a community of researchers', 'University as a (development-based) public institution', 'University as a personal development' and 'University as a factor of production (an entrepreneur)' categories do not reveal in the study. Owing to the fact that cognitive maps regarding the concept of 'university' also reveal the level of knowledge of candidate teachers concerning the concept of 'university' concept, it can be interpreted that universities have weakness in terms of functions related to the categories not revealed in this study. Therefore, we can say that universities should include more applications intended for these categories.

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