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Message from the Editor-in-Chief

Dear Colleagues,

The Online Journal of New Horizon in Education (TOJNED) welcomes you. TOJNED thanks all researchers, practitioners, administrators, educators, teachers, parents, and students from all around the world for reading the issues. TOJNED has diffused successfully innovation on new development in education science around the World. It is devoted to the issues and applications of education. Reviewed by leaders in the field, this publication is designed to provide a multi-disciplinary forum to present and discuss all aspects of education.

TOJNED provides new development in education forum and focal point for readers to share and exchange their experiences and knowledge each other to create better research experiences on education. The main purpose of this sharing and exchange should result in the growth of ideas and practical solutions that can contribute toward the improvement of education.

TOJNED records its appreciation of the voluntary work people who have acted as reviewers for one or more submissions to TOJNED for v6i3. The reviewers of this issue are drawn quite widely from education field. Reviewers' interests and experiences match with the reviewed articles.

I am always honored to be the editor-in-chief of TOJNED. Many persons gave their valuable contributions for this issue. I would like to thank the editorial board of this issue.

TOJNED invites article contributions. Submitted articles should be about all aspects of education science. The articles should also discuss the perspectives of students, teachers, school administrators and communities. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJNED.

For any suggestions and comments on the international online journal TOJNED, please do not hesitate to contact with us.

July 01, 2016
Prof. Dr. Aytekin ISMAN
Editor in chief

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A BLENDED LEARNING ENVIRONMENT IN LANGUAGE TEACHING: STUDENTS' FEEDBACK ABOUT THE EXPERIENCE

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Abstract: It is undeniable that advancements in computer and networking technologies have made a great impact on the education system. As a result of this, several terms such as e-learning, online learning and blended learning (BL) have appeared. In recent years, the use of web-based technology with face-to-face education has increased greatly, particularly in the field of language teaching. This method, which is called blended instruction, can be defined as combining classical in-class instruction with online learning components. Students' attitudes and experiences related to BL should be investigated in order to create a more effective learning environment. The current study aims to investigate students' feedback about the effectiveness of the BL environment in learning English at the School of Foreign Languages at Çukurova University. It also aims to find out the problems, if any, the students came across related to the BL environment and to present their suggestions to make it more beneficial. The data were obtained from 65 participants through a questionnaire whose reliability was measured in a pilot study by applying Cronbach's Alpha analysis (.778).
Keywords: Computer technology, language teaching, blended learning

1. INTRODUCTION

In recent years, the use of computer technology has gained great popularity in the field of education, including language teaching. The term which is widely used to refer to the integration of computers into English Language Teaching (ELT) context is Computer-Assisted Language Learning (CALL), and it is still used as an umbrella term to cover all various use of the computer in language learning. Rilling (2000) states that computers can be helpful to ELT students and teachers in many ways. Learners may use multimedia opportunities and Internet connections for searching and communicating with others. Teachers can use computers to present their lessons more professionally, to prepare lesson materials and to keep grades. In a similar vein, Okan & İnözü (2001) point out that computer technology provides students and teachers with unprecedented opportunities to make language learning and teaching effective and enjoyable.

Okan (2001) emphasizes the importance of the proper use of computer technology by stating that "there is no doubt that, when properly used, computer technology can supplement instruction and facilitate learning".

We can easily observe that the use of computer technology in education has increased significantly in recent years, and advancements in computer and networking technologies over the past decades have created new instructional possibilities for educators. According to Askun, (2007), one of the major developments that has had a positive impact on education system has been the Internet, especially the World Wide Web. Since computer technologies established their use in teaching and learning contexts, terms such as web-based education, e-learning and BL have come to the fore and they have been defined in the literature.

Traditional face-to-face courses refer to those in which the teacher and the student meet in a traditional classroom setting for instructional activities. The primary mode of instructional delivery between teacher and student is face-to-face in a classroom (Comey, 2009). E-learning, on the other hand, is described as a way of teaching where computer is used to achieve individual learning or institutional performance objectives (Clark & Mayer, 2003).

E-learning is also explained as any learning, training or instruction where network technologies, such as networks connecting to the Internet, are used (Fallon & Brown, 2003).

However, traditional face-to-face learning and e-learning have some disadvantages. In an e-learning context, the learner may feel isolated or unmotivated without any real-time human interaction. On the other hand, in a face-to-face setting, the teacher "may lead the learning process and do all the "teaching"- leaving only a small portion of the class time to student discussion (Conn, 2008).

BL environment as a different type of distance education amalgamates the advantages of distance education with the effective aspects of traditional face-to-face education (Akkoyunlu & Soylu, 2006). BL is used to describe learning which "mixes various event-based activities, including face-to-face classrooms, live e-learning and self-paced learning" (Valiathan, 2002). Osguthorpe & Graham (2003) define a blended course as one which is taught by combining traditional face-to-face instruction with online learning components and online course management tools. Since the underlying assumption of blended courses or classes is that there are inherent benefits in both face-to-face interaction and online methods, the aim of using BL approaches is to find a harmonious balance between online access to knowledge and face-to-face human interaction. Thus, the blend should involve the strengths of each type of learning environment, but none of the weaknesses.

2. BL ENVIRONMENTS IN LANGUAGE TEACHING

Several studies (Chiu, 2004, Lee, 2007, Edirisingha et al., 2007, Kopkallı-Yavuz & Mutlu, 2009, Özdener & Satar, 2008, Larsen, 2012) demonstrated the potential benefits of BL approach in language teaching.

In an experimental study, Chiu (2004) investigated the effectiveness of a flight academy's Aviation English training program that implemented online learning CALL technology blended with an instructor in the classroom environment and found that participants generally had positive attitudes toward learning English with CALL before and after the intervention. They had significant improvement on their test scores after the intervention, and they had positive perceptions of CALL technology in facilitating interactions in the classroom both in the pre-test and post-test.

In another experimental study, Lee (2007) tried to find out whether a BL approach that incorporated web-based CALL activities with traditional classroom had a significant effect on the learners' listening and reading achievement in a standardized test and what differences, if any, existed in the test scores between the group that received web-based CALL activities as a supplement and the group that received regular instruction only. There wasn't any statistically significant difference in overall scores between the two groups, but the experimental group made a better improvement on the listening section than the control group. Another aim of this study was to find out the learners' and the instructor's perceptions about the BL environment. According to the results, most learners perceived that web-based CALL activities were helpful and effective, and the instructor had a positive attitude toward the approach of blending the web-based CALL activities with the classroom teaching.

Larsen (2012) investigated the use of BL with ESL writing students in an intensive English program. It was found that students worked more autonomously and focused while becoming more responsible for their own learning. The students in the study commented that they liked learning in the BL environment and would prefer it to more conventional classes.

However, the study in which Neves Seesink (2007) investigated the effects of blended instruction on the writing development of six students and how these learners perceived

blended instruction did not demonstrate similar results. The results showed a certain lack of commitment with online exercises, especially when the exercises were not directly affecting learners' grades. Concerning the blended instruction, the learners perceived the online component as a review/practice tool rather than an integral part of the course. This study shows that the success of BL environments is strongly linked to students' understanding of the rationale behind the blend and in some contexts; learners may be satisfied with face-to-face instruction only.

Based on a research and development project at Munich University, Neumeier (2005) puts forward a framework of parameters for designing a BL environment for language learning and teaching purposes. He states that BL courses can foster successful language learning provided that they are carefully designed on the bases of an analysis of the participants' needs and abilities. In connection with this, Warschauer & Healey (1998) state that it is necessary for teachers to take into consideration the needs of the students and design the teaching situations according to these needs.

Considering the studies mentioned above and several other studies which found that a key variable related to the success of a BL environment was student satisfaction, the aim of the present study is to investigate students' feedback about the effectiveness of the new BL environment at the School of Foreign Languages at Çukurova University, which was implemented to promote students' retention and learning. Another aim of the study is to find out the problems, if any, which the students encountered related to the BL environment and to present their suggestions to make it more beneficial.

3. THE STUDY

3.1. Participants

Participants of the study consisted of 41 undergraduate (UG) and 24 graduate (G) randomly-selected learners who were taking an English preparation class at the School of Foreign Languages at Çukurova University. In addition to attending the face-to-face courses during the academic year, they were required to register the virtual classrooms of their instructors on a website and do the weekly-assigned tasks for 16 weeks. The tasks included listening, speaking, grammar, vocabulary, pronunciation, reading, writing activities and tests. The tasks the students completed were graded in the system and the grades were saved in the online gradebook. All of the participants were at pre-intermediate level during the data collection process, and they were introduced with a BL environment for the first time. The reason for dividing the participants into two groups as UG and G students was to find out whether there were any significant differences between their feedbacks about the BL environment.

3.2. Instruments

A questionnaire, which was composed of 23 Likert-scale items (Sections A, B1 and B2), 2 items with dichotomous variables (Section C), 4 open-ended questions, and a section for further comments, was developed by the researcher to assess the participants' views.

Before conducting the main study, the questionnaire was piloted with a randomly-selected group of 22 students and the reliability of Likert-scale items was calculated. Cronbach's Alpha was used to measure the reliability and the analysis revealed that 23-item Likert-scale's reliability was .778. Thus, the questionnaire was considered to be suitable to use in the main study. The same reliability analysis was applied to the main data in the study for each section and the values reflected a high degree of reliability for the questionnaire (.814 for Section A, .916 for Section B1, and .922 for Section B2). The questionnaires the students responded to in

the pilot and the main study were in Turkish, the participants' native language. The rationale behind this was to prevent any possible misunderstanding and to obtain reliable data.

3.3. Data Analysis and Results

Quantitative data in the questionnaires were analyzed by using Statistical Package for Social Sciences (SPSS). The qualitative data from the open-ended questions were analyzed using content analysis technique, by coding similar points mentioned by the participants. Below are the results about each section in the questionnaire, illustrated in tables and discussed for each item.

3.3.1. Section A: Students' Feedback about General Features and Technical Aspects

Section A of the questionnaire aimed to explore the participants' feedback about the general features and technical aspects. Below are the items in this section of the questionnaire.

1. I could use the website without getting any help.
2. The overall presentation of the website was interesting.
3. I could connect to the website easily whenever I wanted.
4. The presentation of the activities was interesting.
5. The instructions of the activities were clear.
6. The language used in the activities was suitable to our language level.
7. The weekly assignments were parallel to the content of the face-to-face education.

In Table 1 below, the results related to the items in Section A are demonstrated.

Table 1. Frequencies, Percentages, Mean, Standard Deviation and T-test Values for the Items in Section A

Item		1		2		3		4		5		Total		X	sd	t
No		never		seldom		sometimes		often		always						
		f	%	f	%	f	%	f	%	f	%	f	%			
1	UG	0	0	5	12,5	5	12,5	15	37,5	15	37,5	40	100	4,00	1,01	
	G	2	9,5	3	14,3	4	19,0	7	33,3	5	23,8	21	100	3,48	1,29	1,745
	Total	2	3,3	8	13,1	9	14,8	22	36,1	20	32,8	61	100			
2	UG	10	24,4	20	48,8	6	14,6	4	9,8	1	2,4	41	100	2,17	,99	
	G	5	22,7	5	22,7	5	22,7	6	27,3	1	4,5	22	100	2,68	1,25	-
	Total	15	23,8	25	39,7	11	17,5	10	15,9	2	3,2	63	100			1,773
3	UG	3	7,5	6	15,0	9	22,5	15	37,5	7	17,5	40	100	3,42	1,17	
	G	4	18,2	2	9,1	1	4,5	10	45,5	5	22,7	22	100	3,45	1,43	-,087
	Total	7	11,3	8	12,9	10	16,1	25	40,3	12	19,4	62	100			
4	UG	6	14,6	13	31,7	14	34,1	7	17,1	1	2,4	41	100	2,60	1,02	
	G	4	18,2	6	27,3	5	22,7	5	22,7	2	9,1	22	100	2,77	1,26	-,554
	Total	10	15,9	19	30,2	19	30,2	12	19,0	3	4,8	63	100			
5	UG	3	7,7	6	15,4	13	33,3	12	30,8	5	12,8	39	100	3,25	1,11	
	G	1	5,0	1	5,0	7	35,0	8	40,0	3	15,0	20	100	3,55	,99	-,989
	Total	4	6,8	7	11,9	20	33,9	20	33,9	8	13,6	59	100			
6	UG	1	2,5	1	2,5	15	37,5	17	42,5	6	15,0	40	100	3,65	,863	
	G	1	4,5	1	4,5	7	31,8	10	45,5	3	13,6	22	100	3,59	,959	,248
	Total	2	3,2	2	3,2	22	35,5	27	43,5	9	14,5	62	100			
7	UG	8	20,5	8	20,5	13	33,3	9	23,1	1	2,6	39	100	2,66	1,13	
	G	4	18,2	4	18,2	7	31,8	2	9,1	5	22,7	22	100	3,00	1,41	-
	Total	12	19,7	12	19,7	20	32,8	11	18,0	6	9,8	61	100			1,008

As can be seen in Table 1, in terms of their feedback about general features and technical aspects, there is no statistically significant difference between the UG and G students. Below are the discussions of the results for each item in this section.

The participants' responses regarding Item 1 show that most of them could use the website without getting any help. Concerning the presentation of the website (Item 2), the results indicate that a large number of participants did not find the presentation of the website very interesting because 15 students responded as "never" and 25 students responded as "seldom". According to the mean scores, the presentation of the website was more interesting for the G students, but there is no statistically significant difference between the two groups in terms of their responses to this item.

With the responses related to the connection to the website (Item 3), it can be said that the students did not usually have connection problems because the most frequent responses vary between "sometimes" and "always". The mean scores for both groups are very close, 3, 42 for UG and 3, 45 for G students. Considering their answers to this item, there is no significant difference between the two groups.

Consistent with their responses to Item 2, responses to Item 4 indicate that the students did not find the presentation of the activities on the website very interesting. The mean scores (2, 60 and 2, 77) mean that the most frequent responses vary between "seldom" and "sometimes" for both groups. With these results, we can conclude that neither the overall presentation of the website nor the presentation of the activities was very interesting for the participants.

Regarding the instructions of the activities, the results presented in Table 1 (Item 5) clearly show that they were not always clear or comprehensible for the students. 6, 8 % of the participants responded as "never" and 11, 9 % of them responded as "seldom" to this item. Comprehension problems with the instructions may have affected these students' performance and satisfaction in a negative way. These results indicate that some students, especially the low level ones, may need their teacher's guidance to be able to understand the instructions on the website.

One can see from Table 1 that nearly half of the participants (43, 5 %) responded as "often" and 14, 5 % responded as "always" to Item 6; thus, it can be concluded that the language used in the activities was suitable to the students' language level most of the time.

According to the results related to Item 7, for 32, 8 % of the participants, the weekly assignments were "sometimes" parallel to the content of the face-to-face education. Mean values (2, 66 and 3, 00) indicate that most of the responses were between "seldom" and "sometimes". However; in the previous item, nearly half of the participants stated the language used in the activities was suitable to their language level, which implies that there is a parallelism between the content of the activities in the virtual classroom and the content of the face-to-face education. The reason for the responses to Item 7 may be the fact that the assignments in the virtual classroom were given as revision or practice activities related to the content of the face-to-face education, thus they were generally about the previously learned items.

The participants mentioned some problems they had encountered related to general features and technical aspects, which are presented in Table 2.

Table 2. Problems Mentioned Related to General Features and Technical Aspects

Problem Mentioned	f
Connection problem	3
Scores not saved in the grade book	4
Not understanding the feedback on writing assignments	1
Problems in the listening activities	1
Uninteresting presentation of the activities	2
Problems with using the dictionary on the website	1

As can be seen in Table 2, the most frequently mentioned problem was that the students' scores were not saved in the grade book. Another problem was about connection to the website. Three students stated that they had connection problems and waited a long time for pages to load. Two students pointed out that the presentation of the activities was not interesting, and one student had problems in understanding his/her instructor's feedback on writing assignments. Problems in the listening activities and using the dictionary on the website were also mentioned by one participant each.

3.3.2. Section B1: Students' Feedback about the Benefits of Doing the Activities in the Virtual Classroom on Revision

The items in Section B1 assessed participants' views about the benefits of doing the activities in the virtual classroom on revising what they have learnt in face-to-face education. Each item in this section aimed to get the students' feedback on a different section in the virtual class: Item 8 (Listening), Item 9 (Speaking), Item 10 (Grammar), Item 11 (Vocabulary), Item 12 (Pronunciation), Item 13 (Reading), Item 14 (Writing), and Item 15 (Tests). In Table 3, results about the items in Section B1 are provided.

Table 3. Frequencies, Percentages, Mean, Standard Deviation and T-test Values for the Items in Section B1

Item		1		2		3		4		5		Total		X	sd	t
No		not beneficial at all		barely beneficial		somewhat beneficial		beneficial		very beneficial						
		f	%	f	%	f	%	f	%	f	%	f	%			
8	UG	6	14,6	9	22,0	16	39,0	9	22,0	1	2,4	41	100	2,75	1,04	
	G	4	17,4	6	26,1	3	13,0	8	34,8	2	8,7	23	100	2,91	1,31	-,526
	Total	10	15,6	15	23,4	19	29,7	17	26,6	3	4,7	64	100			
9	UG	21	51,2	7	17,1	9	22,0	4	9,8	0	0	41	100	1,90	1,06	
	G	5	21,7	8	34,8	6	26,1	3	13,0	1	4,3	23	100	2,43	1,12	-1,880
	Total	26	40,6	15	23,4	15	23,4	7	10,9	1	1,6	64	100			
10	UG	4	9,8	2	4,9	16	39,0	13	31,7	6	14,6	41	100	3,36	1,11	
	G	2	8,7	3	13,7	6	26,1	10	43,5	2	8,7	23	100	3,30	1,10	,213
	Total	6	9,4	5	7,8	22	34,4	23	35,9	8	12,5	64	100			
11	UG	10	25,0	13	32,5	5	12,5	12	30,0	0	0	40	100	2,47	1,17	
	G	3	13,0	7	30,4	6	26,1	7	30,4	0	0	23	100	2,73	1,05	-,890
	Total	13	20,6	20	31,7	11	17,5	19	30,2	0	0	63	100			
12	UG	16	39,0	12	29,3	6	14,6	7	17,1	0	0	41	100	2,09	1,11	
	G	2	9,5	7	33,3	5	23,8	6	28,6	1	4,8	21	100	2,85	1,10	-2,546*
	Total	18	29,9	19	30,6	11	17,7	13	21,0	1	1,6	62	100			
13	UG	10	24,4	5	12,2	10	24,4	14	34,1	2	4,9	41	100	2,82	1,28	
	G	3	13,6	1	4,5	12	54,5	3	13,6	3	13,6	22	100	3,09	1,15	-,799
	Total	13	20,6	6	9,5	22	34,9	17	27,0	5	7,9	63	100			
14	UG	19	48,7	7	17,9	7	17,9	6	15,4	0	0	39	100	2,00	1,14	
	G	8	36,4	2	9,1	7	31,8	3	13,6	2	9,1	22	100	2,50	1,37	-1,523
	Total	27	44,3	9	14,8	14	23,0	9	14,8	2	3,3	61	100			
15	UG	3	7,3	10	24,4	8	19,5	15	36,6	5	12,2	41	100	3,21	1,17	
	G	4	17,4	3	13,0	6	26,1	6	26,1	4	17,4	23	100	3,13	1,35	,275
	Total	7	10,9	13	20,3	14	21,9	21	32,8	9	14,1	64	100			

As illustrated in Table 3, there is no statistically significant difference between the UG and G students' responses in this section except for Item 12, which was about pronunciation activities. The t-test value for Item 12 shows that there is a significant difference between the UG and G students' responses ($p<.05$). Examination of the mean values for Item 12 indicates that pronunciation activities were more beneficial for the G students than for the UG students. Below are the discussions of results for each item in this section.

The results demonstrated in Table 3 show that only 3 participants (4, 7 %) found the listening activities "very beneficial" but for 10 participants (15, 6 %), they were "not beneficial at all". Most frequent responses vary between "rarely beneficial" and "somewhat beneficial". The mean values show that G students found the listening activities more beneficial when compared to UG students.

As for the speaking activities, the percentage of the participants who stated that the speaking activities were "not beneficial at all" is quite high (40, 6 %). Only one participant found the speaking activities "very beneficial" and only 7 students ranked these activities as "beneficial". Because the speaking activities required a microphone and some technical knowledge, most of the students might have found them too difficult to do. Also, for the students who did not have a computer at home, it may have been impossible to do these activities in the computer lab or Internet cafes.

It is notable that the highest mean scores for both UG (3, 36) and G students (3, 30) in Section B1 of the questionnaire are for Item 10, which is about the grammar activities. 35, 9 % of all the participants found the grammar activities "beneficial", and 12, 5 % of them found them "very beneficial". The results show that the grammar activities in the virtual classroom were more beneficial than the other activities on revising what the students have learnt in face-to-face education.

However, none of the participants found the vocabulary activities "very beneficial". As can be clearly seen in Table 3 (Item 11), for 30, 2 % of the participants, the vocabulary activities were "beneficial" and for 31, 7 % of them they were "barely beneficial". Mean values indicate that G students found these activities more beneficial than the UG students did but this difference is not statistically significant.

Regarding the pronunciation activities (Item 12), the difference between the UG and the G students' responses is statistically significant. The mean value for the G group is 2, 85 while it is 2, 09 for the UG group, which shows that for the G students, pronunciation activities were more beneficial. The low mean values may result from the fact that since students are not tested on pronunciation in the exams, they might not have considered it as a core subject and thus not done the pronunciation activities in the virtual classroom.

The percentage of participants who responded to Item 13, which is about the reading activities, as "somewhat beneficial" is 34, 9. Mean value for the G students is 3, 09 while it is 2, 82 for the UG students. When the responses about the four language skills are considered, it is observed that the participants found the reading activities in the virtual classroom the most beneficial among the others.

We should note that the results related to Item 14 indicate that almost half of the participants (44, 3 %) found the writing activities "not beneficial at all". Mean value for the UG students is 2, 00 but it is 2, 50 for the G students, which is not a statistically significant difference. Participants' feedback about the writing activities in the virtual classroom may be because of the intensive writing syllabus in face-to-face education. Since they are usually busy with the writing activities in the real classroom course, which is an important component of the evaluation system, and some of the writing tasks in the virtual classroom were not parallel to the content of the writing syllabus in face-to-face education, they may have ignored them.

The last item in this section, Item 15, aimed to get the students' feedback on the tests. The results show that the second most beneficial activities were the review quizzes and module tests. 32, 8 % of the participants rated tests as "beneficial". Mean values for this item (3, 21 for UG and 3, 13 for G students) are very close to the ones about the grammar activities. It

can be observed that for the participants, the most beneficial activities in the virtual classroom were the grammar activities and tests.

By looking at the results in Section B1, we can conclude that even the highest means are below 4, 00, which implies that the participants did not find the activities in the virtual classroom very beneficial. Another conclusion we can draw from the analysis of the results is that the G students' feedback about the activities was more positive than that of the UG students. This may be explained by the fact that a large number of G students cannot attend face-to-face classes regularly because they work and study at the same time. It is possible that the activities in the virtual classroom helped them to overcome the problems related to skipping classes, and thus they found these activities more beneficial than the UG students did.

3.3.3. Section B2: Views about the Benefits of Doing the Activities in the Virtual Classroom on Catching up on the Content of Face-to-face Education

The items in Section B2 aimed to find out the participants' views about the benefits of doing the activities in the virtual classroom on catching up on the content of face-to-face education. Like the items in Section B1, each item in Section B2 was related to a different section: Item 16 (Listening), Item 17 (Speaking), Item 18 (Grammar), Item 19 (Vocabulary), Item 20 (Pronunciation), Item 21(Reading), Item 22 (Writing), and Item 23 (Tests). Table 4 below presents the results related to the items in Section B2.

Table 4. Frequencies, Percentages, Mean, Standard Deviation and T-test Values for the Items in Section B2

Item		1		2		3		4		5		Total		X	sd	t
No		not beneficial at all		barely beneficial		somewhat beneficial		beneficial		very beneficial						
		f	%	f	%	f	%	f	%	f	%	f	%			
16	UG	4	10,0	16	40,0	7	17,5	12	30,0	1	2,5	40	100	2,75	1,08	
	G	4	17,4	6	26,1	7	30,4	5	21,7	1	4,3	23	100	2,69	1,14	,188
	Total	8	12,7	22	34,9	14	22,2	17	27,0	2	3,2	63	100			
17	UG	21	52,5	10	25,0	5	12,5	4	10,8	0	0	40	100	1,80	1,01	
	G	6	26,1	8	34,8	4	17,4	4	17,4	1	4,3	23	100	2,39	1,19	-
	Total	27	42,9	18	28,6	9	14,3	8	12,7	1	1,6	63	100			2,082*
18	UG	7	17,1	5	12,2	15	36,6	11	26,8	3	7,3	41	100	2,95	1,18	
	G	4	17,4	4	17,4	3	13,0	8	34,8	4	17,4	23	100	3,17	1,40	-,676
	Total	11	17,2	9	14,1	18	28,1	19	29,7	7	10,9	64	100			
19	UG	13	31,7	8	19,5	12	29,3	8	19,5	0	0	41	100	2,36	1,13	
	G	3	13,0	4	17,4	9	39,1	6	26,1	1	4,3	23	100	2,91	1,08	-1,881
	Total	16	25,0	12	18,8	21	32,8	14	21,9	1	1,6	64	100			
20	UG	19	46,3	10	24,4	6	14,6	6	14,6	0	0	41	100	1,97	1,10	
	G	3	13,0	8	34,8	7	30,4	4	17,4	1	4,3	23	100	2,65	1,07	-
	Total	22	34,4	18	28,1	13	20,3	10	15,6	1	1,6	64	100			2,374*
21	UG	10	25,0	8	20,0	15	37,5	5	12,5	2	5.0	40	100	2,52	1,15	
	G	4	17,4	4	17,4	5	21,7	9	39,1	1	4,3	23	100	2,95	1,22	-1,398
	Total	14	22,2	12	19,0	20	31,7	14	22,2	3	4,8	63	100			
22	UG	20	51,3	11	28,2	4	10,3	3	7,7	1	2,6	39	100	1,82	1,07	
	G	7	30,4	6	26,1	7	30,4	1	4,3	2	8,7	23	100	2,34	1,22	-1,771
	Total	27	43,5	17	27,4	11	17,7	4	6,5	3	4,8	62	100			
23	UG	9	22,0	5	12,2	13	31,7	9	22,0	5	12,2	41	100	2,90	1,31	
	G	3	13,0	5	21,7	7	30,4	5	21,7	3	13,0	23	100	3,00	1,24	-,290
	Total	12	18,8	10	15,6	20	31,3	14	21,9	8	12,5	64	100			

Examination of the results in Table 4 shows that the difference between the UG and the G students' responses to items 17 and 20 is statistically significant ($p<.05$). Mean scores indicate that both the speaking and the pronunciation activities were more beneficial for the G students on catching up on the content of face-to-face education. Below are the discussions of results for each item in this section.

When we look at the mean values for Item 16, we can observe that despite not being statistically significant, there is a difference between the UG and the G students. The UG students found the listening activities more beneficial on catching up on the content of face-to-face education than the G students did. The mean values for the responses indicate that the participants' responses to this item vary between "barely beneficial" and "somewhat beneficial".

The participants' responses to Item 17, which is about the speaking activities, are consistent with the responses to Item 9 in that the speaking activities in the virtual classroom were more beneficial for the G students both on revising what they have learnt in face-to-face education

and on catching up the content of face-to-face education. According to their responses to Item 17, there is a significant difference between the UG and G students ($p<.05$). The low means in the responses to this item (1, 80 and 2, 39) may have stemmed from the participants' unwillingness to do the speaking activities because of having to speak into a microphone, which they might have considered as "unnatural".

When the responses to all the other items in Section B2 are examined, it can be seen that the grammar activities (Item 18) have been the most beneficial for the participants on catching up on the content of face-to-face education. Mean values show that the grammar activities were more beneficial for the G students although the difference is not statistically significant.

As for the vocabulary activities (Item 19), mean values indicate that most of the responses vary between "barely beneficial" and "somewhat beneficial", but one fourth of the participants responded as "not beneficial at all" to this item. Consistent with the responses to Item 11, which also assessed views about the vocabulary activities; mean value for the G students is higher for Item 19, but there is no significant difference between the UG and G students in terms of their responses to Item 19.

However, there is a significant difference between the UG and G students in their responses to Item 20 (($p<.05$), which is about the pronunciation activities. This result is consistent with the result in Section B1 about Item 12. In Item 12, which was also about the pronunciation activities in the virtual classroom, there is also a significant difference between the UG and G students. It can be concluded that the pronunciation activities were more beneficial for the G students not only on revising what they have learnt in face-to-face education but also on catching up on the content.

A high percentage of the participants stated that the reading activities (Item 21) were "somewhat beneficial". When mean values are examined (2, 52 and 2, 95), it can be seen that, as in most of the activities, reading activities were more beneficial for the G students but the difference is not statistically significant.

Similar to the responses to Item 14 in Section B1, almost half of the participants (43, 5 %) responded as "not beneficial at all" to Item 22, which assessed their views about the writing activities. Although it is not significant, there is a difference between the mean values for UG and G students (1, 82 and 2, 34) and it is notable that there are only few participants who found the writing activities "beneficial" or "very beneficial". This may result from the fact that there is an intensive writing syllabus in face-to-face education and the students are tested on the items in that syllabus. Thus, they may have considered the writing activities in the virtual classroom as unimportant or unnecessary.

The participants' responses to the item related to the tests (Item 23) are in line with the ones in Section B1 in that after the grammar activities, tests were rated as the second most beneficial activities for the students on catching up on the content of face-to-face education. The mean values (2, 90 and 3, 00) show that most of the responses are "barely beneficial" and "somewhat beneficial". It can be concluded from the overall results that for the participants, the most beneficial activities in the virtual class were the grammar activities and tests on revising what they have learnt in real classes and catching up on the content of face-to-face education.

No problems were mentioned by the participants related to the content of the activities in the virtual classroom.

3.3.4. Section C: Views about the implementation of the BL environment

In Section C, there were two items (16 and 17) to assess the participants' views about the implementation of the BL environment. They were:

24. Do you think that the activities you do in the virtual classroom should be graded by your instructors?
25. Do you think that it should be compulsory for the students to register the virtual classroom?

Table 5 below shows the responses to Item 24.

Table 5. All Participants' Responses to Item 24 and the X^2 Value

Response	f	X^2	df	p
Yes	14			
No	50	20,250	1	,000
Total	64			

As can be observed in Table 5, only 14 students think that the activities they do in the virtual classroom should be graded while 50 of them believe that they should not be graded. The X^2 value shows that there is a statistically significant difference between "Yes" and "No" responses to Item 24 ($p<.001$). It can be concluded that most of the students do not want to be graded according to their performance in the virtual classroom.

X^2 value was also computed in order to find out whether there is a significant difference between the responses of UG and G students to Item 24 and results are presented in Table 6.

Table 6. UG and G Students Responses to Item 24 and the X^2 Value

Response	UG		G		Total		X^2	df	p
	f	%	f	%	f	%			
Yes	10	24,4	4	17,4	14	21,9	,422	1	,516
No	31	75,6	19	82,6	50	78,1			
Total	41	100	23	100	64	100			

Examination of the X^2 value in Table 6 does not indicate any statistically significant difference between UG and G students ($p<.05$). Most of the participants believe their instructors should not grade the activities they do in the virtual classroom. As in Neves Seesink (2007), the participants in this study might have perceived the activities in the virtual classroom as a review/practice tool rather than an integral part of the course and this may have caused them to respond in that way. Another reason for this might be the problem that four students mentioned about the general features and technical aspects. As mentioned earlier, four students reported that although they had completed the tasks, sometimes their scores were not saved in the gradebook.

Item 25 was asked to find out the participants' opinions about making the registration to the virtual classroom compulsory. Table 7 displays the responses to Item 25.

Table 7. All Participants' Responses to Item 25 and the X^2 Value

Response	f	X^2	df	p
Yes	18			
No	46	12,250	1	,000
Total	64			

It can be seen in Table 7 that 46 participants in the study believe registration to the virtual classroom should not be compulsory, and only 18 of them think it should be compulsory. The X^2 value indicates a significant difference between two responses ($p<.001$). In order to compare the responses of UG and G students, X^2 value was computed and the results are presented in Table 8.

Table 8. UG and G Students Responses to Item 25 and the X^2 Value

Response	UG		G		Total		X^2	df	p
	f	%	f	%	f	%			
Yes	14	34,1	4	17,4	18	28,1	2,046	1	,153
No	27	65,9	19	82,6	46	71,9			
Total	41	100	23	100	64	100			

As illustrated in Table 8, there is no statistically significant difference between the two groups of learners in terms of their responses to Item 25 ($p<.05$). The majority of the participants think that registration to the virtual classroom should not be compulsory. This may be due to the fact that learners can easily find supplementary materials online and do not need to register the virtual classroom for self-study. Also, they may be satisfied with face-to-face instruction only.

3.3.5. Suggestions and Further Comments from the Participants about the BL Environment

As mentioned earlier, the last section of the questionnaire aimed to get the participants' suggestions and further comments about the BL environment. The results are demonstrated in Table 9 below.

Table 9. Suggestions to Make the BL Environment More Beneficial

Suggestion	f
Registration to the virtual classroom should not be compulsory	4
The content should be parallel to the content of face-to-face education	2
There must be a regular scheduled lab hour to do the activities in the virtual classroom with the guidance of the instructors	13
The virtual classroom should encourage group work	1
In the virtual classroom, it should be possible for the online students to communicate	2

As it is illustrated in Table 9, five suggestions were made to make the BL environment more beneficial. The most frequent one made by 13 participants is that there must be a regular scheduled lab hour to do the activities in the virtual classroom with their instructor's guidance. This might indicate that some students did not find the instructions on the website clear, and they needed guidance to complete the activities.

4. DISCUSSION AND CONCLUSION

The main aim of the current study was to explore students' feedback about the effectiveness of the BL environment in learning English at the School of Foreign Languages at Çukurova University. It also aimed to find out the problems, if any, the students came across related to the BL environment and to present their suggestions to make it more beneficial. According to the results of the study, the activities which the participants found the most beneficial in the virtual classroom were the grammar activities and tests. However, the means for all of the activities are below 4, 00, which shows that even the most beneficial activities for the learners were "somewhat beneficial". With these results, it seems plausible to conclude that the BL environment might have been unnatural for the students who were accustomed to a traditional lecture format. Another possible reason for these results might have been students' low computer literacy skills. The ones who were not familiar with computers or who were fearful of using technology might have been unprepared to benefit from such a learning environment, which might have caused their dissatisfaction.

When we compare the UG and G students, we can observe that the G students found the skill activities more useful than the UG students did on revising what they have learnt and on catching up on the content of face-to-face education. When all of the participants' responses are considered, it can be seen that the most beneficial skill activities were the reading activities and the least beneficial ones were the speaking activities on revising what they have learnt in face-to-face education. On catching up on the content of face-to-face education, the reading activities were the best beneficial ones, however, the least beneficial ones were the writing activities. This may stem from the differences between the writing syllabus of the face-to-face education and the writing activities in the virtual classroom. Also, some participants mentioned about the lack of feedback on their works in writing activities, which shows a lack of interaction between the students and the instructors. This may have caused the students' rating the writing activities as not beneficial.

Another conclusion we may draw from the findings is that although most of the participants could use the website without getting any help, the most frequent suggestion that was made about how to make the BL environment more beneficial was to arrange a regular scheduled lab hour to do the activities with their instructors. This may be attributed to the fact that they were introduced with a BL environment for the first time. Their recommendation indicates that some of them were are not ready for such a self-study environment and they needed the guidance of their teachers. Douglis (2009) suggests a number of factors to be considered while designing a blended course, one of which is audience analysis. Hence, moving on from the results of the present study, one suggestion is that students' needs, attitudes and perspectives with respect to a BL environment should be examined and taken into consideration while designing and redesigning the courses. Another suggestion could be that teachers and administrators should interact with the students and explore their feedback at intervals during the course rather than doing this at the end of the course. This can give them the opportunity to help the students with the problems they encounter and to improve the learning outcomes.

In conclusion, this study shows that how much students benefit from a BL environment is strongly related to the characteristics of the learners. Some students may be satisfied with face-to-face education only and they may refuse to believe that a BL environment would be beneficial in any context. When the participants' responses to the Items in Section C are considered, it can be seen that most of them think their work in the virtual classroom should not be graded by their instructors and they believe registration to the virtual classroom should not be compulsory. This implies that they perceive the tasks in the virtual classroom as a review tool rather than an integral part of the course. Thus, we suggest that students' attitudes, abilities and preferences should be examined carefully and taken into consideration so as to increase their satisfaction and to make a BL environment work more effectively for them.

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CONTEXTUALISING LEADERSHIP IN MULTIETHNIC SCHOOLS: PERCEPTIONS, ROLES AND WAY FORWARD

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Abstract: Leadership processes in Multiethnic schools provide particular challenge for school leaders. The paper discusses the perceptions and roles of school leaders in the light of literature review on multiethnic school leadership. The Maltese context is given particular focus due to a number of factors which together form an intriguing but challenging venture into what constitutes the roles which school leaders need to fulfil for the efficiency of their school. The paper also delves into these roles are transformed into actions which promote multicultural education. These are analysed in the light of different forms of multiculturalism. The paper concludes that leadership in multiethnic Maltese school centred on issues of equity and social justice which however lacked the necessary critical lens to spur ways forward. The paper concludes with a number of recommendations which will bring about improvement.

INTRODUCTION

The education of students from different cultural backgrounds has been the subject of debate on a plethora of agendas around the world (Banks & McGee Banks, 2004). The provision of Educational services that meet the needs of minority ethnic students has been a challenge to which many school leaders has contended with for a number of years. Increased globalisation, forced migration, mixed marriages and increased social and economic mobility have resulted in classroom compositions which are increasingly multiethnic and dynamic in nature. Though concerns about the extent to which our schools are prepared to embrace this phenomenon have been surfacing in educational literature, (Eg: Murphy, Steele, & Gross, 2007; Murphy & Steele, 2008; Zirkel, 2004; Zirkel, 2007), few have focused on the role of school leaders as catalysts for change and even less have focused on contextualised leadership processes. The paper contextualizes the leadership enterprise as it occurs within the context of Maltese schools. It adds to the existing body of research by providing insights into how Maltese school leaders perceive their vision as promoters of Multiethnic education and what principles and values underpin their leadership. The study also delves deeply into their role by examining it in the light of literature on multicultural education.

LITERATURE REVIEW

Since the 1970's the Council of Europe stressed the importance of intercultural competence within educational establishments as the cradle for the development of human rights and democracy. Since then, developing intercultural competencies has been suggested as an essential strategy aimed at addressing recurrent and impending problems of today's societies due to differences in cultural disposition and behaviours. Developing competence across cultures is fast emerging as a tool to help address cultural, ethnic discrimination, racism, hate speech and so on. There is an urgent need for education which aids citizens to live together in an increasingly diverse society. Various scholars (eg: Huber 2012) places emphasis on the improvement of school leadership practices as important step for such aims to take stride.

The Maltese context of the study is of particular relevance since Multicultural and Diversity Education is still in its inception and comes out mostly as a response to a number of factors amongst which is the increased globalisation, returned migrants, regular and irregular

immigration, studentships and mixed marriages. Maltese school leaders are hence facing new challenges of working with children of multicultural origin. With increasing diversity in our classrooms, new challenges but also opportunities are now having an impact both on teachers and students but also, perhaps to a larger extent, on school's senior management team. This is supported by current literature (Eg: Dimmock and Walker, 2005; Marshall, 2004; Coleman and Cardo, 2006, Goddard, 2007) who stress the importance of contextual leadership as a new but challenging venture due to its increasing complexity.

Research in the past 25 years has served as a platform for the evolving debate on the role of society in diversity and inclusive education. Though evolving and informative, the discourse on multiculturalism 'has been mobilised and operationalised in educational policy and proactive within market and managerialist frames that tend to limit the possibilities of delivering its promise of more inclusive and equitable schooling' (Blackmore 2006, p.182). Cray, Alston and Beachum (2006) examined school leaders' perception of multicultural education and school climate and found that when Heads of Schools (hence forward (HoSs) promote multicultural principles in their schools, there exists a general positive atmosphere in the school cultivating the ideals of respect, trust and self worth in their students.

The growing privatization of education, socio-economic disparities, race and colour issues, reduction of the achievement gap between races, elimination of racial and ethnic prejudices and an overarching sense of social justice have been the lynchpins connecting leadership with multicultural education. In Malta, the teaching of English as a foreign language forms an additional but vital factor in this regard. Being able to communicate effectively using the English Language is becoming increasingly important for both Maltese and foreign parents who regard it as an effective vehicle for effective functioning of their children in classroom and in the facilitating intercultural communication between parents, teachers and students. In fact, the Maltese government is currently displaying a number of initiatives aimed at improving the communicative aspect of English language across all schools. These initiatives also have a impact on the leadership and management aspects within schools.

The discourse on the relationship between leadership and multiculturalism is two-pronged. On one side there is the prevailing discourse on *managing* multiculturalism and diversity, pushing a line of thought which exalts individual achievement while integrating practices where each individual's/ group's contribution is celebrated. According to Gewirtz and Ball (2000), however, such discourse does not provide scholarship into how societal structures pave the way for inequalities and disparities. On the other side of the discourse lies the foundation of social justice with emphasis being positioned on critical transformative pedagogies placed at the very heart of educational leadership processes (Hodgkinson, 1991; Greenfield and Ribbons, 1993; Gewirtz 2002, Bogotch, 2002).

According to Gewirtz and Ball (2000), the neoliberal discourse of the 1990's has mainly served to shift the multicultural discourse from a managerialistic and socio-economic point of view rather than as a vehicle for the proliferation of social justice and reduction of inequalities. Larson and Murtadha (2002), in their study on the relationship between educational leadership and social justice, urge school leaders to place the value of social justice at the very heart of their educational strategies. They insist that school leaders give particular attention to issues of race, class, gender, disabilities and sexual orientation. From this point of view, HoSs tend to achieve more equitable outcomes for all students (Blackmore, 2006). Schools are therefore seen as grounds where social, economic, cultural and political differences are in contention. As opposed to the assimilationist view (Gewirtz and Ball, 2000)

the critical multiculturalist perspective 'recognize(s) and respect(s) difference rather than assimilating it and struggles for more equitable redistribution of resources (Zembylas and Iasonos, 2010).

Drawing from the work of Ladson Billings (1997, 2001, 2005), Theoharis (2007) draws a distinction between a *good leader* and a *social justice leader*. He argues that social justice leadership is a refinement of good leadership. On similar grounds Bogotch (2002), Scheurich and Skrla (2003), and Dimmock and Walker (2005) stress the need to re-examine what has up till now been perceived as good leadership and critically examine how various leadership approaches influence students' performance. This shows that the outlook which school leaders have on equity and distributive education have an impinging effect on the way the school operates.

Research also suggests that school leaders have limited and often insufficient knowledge on Multicultural issues (Mabokela & Madsen, 2003). Evidence also suggests that school administrators do not understand the pervading harm of racism (Young & Laible, 2000) and tend to overlook prejudice issues deeming them as unimportant. Other studies (eg: Walker 2005) have highlighted positive practices which many HoSs have developed over the course of their careers serving as role models and advocates of sound values within their communities. These school leaders were able to make proactive use of their values and mitigate against societal inequalities particularly racism and poverty. School leaders who are committed to highlight *cultural differences* rather than *cultural deficits* concede to the notion that children's failure in schools are a result of the culture in which they grew up (Banks, 1994). Walker (1991) linked the characteristics of these school leaders with those exemplified by the Moral model of leadership. These values form the basis on which all school leadership should be based upon as they connect the school administration, teachers and students. Other authors (eg: Goddard et al., 2006, Theoharis, 2007) studied the relationship between the characteristics of leaders in Multicultural schools and the challenges of decision making within such contexts. They concluded that the HoSs' values of social justice had a positive impact on the inclusive values of the school, the changing of culture, pedagogical preparation and policy setting within the school.

Similarly, research conducted by Leeman (2007) and Mahieu and Clycq (2007) concluded that the majority of the HoSs they studied, focused on the recognition of difference and the provision of equal opportunities for success and were effectively preparing children as citizens and employees in a Multicultural society. However, other studies conducted by Goddard and Hart (2007) showed contrasting evidence and found that a number of HoSs actively defied any attempts to recognize diversity and difference on the grounds that all students need to be treated the same in full respect to school procedures and policies. Such assimilationist approach ignored cultural differences among groups and the diverse needs of the students.

MULTICULTURAL EDUCATION

Kincheloe and Steinberg (1997) conveniently categorise multiculturalism into four broad categories

a) Conservative Multiculturalism
b) Liberal Multiculturalism
c) Pluralist Multiculturalism
d) Critical Multiculturalism

Conservative Multiculturalism

This approach tends to emphasise the predominance of one culture over another. It is the assimilation of diversified groups into one normative culture (Tiedt & Tiedt, 2002). Nieto (1996, 1999) criticizes this approach stating that it ignores the persistent issues of social justice and the margainalization of small ethnic groups. She states that conservative Multiculturalism is firmly rooted in white middle class culture placing emphasis on a one-size-fits-all approach ushering minor ethnic groups into a conformative state towards the dominant culture. School leaders who adopt this approach perceive 'other' children as being inferior and with an impending need to conform with other students.

Liberal Multiculturalism

Liberal Multiculturalism tends to emphasise commonality between groups rather than highlighting differences. This approach has been criticized by Sleeter and McLaren (1995), and by (Kincheloe and Steinberg, 1997) as leading to 'colour blindness' and 'cultural invisibility' This approach emphasises the importance of liberty and equality. School leaders therefore believe in their ability to create a shared vision within the school and community, whilst maintaining high expectations for student learning, and professional development opportunities for teachers.

Pluralist Multiculturalism

Pluralist Multiculturalism, on the other hand focuses on the celebration of differences rather than similarities. This type of approach places emphasis on traditions, customs, artefacts and rituals which characterises that particular group. School leaders, therefore tend to be values-driven and have a passionate commitment to use education as a means of challenging promoting values of fairness, respect and justice (Dimmock et.al. 2005). HoSs are able to inspire and motivate others through their own practices, thus securing high levels of commitment with school and outside school boundaries. These school leaders are therefore passionate about making connections between the school and the wider community, through constant links with parents, educational authorities, local councils and Non-governmental organisations. Criticisms of this approach (Eg: Nieto, 1996) are directed on the fact that power relations and structural inequalities are not addressed.

Critical Multiculturalism

Critical Multiculturalism challenges social inequalities and advocates for the need to challenge social assumptions and initiate discourses on power relations which exist between groups. Focus is directed at mitigating against structural imbalances present in society. Stress is hereby made on the role of school leaders as the catalysts for equity practices and as 'filters' of dominant values over minority groups. Dimmock and Walker (2005) criticize this approach as being idealistic and as lacking focus on the approach necessary to achieve social change. They also argue that the approach contains a high dose of political overtones which make it prohibitive on school leaders to enact. School leaders who adopt a critical view of Multicultural education are protagonists of organizational and societal change. They promote anti-racist pedagogy within their schools and work towards the promotion of social justice and equity (Tillman, 2008; Jean-Marie, 2008; Murakami-Ramalho, Nuñez, & Cuero, 2010; Horsford, 2011; Santamaría & Santamaría, 2012; Gooden & Dantley, 2012; Khalifa, 2012; Mansfield, 2014; Santamaría et. al., 2014; Santamaría, 2014). These researchers suggest that culturally responsive leadership may result in socially just and equitable outcomes for all learners in contexts where disparities are present.

Multicultural education in Malta.

Malta, like many other countries in the world, is constantly experiencing a surge in social mobility and opportunities arising from the increased interactions of different cultures, languages, races and religions. Malta's long history of colonisations and the effects which these had on Maltese people are a monument of our rich heritage. Statistics show that in 2010 about 8200 people immigrated to Malta, and about 1200 of whom were returning migrants from the European Union (Vassallo, 2012).

The surge of Multicultural realities within the Maltese social context can be viewed as a two pronged conceptualisation. On one hand it has given rise to a sense of uncertainty, fear of the unknown and unwarranted intrusion while on the other hand it has conveyed a sense of reaching out, diverse encounters, challenging opportunities and cultural enrichment.

The largely contested irregular immigration towards Maltese shores has had a depressing impact on the perception of Multicultural diversity in Malta with many Maltese equating Multiculturalism with irregular immigration amidst ambivalent feelings of concern and anxiety. This is further confirmed by research conducted by Vassallo (2012) who concurs that large-scale irregular immigration in the Mediterranean has caused unprecedented alarm among the Maltese population. What, therefore, has been frequently inappropriately laid out is the notion that Multicultural education is synonymous to the education of children coming from African countries.

What must be taken into consideration however, is the fact that the population of non-Maltese students into Maltese classrooms is composed of students coming from a host of both European and non-European countries such Germany, USA, UK, Italy, France and Serbia, Libya, Algeria, Tunisia, Syria, Nigeria, Ethiopia and others. There are also students coming from Central and South America, Oceania and Asia, albeit to small numbers. This amounted for a total number of 1393 students within our local primary and secondary schools in the year 2008 (Educational statistics, 2011).

This multiplicity of multicultural students within Maltese schools populations has stirred up the need for school leaders to incorporate leadership practices aimed at stimulating a healthy environment, characterized by a number of supportive and responsive structures primarily geared at spurring teachers to include all children in their daily curricular planning. Initiatives have been geared at hosting activities aimed at enhancing interactions with teachers and students in an attempt to reconstruct new realities based on mutual respect and tolerance. The Maltese National Curriculum Framework (2011) further supports these initiatives by highlighting the need for student services to be "given in the context of diversity, implying that they address the learner's current/ actual level of competence with a view of subsequent progress and achievement" (Towards a Quality Education for all, 2011, p 20.) This statement further pushes school leaders to unprecedented leadership strategies and skills aimed at reaching the needs of multicultural students in the classrooms.

Furthermore, the increasing convergence of different languages, religions, cultural behaviours and different ways of thinking, has prompted teachers to consider a pedagogy which is inclusive of cultural differences. The education of children from Multicultural backgrounds is thus conceptualised as an opportunity rather than as an obstacle. For these opportunities to be nurtured and developed able leadership needs to be at the very heart of daily scholastic activities. An appropriate style of leadership would promote effective synergy between people from different cultural, ethnic, and religious backgrounds. Teachers will then have the

possibility of capitalizing on the experiences of their counterparts in Malta and other European countries, study models and stratagems employed and infuse them in their daily interaction with students.

METHODOLOGY

The qualitative means of investigation was deemed appropriate for this study because it gave opportunity to 'delve deeply' (Denzin et.al., 2005) into the perceptions of school leaders and their role in leading their multiethnic school. The interview method was chosen as it allowed the possibility of capturing verbal and non-verbal cues and also allowed probing into emotions and behaviours. Interviewing also provided the advantage of keeping focus on the research question. Confidentiality and anonymity were stressed prior to the interview. The highest of ethical standards were maintained throughout the whole research study.

The interviews consisted of a series of open ended questions lasting around 45 minutes intended to probe into the HoSs' perception of Multicultural diversity within his/her school. Thirteen school leaders from secondary schools in Malta were identified as appropriate candidates for the study, based on the successes of their school leadership, the geographic area and the cultural composition of the school. Out of thirteen, twelve agreed to be interviewed.

The research questions were identified as follows:

1) What are the *perceptions* of Maltese School leaders on Multicultural Education?
2) How do these perceptions translate into *roles* in everyday School leadership? and
3) What *way forward* is advocated for improved multiethnic leadership practice?

Interviews were conducted on strategic periods during the academic year namely:

a) During the first month of the scholastic year (October) where leadership and organisational skills are inevitably put under scrutiny,

b) Immediately after a School Development Session where there are ample opportunities for the school leader to put his/her skills to the test.

c) After parents' day meeting where the school principal would have had the opportunity to share his Multicultural skills with parents, teachers and students.

This retrospect method of interviewing was most effective since it tapped HoSs' perception of Multicultural Education immediately after an opportunity to test their role in favour (or otherwise) the principles of Multicultural Education. Data analysis was conducted with the assistance of atlas.ti, a qualitative data analysis software which aided the researcher into identifying recurrent themes and patterns which could later be used as a springboard for further analysis. Actions were taken to enhance the internal validity of the study. By comparing and contrasting these views against literature review on Multicultural Education suggestion for improvement of multiethnic school leadership are solicited.

Results

Twelve out of thirteen selected respondents participated in the study. It must be stated that none of the twelve participants placed emphasis on the domination of one culture over another. As one HoS (H2) eloquently put it, "in our eyes all children are the same and are exposed to the same educational opportunities which the school promotes in its various

initiatives and activities." One HoS (H6) started from the notion that Malta is known as *Din l-Art Helwa* (The *land of sweetness*, referring to the first stanza of the Maltese National Anthem) and that this is a characteristic to which we, as Maltese should be proud of. He also emphasised the notion of human rights as the prime factor for their actions and behaviours as school leaders.

However ten out of twelve respondents (H1, H3, H4, H5, H7, H8, H9, H10, H11, H12) showed concern about the difficulty of students from different cultures to integrate within Maltese culture. They expressed strong opinions in favour of students needing to conform to the ideals of Maltese society and to respect the rules and regulations of the school. Two HoSs (H3 and H4) emphasised the principles of social justice as the primary goal in their daily quest for a fair and just education with the range of assertions ranging from "moral beliefs", "social equity", "justice" and "need for more empathy". They claimed that society must act with the principles of justice citing various moral stories as the guiding precepts.

Four HoSs (H2, H4, H8, H12) however demonstrated awareness of the difficulties faced by teachers in including children from Multicultural origin into their classroom. They stated that support is rudimentary and lacks the necessary expertise and the required knowledge, awareness aptitude and skills necessary to deal with different cultures. They also stated that actual resources to deal properly with diversity education are poor insofar as they "unwittingly result in further social injustices because authorities lack the necessary resources to support the integration of immigrants in the society". H2 stated the multiplicity of cultures did not pose a problem to the staff or to the school administration and therefore no further or alternative intervention was needed and that students followed the school curriculum as usual without any difficulty to this HoS a different culture or a different language never posed any problem and therefore no additional adjustments were necessary. On the other hand, the same HoS recounts that he would prefer to lead a school with "not so many cultures around".

H7 held a much different view. She stated that a school hosting children from different cultures needed
more thoughtful considerations

> ... one has to stop and think about ... or rather anticipate ... how can we be a better school for these children and also what baggage do they bring with them... how they can contribute.

This HoS admitted that programs "which reflect their culture need to constructed", and that she herself does not possess the knowledge or the expertise to initiate or push forward such changes. She also stated that to her knowledge little is being done to alter the curriculum of schools to include "other" perspectives. She stated that it is "hard for me to imagine how such programs would work with all the syllabi which need to be covered". She pondered as to how many teachers actually adopt Multicultural methodology in their teaching citing the social studies and environmental studies teachers as possible catalysts for such changes to possibly take flight. She stated that teachers need to be trained and that "differential teaching should also include cultural dispositions and not only learning abilities... at the moment a more mainstream approach seems to be the norm." This signifies that this HoS is advocating her teachers to treat everyone the same. This preferred style of leadership was also adapted by another HoS who stressed the importance sharing the mission of the school with teachers parents and students. According to her, once a "common line of understanding is instilled among all stakeholders, in terms of the prescribed learning outcomes, then there will be few other hurdles."

Six HoS (H1, H2, H4, H5, H7, H9) also expressed that parents of Maltese children might unknowingly transmit on their children negative attitudes and behaviours cultivating "xenophobia and racist attitudes which go contrary to the values being imparted by the school management team and teachers". H2 insisted ... "HoSs besides working wholeheartedly in their attempts to include children from other cultures also need to work against the xenophobic attitudes of some parents" H4 and H5 also insisted that "...a sustained effort needs to be directed at educating parents on racism and racial issues."

H11 stated that "As a school management team we need to get closer to the communities our schools get in touch with". Another HoS stated that "...they [children] are forced to accept the homogenous stance imparted by the Maltese school environments." Also

> children from different backgrounds than ours are constantly forced to follow our educational system... when you really stop and think about it... how just [right] is it to do so? ... are we really catering for their needs?...in order to be accepted these children need to behave like Maltese do... in their appearance, in their behaviour, in their free play, in their religious expression... in everything... how right is it? Is it truly respectful for all?

H12 suggested the formation of an action group composed of educational stakeholders who believe in the benefits of Multicultural education and who are also committed to

> embark on research projects in such important and dynamic area in the education sphere which is difficult to come to grips with as its understand is rather complex and we tend to simplify it by looking through our own minds.

On a similar line of thought H11 also suggested that a group needs to be formed to sustain efforts on "the economic and political level and together they can form policies for the general public aimed at easing out the difficulties and dismantling the barriers which many children face in their quest to live up with others". He also stressed that there needs to be a sense of *compassion* (referring to the education of irregular migrants). He expressed his concern that if proper supporting structures are not in place, students from different cultural backgrounds will remain "detached from mainstream Maltese culture and this might create a *ghetto culture* especially in secondary schools". Another Head of School emphatically stated that

> students from diverse backgrounds other than Maltese are constantly being forced in a culture which is not theirs and we are expecting that they follow the Maltese system of education... in some cultures, for example they sit on the ground to eat or sometimes a family eats from one recipient... something which goes contrary to our culture... If we truly want inclusion of different cultures than we must be also to look from their (referring to irregular immigrants of African origin) perspective.

H10 claimed that her leadership style changed over time in parallel with the change in demographics of the school. She stated that as time went by she became "more interested" in the different cultures residing in her school and started becoming intrigued in the composition, cultures and traditions of her students. She also related that she started to involve teachers in different aspects of teaching children from different cultures, even though she insisted that interest [in teachers] needs to be harnessed effectively and efficiently in the interest of all children. From the interview it resulted that although she initiated her career adopting a liberal view of multiculturalism, her leadership is now focused form of leadership where she is more involved in "keeping up with the daily hassles and problems which come up from time to time". She stated that during everyday activities she is always aiming to "seek

to satisfy both professional and personal needs of the staff...[and] it is only in this way that you earn respect from them (staff)".

H4 stated that his job is to "simply" to integrate children from other cultures into mainstream education. He eloquently stated that as HoS, he does not advocate for diversified techniques (related to cultural differences) in the classroom, but rather focuses on equitable resources for all children irrespective of their cultural provenience.
H12 commented that:

> teaching a whole lot of children coming from different continents is indeed a challenging and healthy experience... it is more fascinating... I think to teach such as variety of students...I myself have sometimes stepped in classroom to observe how are teachers dealing with it all... and have also advised teachers on a number of strategies which they can use to deal with multicultural groups... I have taken the whole responsibility of it all... I know its challenging but we, here, at school, are up to it well.

H2, H5 and H9 expressed the notion that while they serve they try to serve the needs of all children, respecting their culture and diversity but at the same time working towards common educational goals. As H5 put it:

> We learn together, we grow to together... different yet united... if such an attitude is well in place... I believe we can have a better world... celebrating differences but treating each other on equal levels, especially with parents at all times... for us diversity is asset and not a hindrance ... I myself have learnt a lot from families...I' ve been invited in their homes and *that* [emphasis of interviewee] is a real achievement.

He also mentioned that (in his opinion) the Maltese system of education though possessing strong characteristics needs to be more receptive to the varying needs of children from other cultures. He stated that HoSs are finding it difficult to include children of multicultural origin because they feel not proficient in cross-cultural skills and in the education for diversity. He stated, however that he is noticing a shift in a more Multicultural teaching staff and therefore "the future looks bright". Having a more diversified teaching staff will

> help in the design and implementation of programs for Multicultural students. Teachers coming from different countries together with Maltese teachers can work together towards effective programs for children and I strongly believe this will have a positive effect on the whole community at large.

On a similar line of thought another H9 stressed the importance of including everyone as part of a whole democratization involves all multicultural communities in the Maltese Islands. In his own words "Malta has been influenced by other cultures, the French, the British, the Arabs ... our cultural roots are very strong...we can all learn from each other and schools are the cradle in which such process can take place". He ventured even further than this, stating that

> schools can work together with NGOs (Non-Governmental Organisations) to provide support for minor communities. As a school we need to be the link... after all the school is a reflection of society.

Based on the results of the interviews, analysis proceeds by determining prevailing patterns on school leaders' perceptions of Multicultural and Diversity Education and how such views are concretised into behaviours and actions.

ANALYSIS

The fact that twelve of out thirteen HoSs agreed to be interview illustrates that HoSs are aware of the impending need to discuss issues on Multicultural and diversity education. The enthusiasm shown prior and during the interviews is an illustration of their willingness garner more knowledge on such a sensitive topic. One HoS opted out of the interviewing process suggesting a certain sense of hesitation in discussing the topic.

None of the twelve participants implied a domination of the Maltese culture over other cultures but ten HoSs expressed concern about the difficulty of students from different cultures to integrate within Maltese culture and expressed strong opinions in favour of students needing to conform to the ideals of Maltese society and to respect the rules and regulations of the school. This clearly points towards attempts to assimilate diversified groups into one normative culture and prompting disregard towards important issues of socialisation and margainalisation of minorities (Nieto, 1996, 1999). According to Nieto (1999) these leaders tend perceive 'other' children as being inferior and with an impending need to conform with other students. A possible interpretation of this could be that HoSs adopt this method as a psychological precept into urging teachers to be loyal to their profession and work parallel with the school's common vision. It must be stated that such analysis needs to be seen in the light of numerous changes aimed at reshaping the current landscape of the Maltese Educational system within a context sustained efforts for wider inclusion.

Findings show that eight out of twelve HoS in the sample interviewed adopt a conservative Multicultural approach and adopt values, norms and behaviours common to many cultures to promote and "conserve" a more assimilationalist view of Multicultural education. These principles did not view Multicultural education from a needs perspective but rather tend to work at establishing homogeneity. According to these HoSs the more diversity is emphasised the more problems it creates. Two of the twelve HoSs interviewed, however, expressed their concern about the lack of success in adopting a conservative approach. This is parallel to research conducted by Goddard and Hart (2007) who claim that HoSs in Canada actively resisted diversity education claiming the emphasis on dissimilarities is the major cause on racism and Xenophobia. Similarly research carried out by Garcia and Lopez (2005, p.437) concluded that diversity is "something to be assimilated and not highlighted.

Three HoSs H2, H5 and H9 adopted a more *liberal* approach to multicultural education prioritising equity education for all students and placed strong emphasis the moral aspect of educating children from different cultures. They stressed that the fact that the school is well known for its diverse population is both challenging and rewarding. They spoke about the need to address inequalities in schools in a proactive and determined manner highlighting social justice and equity teaching as the major focus of their leadership. They insisted in the need to create programs which promote awareness of diversity and also provide mechanisms which provoke healthy debates and discourses which question stereotyping and prevailing myths which imply dominance of one culture over another. According to these school leaders energy needs to be directed at initiating projects which promote student engagement and where each individual is valued for his/ her abilities and contribution. They tend to use the Maltese culture as a springboard to inculcate common values, thus emphasising similarities rather than differences. These three HoSs did not perceive diversity as an issue and dealt with it by not emphasising it, eliciting and highlighting the similarities and working wholeheartedly towards full integration. Such attitude points towards 'colour blindness' (Sleeter and McLaren, 1995) and 'colour invisibility' (Kincheloe and Steinberg, 1997). These

HoS believe that diversity is "a problem" which has to be catered for immediately, overemphasising sameness and completely disregarding differences.

Hence for most HoS the uphold of social justice principles was a priority, mechanisms need to be put in place to support the integration of migrants into society. Hence for such an endeavour to be fulfilled schools together with the Educational Authorities must be able to reach parents of Maltese children in order to dispel myths surrounding education for migrants. Such activities need to be strongly collaborated with local councils and other Non-Governmental organisations, thus nurturing an atmosphere of collaboration, mutual understanding and respect.

For some HoSs, however the principles of social justice are frequently intermixed with "treating everybody the same." But as Johnson and Williams (2015, p. 1) state 'treating all kids the same is the real problem'. According to these authors HoS are missing on the whole scope of educational leadership since in actual fact the playing field on which educational leadership is run is not at all level and that equal treatment is not a guarantee of equitable results. While it is not always easy for HoS, to recognize and affirm the diverse needs of their school population, concrete action must be initiated to view diversity as a resource to be tapped rather than a "problem".

Only one HoSs (out of the twelve interviewed) was able to recount the contributions by various ethnic groups within the school. Most HoSs stated that contributions were given by various "individuals" rather than groups and that school acknowledges each contribution as part of a "whole class work". Most HoSs stressed that overburdened curricula do not allow for specific ethnic contributions to be highlighted. Such views conform to the assimilation patterns (Eg: McNergney and Hebert, 2001, Goddard and Hart, 2007).

None of the HoSs interviewed displayed critical multiculturalist views. The majority of HoSs favoured a conservative view of Multiculturalism which complemented their conservative style of leadership. This could be a reflection of the strong democratic values held within the Maltese political system. Moreover the National Minimum Curriculum Framework (2011) emphasizes that "together, children have to resolve conflicts as a result of their learning to contribute and participate in a democracy" and "children learn about social justice and democracy with an understanding of one's rights and responsibilities as they actively engage in discussions, debates and governance practices". The statements seem to direct educational stakeholders towards assimilationalist policies aimed at keeping the "status quo" through the inclusion of everybody within the whole curricular setup. These assimilationalist views point towards a philosophy which aims at *managing* diversity rather than *leading* diversity. Various authors (Eg: Solomon, 2011; Riehl, 2000; Ryan, 2003) insist that administrative work is conservative in nature and leaves little space for creativity and innovation. There is the tendency for administrators to work towards "conserving the system" (Ryan, 2003) of the workplace, thus perceive challenges as being insurmountable and unnecessary.

This paper has however also given evidence that Maltese of leaders have a strong sense of social justice but are finding it difficult to embrace the change necessary to promote multicultural education as a critical tool which challenges social assumptions and intitiate discussions on implied and latent power relations existing within society.

DISCUSSION

The School leaders in the multi-ethnic schools need to have a clearly articulated and unwavering commitment to attack ingrained societal inequalities. They need not rest on their

laurels or the rhetoric of their values and beliefs but need to loudly proclaimed them and channel energy toward their realisation, notwithstanding the difficulties which they might encounter. By being reflective on their practice and criticizing their own approach to leadership they become proactive in anticipating future problems, thus becoming agents of social change.

HoSs need to view the education of children from diverse culture as a *challenge* rather than a *problem* and perceive their position as school leaders as a tool for mitigating against inequalities and as an opportunity to nurture a positive atmosphere where everybody can learn from one another. They need to strongly believe in being proactive into cultivating a just and peaceful society. Behaviours and actions need to focused towards critically investigating how their own backgrounds influence their daily decisions in schools. More programs need to be developed to disseminate positive Multicultural practices in schools, which are expedient at dispelling myths and stereotypes. Resources need to be deployed on school projects which promote the engagement of all pupils irrespective of Multicultural origin. Challenging social inequalities, advocating for such need and initiating debates on imbalances in power relations among groups can become fertile ground for the promulgation for the principles of Multicultural Education in schools**.**

CONCLUSIONS

The influx of people from other cultures due to immigration (regular or irregular), mixed marriages, studentships and work-related opportunities have posed new challenges to the Maltese Educational System. Many HoSs, together with teaching staff have voiced their concern on how to adapt to these changing demographics in the school population.

The central issues which prevailed in this research were the social justice and equity aspects. Hence, school leaders need to have opportunities to job shadow successful school leaders where social justice and equity education are the hub of their leadership daily practice. Discourses in school leadership programs need to centre on reflective equity practice across school development planning, individualised educational programs, curriculum development sessions and so on. Moreover it is imperative that school leaders are critical on the impact which their leadership has on staff, parents and students. Such processes will eventually spur new transformative approaches to leadership which are truly representative of inclusive cultures present in the community. Culturally sensitive research frameworks need to be constructed to suite the particular Maltese context. Similarly concepts such as cultural dominance and oppression, culturally sensitive research methods, cross-cultural pedagogical methods need to form an integral part of leadership preparation programs.

Findings in this study have generated more questions than answers. What emerged from interviews is the impending need to move away from conservative positions and venture to more critical approaches. The impending need for more training in issues surrounding leadership in multiethnic schools needs to communicated more effectively to educational authorities. For school leaders to be adequately prepared to embrace multicultural students within the Maltese educational system, programs need to be set up to challenge underlying assumptions on equity education. School leaders need to enhance their cultural knowledge, attitudes, awareness, skills and dispositions in order to attain the level of competency necessary to effectively lead multiethnic schools. need to be provided with opportunities to reflect on their practices and the impact. They would also need to examine the impact of these practices in the wider context.

While the interview method had its own advantages it is constrained by the fact that respondents often tend to answer according to what the researcher is hoping to achieve in the study. Given that interviews require detailed analytical processes, sample size is limited to a minimum due to the large quantity of data being analysed.

RECOMMENDATIONS

The particular Maltese context in which Multicultural Education operates needs to be further studied. The study would need to be replicated, perhaps using quantitative means of investigation. Quantitative measures such as questionnaires could provide further insight into tracking changes in leadership styles, as demographics of schools change over time. This would give Educational stakeholders (authorities, boards of trustees, Non-Governmental organisations, local councils, parents and others) a wider approach and multiple viewpoints of such complex issues. By developing a research database on leadership in multicultural school leaders could tap new avenues for research.

Notes:

1) In this study, the terms *school leaders*, and *Heads of Schools* are used interchangeably.
2) Similarly the terms multicultural and multiethnic are interchangeably used.
3) HoS and HoSs are used to denote Head of School and Head of Schools respectively.

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ENVIRONMENTAL LITERACY LEVELS OF THE CLASSROOM TEACHERS IN TURKEY: A RESEARCH TOWARDS THE CLASSROOM TEACHERS SERVING IN BURSA

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Abstract: The educators and the teachers who will give environmental education to children are supposed to have knowledge about the basic issues regarding the environment, to be at a certain sensitivity level about the environmental issues, to assume active roles in the process of reducing the environmental problems and, in this acpect in their daily lives, to exhibit behaviours towards protecting the environmental values.

The teachers who have important duties and responsibilities in the individuals becoming environmentally literate citizens are must be invorenmental literate individuals at the operational level. The primary school period during which the social relations and personalities of the children develop is very important. The classroom teachers educating the children at the age of primary school being "environmentally literate" and these teachers educating their students in this direction will be one of the components contributing to the protection of the environmental values, creation of the awareness concerning the environmental issues and eventually, construction of a sustainable furture. In the research carried out with the classroom teachers at the primary schools and depending on the basis of voluntariness within the scope of "*the Survey for the Invironmental Literacy of the Classroom Teachers*", an environmental literacy survey has been applied to 310 teachers.

Keywords: Environmental Literacy, Classroom Teachers, Bursa, Environmental Knowledge, Environmentally Beneficial Behaviour.

INTRODUCTION

Protection of environmental values of the individuals depends on being in positive attitudes towards the environment. Since the individuals are not born having these attitudes, the children sholud be equipped with positive attitudes for the environment from the early ages. Thus, with an effective environmental education to be given to the children from the early ages, it could be made possible to have them be in positive attudes towards the environment. For this, primarily the educators-teachers who are to give this education are supposed to have knowledge about the basic issues regarding the environment, to be sensitive to the environmental issues, to assume active role in the works towards the solution of the environmental problems and to exhibit behaviours towards the protection of the environmental values in their daily lives. In other words these educators-teachers should be "environmentally literate".

Roth (1968), in the later periods, by expanding this topic raised by Roth, the content of the concept has been fiiled up. In the 1st National Environmental Education Act prepared in the US in 1970, the concept of 'environmental literacy' has been mentioned. In the International Environmental Education Conference held in Tblisi 1977, the concept of 'environmental literacy' has been emphazied and it has been stated that the purpose of the environmental education is to have the individuals acquire environmental literacy. In 1989, a document titled "environmental literacy for every thing" has been published by UNESCO-UNEP. In this

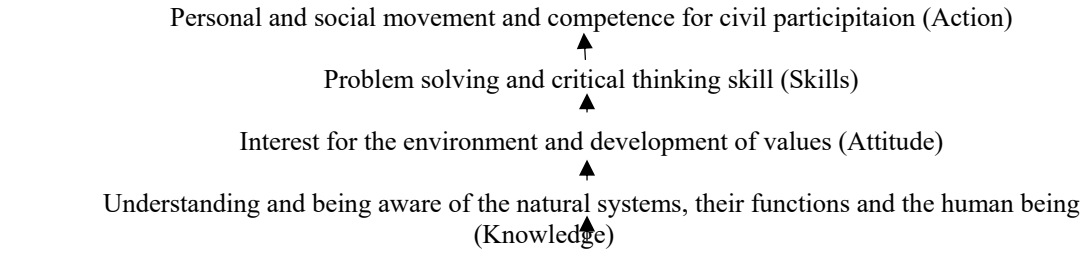
document, environmental literacy has been accepted as the main purpose of the environmental literacy.

Roth has described the concept of environmental literacy in his book she wrote in 1992 "*Environmental literacy: its roots, evolution and directions in the 1990s*". According to this, the environmental literacy refers to (Roth, 992) knowing the structure-functioning of the environmental systems and having the necessary sensitivity in the process of protecting, improving and ensuring the continuity of the environmental values and acting in this direction. In this description, it becomes obvious that the environmental literacy has four major components as knowledge, behaviour, attitude and sensitivity. Roth indicates that the phenomenon of environmental literacy has a three layer- structure:

Nominal environmental literacy; this is the minimum one among the levels of the environmental literacy. In this most primitive level the natural systems are known, information about the results emerging from the human-environment interactions is obtained.

Functional environment literacy; at this level, besides knowing the human-environment interaction, the positive and negative results of this situation is also known. Since the devastating damages that the humans give to the environment is known, a sense of anxiety prevails. But the stated fear is not always transformed into a positive behaviour towards protecting the environmental values.

There is *operational environmental literacy* in the third category. This represents the highest level of environmental literacy. The ones at this level do not only have a deep knowledge about the environment. At the same time, they have a broad knowledge about effects that their behaviours will create on the environment. A literate at this level expresses his or her feelings and thoughts in a corporate organization (eg. non-government organizations). These people do readings about the literature concerning the environment, write down their thoughts and criticize the current situation. They have a strong sense of responsibility at the point of protection of the environmental values and ensuring the sustainability. They do not only take action at the individual or local level. The global environmental issues are equally important for them (Hogden, 2012: 13). What is important at this stage is whether the knowledge about the environment can be transformed into responsible-beneficial behaviour for the environment or not. In other words, the knowledge, by being internalized by the individuals, is required to shape their daily lives. The environmentally literate individual that Roth describes herein, is consistent with the aim of "for the solution of the environmental problems, by having the idividuals acquire the necessary attitudes and behaviours making the more active (Tbilisi)" which is emphasized in the 1978 Tbilisi Declaration.
Elder (2003) indicates that the environmental literacy is a five-stage process and expresses that the environmental literacy can not be accomplished without the completion of the mentioned five-stage process. A success at any stage is not alone sufficient. In this case, it can be said that the the acquisition of the environmental literacy would remain inconclusive (Elder, 2013).



Pigure 1: According to Elder The Environmental Literacy Stages (Elder, 2003)

By Morrone and his firends, the case of environmental literacy has been handled in a manner related with the environmentally beneficial behaviour. Accordingly, Morrone and his friends have stated that the individual cannot be considered as environmental literate unless the environmental knowledge that the individuals have is transformed into environmentally beneficial behaviours and have indicated that an environmentally literate individual is required to have fundemantal and deep scientific background equipped with environmental value, attitude and skills to transform the knowledge into action (Morrone, Mancl ve Carr, 2001).

As a result, originating from the definitions made, we can say that understanding the natural processes that make the life possible and protecting them with respect is the environmental literacy; and the individual who knows the principles and the limits of the nature, who has accepted living with the nature in harmony is the *environmental literate*. An "environmental literate person" has got information about how his daily life preferences will harm the environment and how these preferences will provide benefits for the environment. Depending on this information he has, while shaping his own life in this direction, on the other hand, he informs the people around himself about this subject.

The teachers who have important duties and responsibilities in making the individuals environmentally literate citizens are required to be environmentally literate individuals at the operational level. It is important to examine the environmental literacy levels and positive behaviours for the environment of the classroom teachers who have important tasks in the process of raising an environmentally sensitive generation. Indeed, in the US National Environmental Act 1990, providing environmental education for the teachers at the local and national level, and integrating them into the environmental education programmes has been aimed. Accordingly, the precondition of accomplishment of the environmental education programs launched at national level has been determined that the teachers who are to give the environmental education should be educated about the environmental values at an adequate level (Chepesiuk, 2007).

Supporting the the process of awareness about the importance of environmental values with the activities towards children would be an important step for the secure tomorrow. The primary school period which is the period when the social relations and personalities of the children develop is of great importance. Hence, the classroom teachers educating the children at the primary school age being "environmentally literate", training their students in this direction will be one of the most important components contributing to the preserving the envivironmental values and creating awareness regarding the environmental issues and eventually constructing the sustainable future.

Currently, at which level is the environmental literacy of the classroom teachers serving in the primary schools? The questions what is, what should be the roles of the classroom teachers, who have the purpose of bringing up an individual who is intellectual and respectful to the nature by giving contemporary "literacy" education to the children at the primary schools, in the process of providing a sustainable, balanced environmental system have been the basic starting point of this study.

The aim of the research in this context is to determine the environmental literacy levels of the classroom teachers serving in the Osmangazi County which is one of the central counties of the city of Bursa. The Osmangazi County is one of the largest counties of Turkey in terms of population. (According to data from the year 2014 its population is 802,620.)

METHOD

Several studies have been performed in the world and in Turkey in order to determine the environmental literacy levels of the individuals. In these studies performed, different scales have been used for the determination of the environmental literacy. For example in the years of 2001 -2002, an environmental literacy survey was administered at the Michigan State University which 19890 students participated in. In 2007, an applied study related with environmental literacy was conducted in in Korea with 969 students by Chu, Lee, Ko, Shin, Lee, Mee, Min and Kang. In Turkey, the Environmental Literacy Scale developed at the Michigan State University was applied to the students having education in Ankara by adapting to Turkish by Teksöz, Şahin and Ertepınar.

When Several academic studies carried out in the context of environmental literacy in Turkey are examined, they can be categorized as follows: Examining the environmental literacy levels or environmental sensitivities of the students at the primary school level[1]; the studies towards determining the environmental literacy levels or attitudes for the environment of the students having education at various undergarduate programs[2]; searching for the attitudes of the teachers for the environment or studies related with the assessment of the environmental literacy[3].

The Hypothesis of the Study

The hypothesis of the study is as follows: The environmental literacy levels of the classroom teachers are at the *functional environmental literacy level* in the context of the environmental

[1] Some of these studies include the following: Alp, E., Ertepinar, H., Tekkaya, C., & Yilmaz, A. (2006). A study on environmental attitudes and knowledge of elementary school students. Abstract book. *VII. National Science and Mathematics Education Congress*, Gazi University. Ankara. Turkey; Bozkurt, O., and Orhan, A. T. (2004). Identification of the misconceptions they have of elementary school students about acid rain. Abstract book. *VI. National Science and Mathematics Education Congress*. Marmara University, Istanbul, Turkey; Cetin, G., & Ertepinar, G. (2004). The seventh and ninth graders a comparison of the level of understanding some of the concepts of Ecology. Abstract book. *VI. National science and mathematics education congress*. Marmara university. Istanbul, Turkey; Cobanoğlu, E.O., Er, D.Z., Demirtaş, E., Ozan, & B., Bayrak, C. (2006). Of elementary school students ' perceptions of environmental problems. Abstract book. *15. National Educational Sciences Congress.* Mugla University. Mugla; Darcın S.E., Orhan A.T., Bozkurt O, & Yaman S. (2006). The detection level examination of a class of eighth graders about the ozone layer. *Sakarya university journal of eductional sciences*; Yaman, S., Bozkurt, O., Aydin, H., Uşak, M. & Gezer, K. (2005). Primary school students' knowledge levels about greenhouse effect, ozone layer and acid rains. *The mediterranean journal of educational studies*, 10 (2), (pp. 81-95).; Yılmaz, O., Boone, W.J., & Andersen, H.O. (2004). Views of elementary and middle school Turkish students toward environmental issues. *International Journal of Science Education*. 26 (12). (pp. 1527-1546).

[2] Some of these studies include the following: Altan, M. Z. (1998). A call for change and pedagogy: A critical analysis of teacher education in Turkey. European journal of education. 33.(pp. 407–508). Berberoglu, G., Tosunoglu, C., (1995). Exploratory and confirmatory factor analyses of an environmental attitude scale (EAS) for Turkish university students. *The journal of environmental education*. 26. (pp. 40–44).; Karagozoglu, G., (1991). Teacher education reform in Turkey. *Action in teacher education*, 13. (pp. 26–29.)

[3] Some of these studies include the following: Erten, S. (2003). 5. students in the class "of trash reduction" an instructional model for acquiring awareness. *Hacettepe university journal of education*. *25.* (pp. 94-103).; Guler, T. (2009). Ecology-based environmental education on teachers ' environmental education influence their opinion against it. *Journal of education and science*. 34 (151). (pp. 30- 43).; Urey, M. & Şahin, B. (2010). Academic staff of environmental issues and environmental education for feelings, thoughts and behaviors evaluation. *Cukurova University journal of education*. *3*(38). (pp.134-149).

literacy category that Roth defines. In other words, the classroom teachers have information about the environmental issues at the basic level, they know about the positive-negative results of the human and environment interaction, since they are aware of the devastating harms of the environmental problems that humanity is facing, a sense of anxiety prevails. But, they are not willing to make a fundemental change in their daily lives towards reducing the environmental problems, they do not take part in the activities at the operational level by joining a corporate organization like non-government organizations in the context of reducing the environmental problems; moreover, they do not follow the scientific publications in order to improve their knowledge on issues related to the environment, they do not express their thoughts at these platforms.

The Importance of the Study

The field study covered within the context of this study being carried out in the city of Bursa which has received immigrants from many regions of Turkey, and in which individuals having diverse socio-cultural features are living will provide the researcher of the information about the environmental literacy levels of the classroom teachers serving all over Turkey. The data to be obtained from this study will provide an important data base for the environment based various researches and projects to be developed for the teachers who will transfer an approach based on sustainable, balanced and intergenerational justice.

Creating the Questionnaire

In the Bursa - Osmangazi County, 1824 classroom teachers have been serving. With 310 of these teachers, the "Environmental Literacy of the Classroom Teachers Survey" has been conducted with the aim of determining their environmental literacy levels. During the process of creating the questionnaire, starting from the conceptual framework of Roth, ıt has been aimed to determine which one/which ones of the four basic components of environmental literacy which are knowledge, behaviour, attitude and sensitivity cases the classroom teachers participated in the field study have internalized. In this context, the "*Environmental Literacy of the Classroom Teachers Survey*" composed of 100 questions under the headings of *knowledge test, behaviour determination, attitude determination, and sensitivity level* has been applied to the classroom teachers.

In the process of creating the questionnaire, the surveys previously carried out by the academicians as result of literature scanning have been examined. While creating the questionnaire, the working areas of the classroom teachers, the subjects included in the primary school cuuriculum, the uniqueenvironmental values - problems of Turkey and the unique environmental values of the city of Bursa where the study was carried out have been considered. The questions created in this way have been included in the "Environment Knowledge Test" which is the first part of the questionnaire. In the "Environmental Knowledge Test", questions in general nature related with environmental issues at national and local scale and environmental values are also included. In the questionnaire, all of the questions included in the "beneficial behaviour for the environment", "attitude towards the environment" and "sensitivity to the environmental issues" sections have been developed by the researchers considering the issues and problems related with the environment.

The questions guiding the research with the subject of determination of the environmental literacy levels of the classroom teachers serving in the city of Bursa are as follows;

- What is the level of knowledge of the classroom teachers serving in Bursa about basic issues related to the environment?

- How are the attitudes of the classroom teachers serving in Bursa at the point of protection and sustainability of the environmental values?
- What is the sensitivity levels of the classroom teachers serving in Bursa for the globally effective environmental problems?
- Is there any meaningful statistical correlation between the environmental literacy levels of the classroom teachers who are the subject of the research and their genders?
- Is there any meaningful statistical correlation between the environmental literacy levels of the classroom teachers who are the subject of the research and their duration of the working hours?

Implementation of the Questionnaire

Initially, the written permission has been taken from the Bursa - Osmangazi County National Education Directorate for the purpose of implementing the " Environmental Literacy of the Classroom Teachers Survey" developed by the researchers with the methods mentioned above. With this permission document received, the primary schools in Osmangazi County have been vizited and the school administrators have been interviewed. Work has been conducted in 18 primary schools 2 of which are private and 16 of which are public primary schools. Within the context of "Environmental Literacy of the Classroom Teachers Survey", in the field study conducted with the classroom teachers at the primary schools on the basis of voluntariness, 173 female and 137 male classroom teachers have been interviewed. The interviews lasted approximately 30-35 minutes.

Validity and Reliability Analysis

In the "Environmental Literacy of the Classroom Teachers Survey", three diffrent dimensions as behaviour determination, attitude, and sensitivity are included. Cronbach's alpha coefficients calculated for these dimensions are given in the following table. As seen on the table, the Cronbach Alpha values for these three dimensions are above 70%. This indicates that the determined dimensions are reliable.

Tablo 1: Values of Cronbach α

Dimension	Items	Mean	C.Alpha
Environmental Behavior Detection	23	3,74	0,88
Attitude Towards The Environment	18	3,95	0,81
Sensitivity To Environmental Issues	15	4,15	0,98

FINDINGS

“The findings of the survey conducted with face-to-face interview method within the context of the field study titled "Environmental Literacy Levels of the Classroom Teachers in Turkey: a Research Towards the Classroom Teachers Serving in Bursa" are as follows:

Demographic Findings

The 55, 8% of the teachers participated in the field study are women, the 37, 7% is between the ages of 39-46. The 90, 6% of the teachers are not members of any NGO, the 33,9% of them have been working for 15-19 years.

Table 2: Demographic characteristics of the classroom teachers

Gender	Frequency	%	NGO's Membership	Frequency	%
Female	173	55,8	Evet	29	9,4
Male	137	44,2	Hayır	281	90,6
Age	**Frequency**	**%**	**Tenure**	**Frequency**	**%**
22-30 age	37	11,9	0-4 yıl	25	8,1
21-38 age	87	28,1	5-9 yıl	37	11,9
39-46 age	117	37,7	10-14 yıl	63	20,3
47- 54 age	52	16,8	15- 19 yıl	105	33,9
55 age and above	17	5,5	20 yıl ve üzeri	80	25,8
Total	**310**	**100,0**	**Total**	**310**	**100,0**

Findings Related to Environmental Knowledge

In the qustionnaire, there are 36 information questions for the purpose of evaluating the knowledge of the classroom teachers about the environmental system. The number of the correct answers given to the questions have been designated as the environmental knowledge level score. According to this, for environmental knowledge 24,57 (±4,5ss) as the avarage score , 5 as the minimum score and 33 as the maximum score have been found.

Whether or not the environmental knowledge differ according to gender has been analyzed with two independent sampling "t Test", and as the result of the analysis it has been revealed that the avarage of the environmental knowledge score does not differ according to gender (t=0,554; p=0,580).

For the purpose of analyzing whether or not the environmental knowledge levels differ in terms of the working time periods of the teachers, "One-Way Variance Analysis (ANOVA)" has been used. The results of the analysis are listed in the following table.

Table 3: Tenure and teachers ' environmental knowledge levels

	Tenure							
	0-4 year (n=35)	**5-9 year (n=37)**	**10-14 year (n=63)**	**15-19 year (n=105)**	**20 year + (n=80)**	**F**	**P**	**Post-Hoc**
Environmental Knowledge Scores	21,92	24,00	24,25	25,00	24,57	3,409	0,010	0-4yıl<15-19 yıl 0-4 Yıl<20+

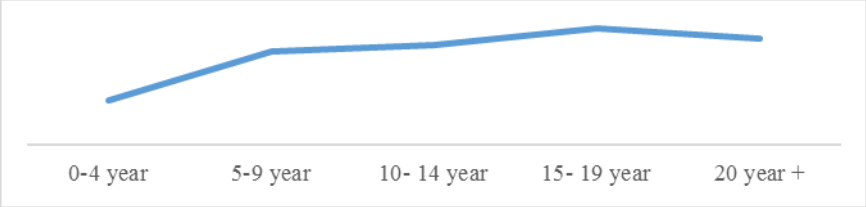


Figure 2: The relation of the working time periods of the classroom teachers with their environmental knowledge levels.

As seen from the table and figure above, the avarage knowledge level score of the classroom teachers differ in terms of their working time periods. This difference has come out as the ones who have 0-4 years of working period in their profession have lower score compared with the ones who have 15-19 years and 20 years and above. (Post-hoc) Whether or not the environmental knowledge scores of the classroom teachers are associated with the behaviors, attitudes and sensitivity towards the environment has been examined and the following findings have been obtained.

Table 4: The relation of the environmental knowledge scores of the classroom teachers with their behaviours, attitudes and sensitivity towards the environment

	Behavior	**Attitude**	**Sensitivity**
Score	0,188**	0,267**	0,158**
Behavior	1,00	0,548**	0,562**
Attitude	0,548**	1,00	0,665**
Sensitivity	0,562**	0,665**	1,00

** p<0,01

When the correlations in table above are analyzed, it can be stated that there are meaningful but rather low positive oriented correlations between the environmental knowledge score and behaviour, attitude towards the environment and sensitivity for the environmental problems.

The Findings Related to the Beneficial Behaviours Towards the Environment

In order to assess whether or not the classroom teachers perform beneficial behaviours towards the environment, a 23-item scale has been created. The answers given to the items are in the form of 1 "never", 2 "rarely", 3 "sometimes", 4 "often" and 5 "always". The Figure 1 showing the items included in the scale created and the avarages related with the responses given is placed below:

In the evaluation of the beneficial behaviours of the classroom teachers towards the environment, the analysis have been conducted in this regard in order to determine whether or not the environmental literacy differs according to the period of working time and gender which is the basic matter of the research. Whether or not the beneficial behaviours of the classroom teachers differ according to gender has been analyzed with two independent sampling "t Test". According to the results of the research, the beneficial behaviours towards the environment differ according to gender (t=6,159; sig:0,000). This diffrenece has come out in favour of female classroom teachers. (MeanDifference: 0,323).

Table 5: Group statistics

	Gender	**N**	**Mean**	**Std. Deviation**
Behavior	Female	173	4,0012	,46032
	Male	137	3,6782	,45609

Table 6: Independent sample test

		Levene's Test for Equality of Variances		t- test for Equality of Means				
		F	Sig.	T	df	Sig. (2 – tailed)	Mean Difference	Std. Error Difference
Behavior	Equality of Assumed	,644	,423	6,159	308	,000	,32291	,05243
	Equality of Variances			6,165	293,103	,000	,32291	,5238

For the purpose of investigating whether or not the environmentally beneficial behaviours of the classroom teachers differ according to the working time period, "One-Way Variance Analysis (ANOVA)" has been used. According to the results of the analysis, statistically meaningful difference have not been found compared with 5% meaningfulness level (F=0,212; sig:0,932).

Table 7: The relationship of behavior with the working time

Working Time	N	Mean	Std. Deviation
0-4 year	25	3,8080	,47371
5-9 year	37	3,8811	,50460
10-14 year	63	3,8292	,39982
15-19 year	105	3,8583	,49533
20 year and plus	80	3,8870	,53400
Total	**310**	**3,8585**	**,48508**

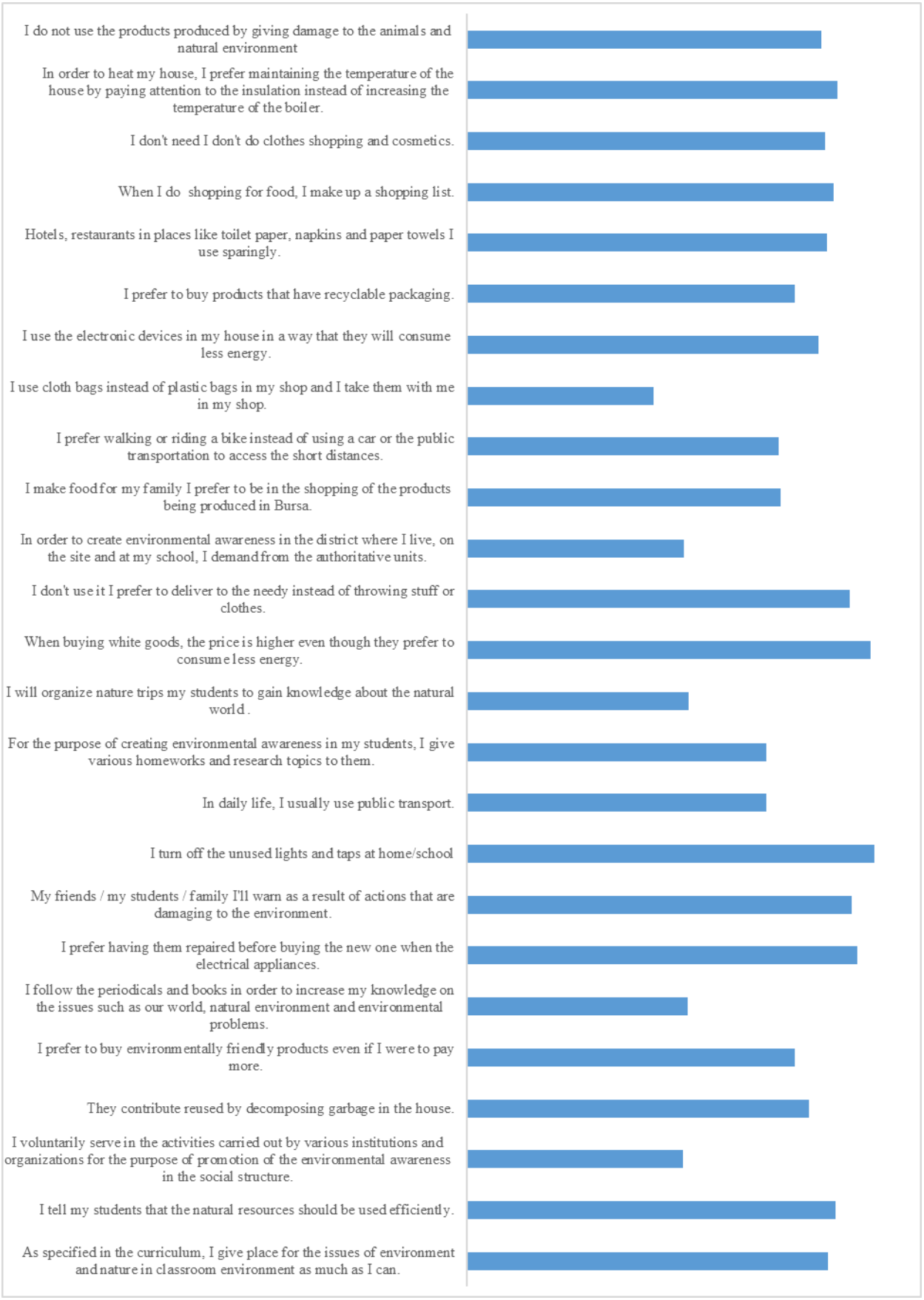


Chart 1: The avarage of the beneficial behaviours of the classroom teachers towards the environment

As to be seen on the Chart 1, The environmentally beneficial behaviour which received the highest score is as follows:

- "I turn off the unused lights and taps at home/school."

Table 8: Lights and taps off

	Frequency	%
Never	0	0
Rare	2	0,6
Sometimes	10	3,2
Often	67	21,6
Always	231	74,5
Total	**310**	**100,0**

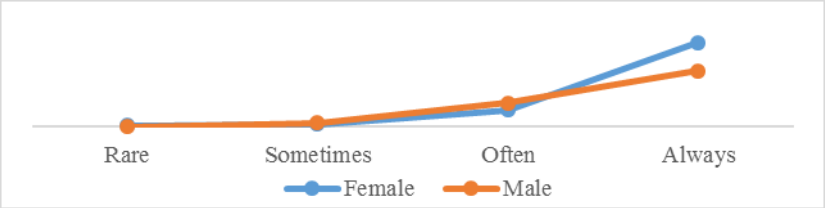


Figure 3: Teachers' turning off the unused lights/taps according to their gender

While the 80% of the female teachers have given the response "always", this ratio has declined to 67% for the male teachers. In terms of working time period, it is observed that the ratios are close to each other (Figure 3).

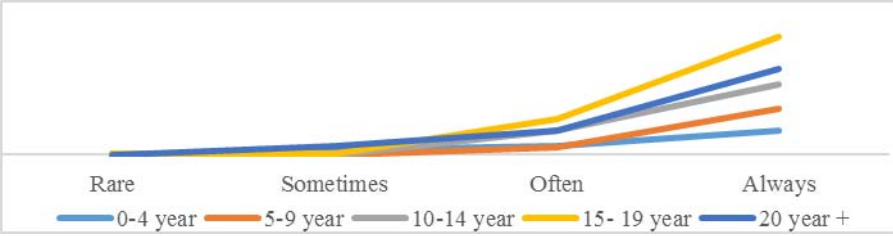


Figure 4: Teachers' turning off the unused lights/taps according to the working time period

Again, as to be seen on Chart 1, one the environmentally beneficial behaviours that received lowest score is like that:
"I voluntarily accept duty in the works carried out by means of various institutions and organizations in order to create and promote environmental awareness in the social structure and give support to these works."

Table 9: Voluntary work in order to create environmental awareness

	Frequency	%
Never	64	20,6
Rare	99	31,9
Sometimes	95	30,6
Often	36	11,6
Always	16	5,2
Total	**310**	**100,0**

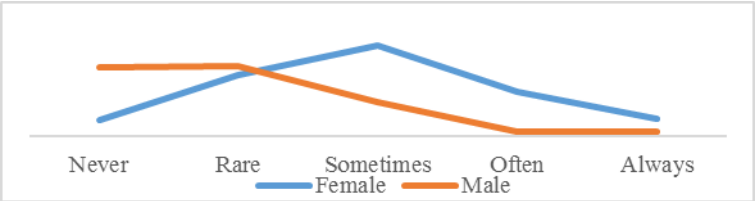


Figure 5: Voluntary work of the classroom teachers on the environmental issues according to their gender

One of the basic criteria in the context of environmental literacy is individual's doing voluntary works in order to create environmental awareness in the community and for this purpose, participating in the activities of various non-government organizations. Within the scope of the field study, the classroom teachers' fulfilling frequency of this behaviour has remained quite low. The ratio of the teachers who responded as "often" and "always" has remained at the level of 16,8% (Table 9). When this case is examined in the context of gender, while this ratio for the female teachers (The sum of the responses often and always) is at the level of 26,6%, the ratio has dropped to 4,4% for the male teachers (Figure 5). When considered in the context of working time period, a significant difference has been observed in between (Figure 6).

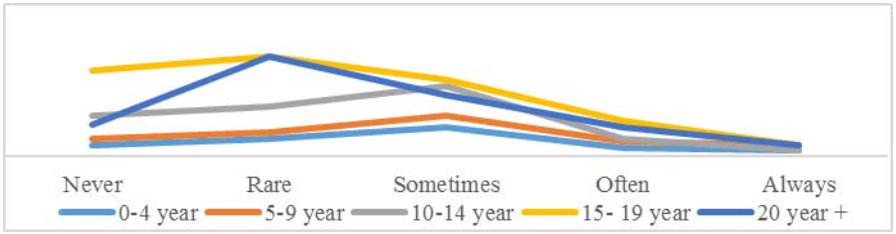


Figure 6: Voluntary Work of the teachers on the environmental Issues according to their working time period.

When the Chart 1 is examined in general, it can be said that while the teachers participated in the field study behave more sensitively on the issues that concern especially themselves, their families and their homes, they are less willing to fullfill the behaviours towards working voluntarily with the purpose of expanding the environmental awareness in the individuals and to take action actively in the process of protecting the environment. In addition, moving from the survey data, it is seen that the frequency of the female classroom teachers fulfilling the environmentally beneficial behaviours is higher in comparison with the male classroom teachers.

Attitudes Towards Protecting the Environmental Values

In order to determine the environmental literacy levels of the classroom teachers for the purpose of determining their attitudes at the point of protection and sustainability of the environmental values, 18 questions have been prepared. The responses given to the questions are as in the form of 1 "I strongly disagree", 2 "I disagree", 3 "I am undecided", 4 "I agree",and 5 " I strongly agree". The averages of the responses that the classroom teachers gave to the statements contained in the prepared scale are as seen on the Chart 2.

In the evaluation of the attitudes of the classroom teachers towards the environment, gender and the working time period have been considered as the basic evaluation criteria. In the direction of these criteria, whether or not the attitudes towards the environment differ

according to the gender has been analyzed wth the "Mann Whitney U Test"[4]. According to the results of the analysis, it has been found out that the attitudes towards the environment differ according to the gender and this difference is in favour of the classroom teachers.

Table 10: Group statistics

	Gender	N	Mean	Std. Deviation
Attitude	Female	173	4,0853	,36845
	Male	137	3,7880	,48251

Table 11: Test statistics (a)

	Attitude
Mann – Whitney U	7382,000
Wilcoxon W	16835,000
Z	-5,706
Asymp. Sig. (2 – tailed)	,000

a. Group Variable: Gender

In the evaluation of attitudes of the classroom teachers towards the environment in terms of working time periods, the "Kruskal Wallis Test"[5] has been used. According to the results of the analysis, it has been revealed that attitudes towards the environment do not differ in terms of working hours.

Table 12: Test statistics (a.b)

	Attitude
Chi – Square	2,849
Df	4
Asymp. Sig.	,583

a. Kruskal Wallis Test
b. Group Variable: Working Time

Table 13: The relationship of attitude with the working time

Working Time	N	Mean	Std. Deviation
0-4 year	25	3,9520	,38092
5-9 year	37	4,0432	,38571
10-14 year	63	3,9183	,44225
15-19 year	105	3,9386	,49445
20 year and plus	80	3,9613	,43538
Total	**310**	**3,9539**	**,44711**

[4] Because the variances ar not homogeneous group Kruskal- Wallis test used.
[5] Because the variances ar not homogeneous group Kruskal- Wallis test used.

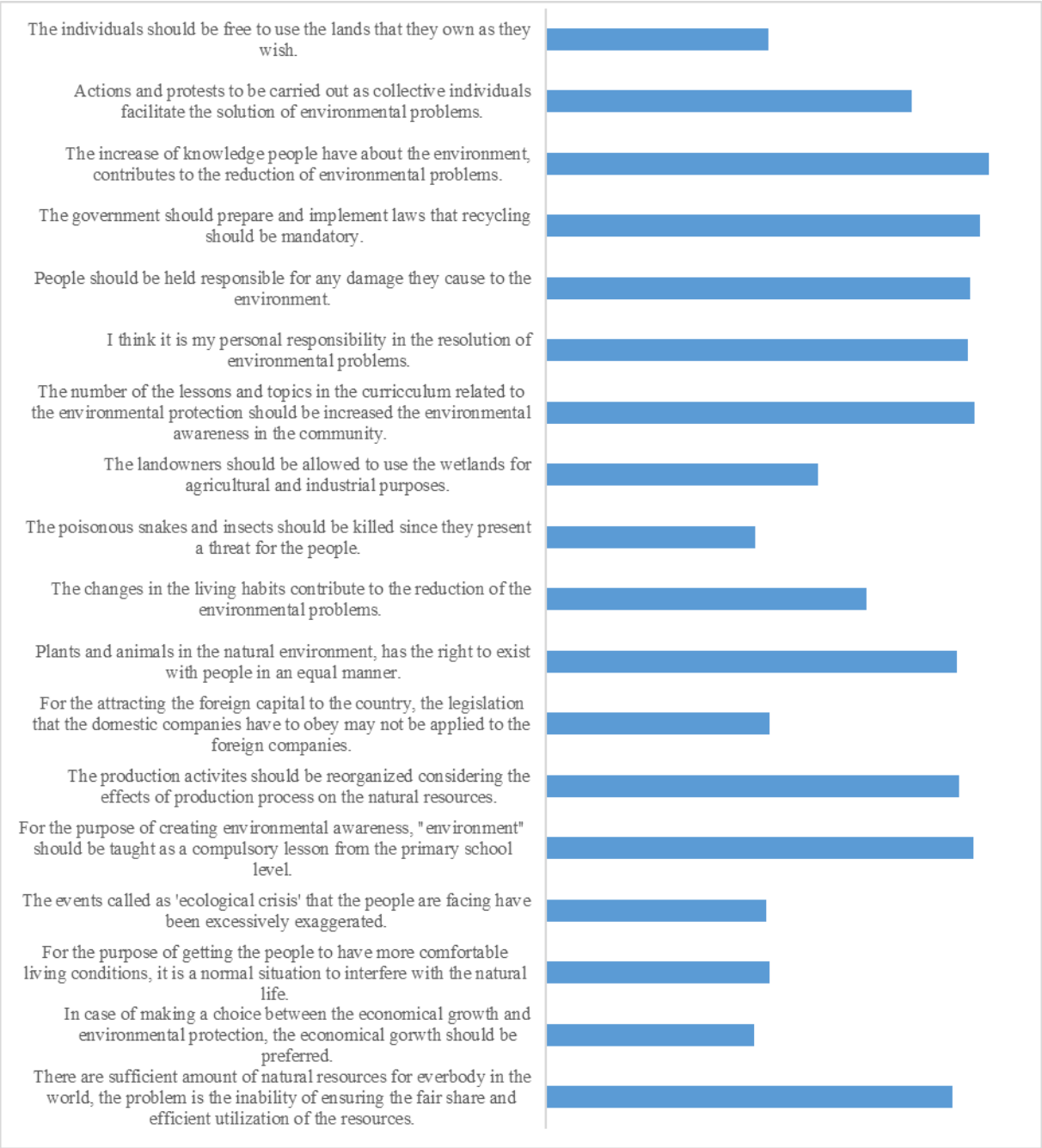


Chart 2: The avarage of the attitudes of the classroom teachers towards the environmental values

Of the questions asked in order to determine the attitudes of the classroom teachers the response to which the highest score was given is in the form of "Increase of the knowledge of the people in the subject of environment contributes to the reduction in the environmental problems".

Table 14: According to the classroom teachers does the increase in the environmental knowledge of the people reduce the environmental problems

	Frequency	%
Strongly Disagree	2	0,6
Disagree	3	1
Undecided	9	2,9
Agree	117	37,7
Absolutely agree	179	57,7
Total	**310**	**100,0**

95,5% of the classroom teachers agree to the opinion that with the increase of the knowledge of the people about the subject of environment the environmental problems will reduce (Table 14).

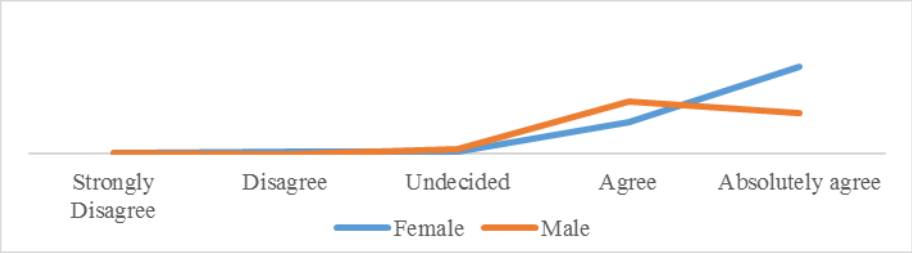


Figure 7: The effect of the environmental knowledge of the classroom teachers on environmental protection according to heir genders

For this question, while the 53,3% of the male classroom teachers have given a response as "I agree", the 70,5% of the female classroom teachers have given a response as "I strongly agree" (Figure 7). There is no considerable difference between the thoughts of the teachers with regad to the working time period (Figure 8).

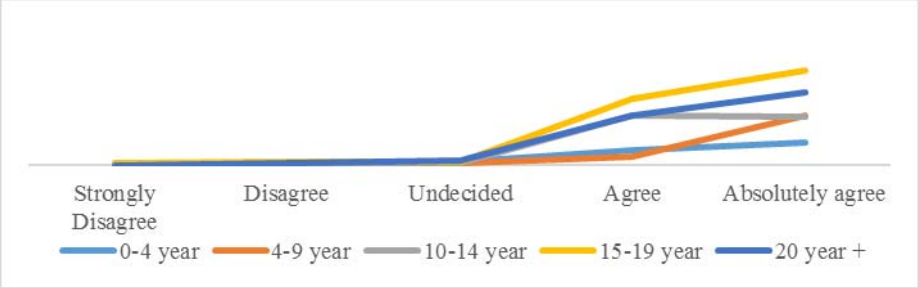


Figure 8: The effect of the environmental knowledge of the classroom teachers on environmental protection according to their genders

The statement which received the lowest score is as in the form of "If there will be a choice between economic growth and environmental protection, economic growth should be preferred.". The 70,9% of the teachers do not agree to this question (Table 15). In fact, this case is a logically positive case in terms of protection of the environmental values.

Table 15: According to the classroom teachers, should economic growth be prefferred to environmental protection?

	Freqency	%
Strongly Disagree	77	24,8
Disagree	143	46,1
Undecided	71	22,9
Agree	13	4,2
Absolutely agree	6	1,9
Total	**310**	**100,0**

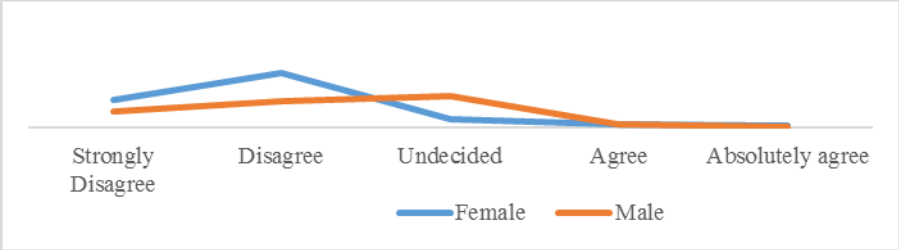


Figure 9: The classroom teachers' preference of economic growth to environmental protection according to their genders

When the genders of the classroom teachers and the responses given to this question is compared, the female classroom teachers have given the answer "I disagree" at the rate of 56,1%, and the male classroom teachers have given the answer "I am undecided" at the rate of 40,1% (Figure 10).

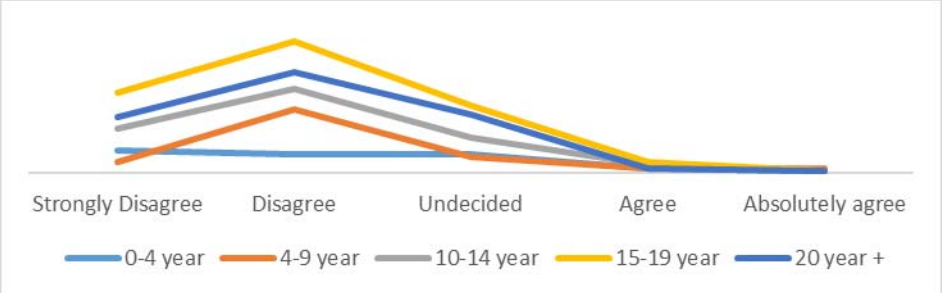


Figure 10: The classroom teachers' preference of economic growth to environmental protection according to working time periods

When the thoughts of the classroom teachers are examined in the context of working time periods, it is seen that the highest ratio has been concentrated on the answer "I disagree" in all categories (Figure 10).

As seen on both of the tables above, while the attitudes of the classroom teachers at the point of protecting and maintaining the environmental values has shown parallelism with each other in the context of working time period, the female classroom teachers have been higher than the male classroom teachres in the context of gender.

Sensitivity to Environmental Problems and Issues

There are 15 questions in the sensitivity scale developed for the purpose of determining the sensitivity levels of the classroom teachers towards the environmental problems that is

effective on the global scale and that negatively affects all living and non-living beings. The answers given to the items are in the form of 1 "I am not worried at all", 2 "I am very little worried", 3 "I am undecided", 4 "I am a little worried" 5 "I am very worried".

Whether or not the sensitivity of the classroom teachers towards the environment differs according to gender has been analyzed with "Mann Whitney U Test". According to the results of the analysis, it has been found out that the sensitivities towards the environment differ according to the gender and this difference is in favour of female classroom teachers.

Tablo 16: Group statistics

	Gender	N	Mean	Std. Deviation
Sensitivity	Female	173	4,5942	,55897
	Male	137	3,6044	1,09798

Tablo 17: Test statistics (a)

	Sensitivity
Mann – Whitney U	5286,000
Wilcoxon W	14739,000
Z	-8,432
Asymp. Sig. (2 – tailed)	,000

a. Group Variable: Gender

For the purpose of analyzing the sensitivity of the classroom teachers towards the environment in the context of working tme period, the "Kruskal Wallis Test" has been used, and according to the test findings, it has been found out that the sensitivities towards the environment do not differ according to the working time period.

Table 18: The relationship of sensitivity with the working time

Working Time	N	Mean	Std.Deviation
0-4 year	25	4,4187	,74940
5-9 year	37	4,3243	,76838
10-14 year	63	4,0519	,98995
15-19 year	105	4,1206	1,07648
20 year and plus	80	4,1275	,96085
Total	**310**	**4,1568**	**,97311**

Tablo 19: Test statistics (a.b)

	Sensitivity (Worry)
Chi - Square	3,247
Df	4
Asymp. Sig.	,517

a. Kruskal Wallis Test
b. Group Variable: Working Time

The avarages of the responses that the teachers have given to the items included in this group are as seen on Chart 3.

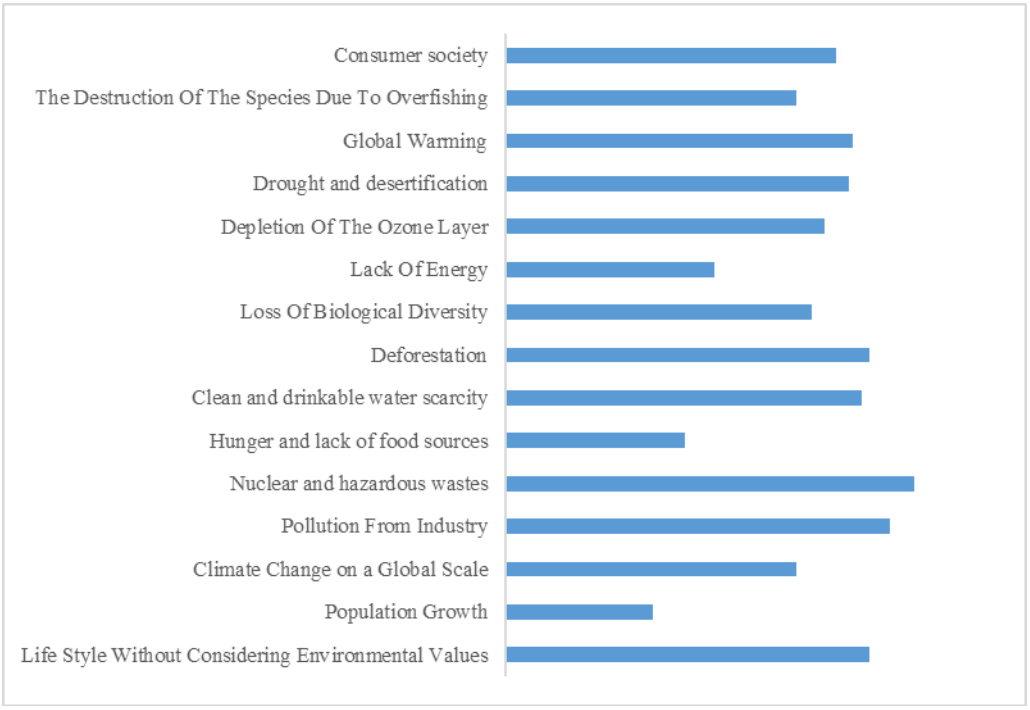


Chart 3: The avarage of the sensitivities of the classroom teachers towards the environmental problems

In the questionnaire prepared for the purpose of measuring the sensitivity levels of the classroom teachers towards the environmental problems witnessed globally, it is seen on the table above that the classroom teachers are the most sensitive (worried) against "nuclear and hazardous waste", and they are the least sensitive against the "population growth".

Table 20. Worry about the population growth

	Frequency	**%**
I'm not worried never	27	8,7
I am a lot less worried	41	13,2
Undecided	38	12,3
I am a little worried	76	24,5
I am very worried	128	41,3
Total	**310**	**100,0**

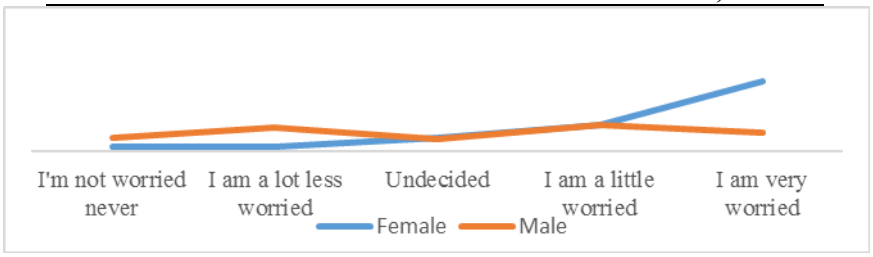


Figure 11: The sensitivity of the Classroom Teachers against the Population Growth According to their Genders

While the 80,6% of the responses of the female classroom teachers have concentrated on the choices " I am a little and very worried", the ratio of the ones from among the male classroom teachers who gave these answers is at the level of 47,4% (Figure 11).

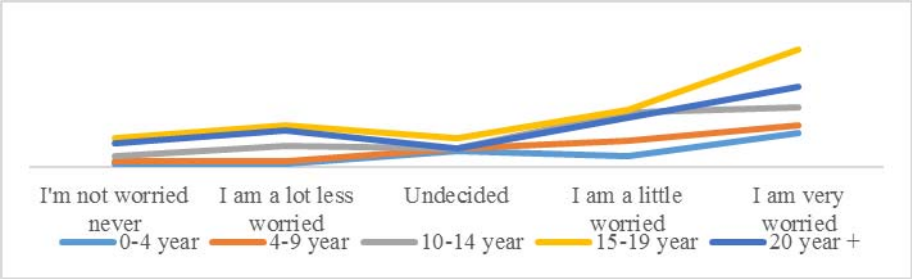


Figure 12: The sensitivity of the classroom teachers against the population growth according to their working time periods

In the context of working time periods, the response that the teachers in all categories have given at the highest rate is "I am very worried".

Table 21: Worry about nuclear and hazardous waste

	Frequency	**%**
I'm not worried never	0	0
I am a lot less worried	32	10,3
Undecided	21	6,8
I am a little worried	48	15,5
I am very worried	209	67,4
Total	**310**	**100,0**

The environmental problem that the classroom teachers are the most worried about is nuclear and hazardous wastes. The response of the 82,9% of the teachers have concentrated on the choices "I am a little and very worried".

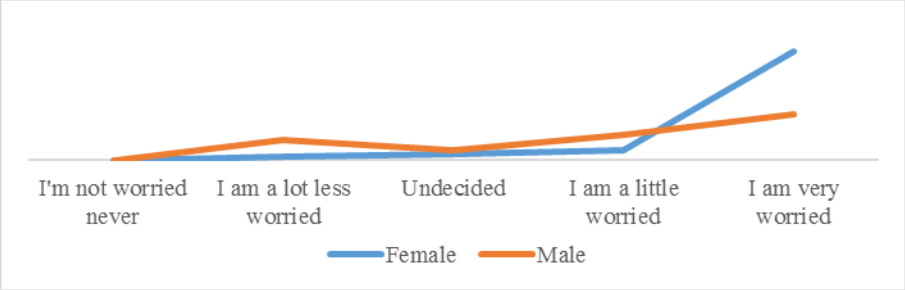


Figure 13: The sensitivity of the classroom teachers against the nuclear and hazardous wastes According to their genders

As seen in Figure 13, while the sensitivity of the female classroom taechers against the mentioned environmental problem is higher, it is seen that the classroom teachers have responded in parallel to each other in terms of working time periods (Figure 14).

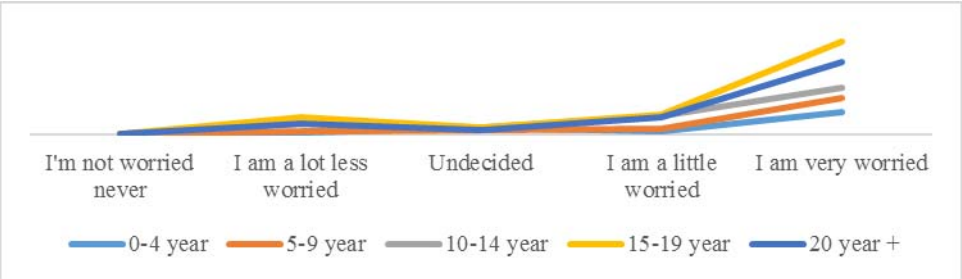


Figure 14: The sensitivity of the classroom teachers against the nuclear and hazardous wastes According to their working time periods

The Relationship Between The Dimensions Of Environmental Literacy

Table 22: Group statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
Behavior	**Female**	173	4,0012	,46032	,03500
	Male	137	3,6782	,45609	,03897
Attitude		173	4,0853	,36845	,02801
Female		137	3,7880	,48251	,04122
	Male				
Sensitivity	**Female**	173	4,5942	,55897	,04250
	Male	137	3,6044	1,09798	,09381

Table 23: Independent Sample Test

	Levene's Test for Equality of Variances		**t- test for Equality of Means**		
	F	Sig.	t	df	Sig. (2- tailed)
Behavior	,644	,423	6,159	308	,000
Equal variances assumed					
Equal variances not assumed			6,165	293,103	,000
Attitude	24,533	,000	6,151	308	,000
Equal variances assumed					
Equal variances not assumed			5,965	248,674	,000
Sensitivity	119,102	,000	10,295	308	,000
Equal variances assumed					
Equal variances not assumed			9,612	191,186	,000

Tablo 24: Test statistics (a)

	Attitude	**Sensitivity**
Mann- Whitney U	7382,000	5286,000
Wilcoxon W	16835,000	14739,000
Z	-5,706	-8,432
Asymp. Sig.	,000	,000

a. Group Variable: Gender

In the table above, whether or not the attitudes of the classroom teachers for the environment differ according to gender has been analyzed with two sampling "t Teast", and whether or not the levels of attitude and sensitivity differ according to gender has been analyzed with "Mann Whitney U Test" since the group vairences are not homogeneous. According to the results of the "Levene Test", the group variences have come out homogeneous on the behaviour scale (sig>0,05), but on the attitude and sensitivity scales, the group variences have not come out homogeneous (sig<0,05). For that reason, the differences between the genders have been analyzed with "t Test" for the behaviour scale, and with the "Mann Whitney U Test" for the other two.

According to the results of either the "t Test" or the "Mann Whitney U Test", the behaviour, attitude and sensitivity levels of the female classroom teachers against the environment has come out to be higher compared with the male classroom teachers.

CONCLUSION AND RECOMMENDATIONS

Environmentally literate individuals are needed in order to protect the environmental values in the social structure and ensure its sustainability. The presence of the environmentally literate individuals is directly linked to the behaviours shaped by the environmental educations given from the early ages. In order to internalize the gains towards the environmental literacy in the individuals, the programs related to environmental awareness should be developed transferred to individuals from the early ages. Environmental literacy is a never-ending process. The environmental education starting at the nursary school level should be organized at the primary shcool, secondary school and higher education institutions and even in various dimensions and depths in daily lives of the individuals with the lifelong education philosophy. But, it is also important that the individuals who will direct the gains and the educations to be given towards making the individuals environmentally literate that is the educators are supposed to have certain level of competence in this regard. Another issue which is important for the environmental awareness to be instilled in the children is the existence of a role model understanding the environmental system and protecting it for its continuity. In other words, the educators who know the functioning and the elements of the environmental system are not alone sufficient. At the same time, role model educators who will actively take action for the sustainability of this system by preserving it are required. Therefore, in addition to the knowledge of the educators about the environment, their attitudes-sensitivities and behaviours should be in a mutually supportive manner.

The classroom teachers that the children first encounter in the official education system in Turkey and who are the next role models after their parents are among the most important actors at the point of creation and sustainability of the environmental awareness in the individual at the infancy age.

Within the scope of this study, the data of the field study which was carried out towards determining the environmental literacy levels of the classroom teachers in the Osmangazi County of the city of Bursa for the pupose of revealing the current states of the classroom teachers about the environmental issues, problems and values can be summarized as follows:

a. The classroom teachers have a general knowledge level about the environmental issues, problems and values. (In the knowledge test, The average of the teachers out of 33 full points is at the level of 24,57%).

b. In addition, with regard to the environmental issues and values, the attitudes of the the classroom teachers have a perspective that will contribute to protecting and enabling the sustainability of the environmental values. Within the context of environmental issues and values, the attitudes of the classroom teachers for the issues such as protecting the environment, implementing the legal regulations in this framework, and that the education process is important in creating the environmental consciousness in the individuals are in the supportive manner in ensuring the protection and sustainability of the environmental values.

c. The sensitivity levels of the classroom teachers against the environmental problems experienced globally and negatively affecting all living and non-living beings is high. In other words, they consider the environmental problems occuring on a global scale importantly and feel worried.

d. Finally, it is required that the classroom teachers should make changes in their daily behaviours in order to minimize the damage to the environment by being aware of the behaviours in the sense that Roth define, should orient the individuals in the community to behave in this direction, should carry out necessary reading and research in order to increase their knowledge about the environmental issues, should work actively either personally or through NGOs. In other words, they should be a role model for the protection and sustainability of the environmental values in the community in terms of their behaviours. Hence, when the environmentally beneficial behaviours of the classroom teachers is examined in general, it is seen that their behaviour avarage is at the level of 3,78 (out of 5 full points). And this reveals that the behaviours of the classroom teachers are in a way that they will provide benefit to the environment. However, when the the behaviours included in the questionnaire are examined it is seen that the classroom teachers behave in a way to provide benefit to the environment especially on the issues that concern themselves - their families - their homes (Chart 1). But, when the environmentally beneficial behaviours of the classroom teachers who have participated in the field study is examined within the context of "functional environmental literacy" defined by Roth, the picture that comes out changes. Namely;

- The average of the behaviour "I voluntarily serve in the activities carried out by various institutions and organizations in order to create and promote environmental cnsciousness in the social structure and give support to these activities." is 2,49. (See Table 9)
- The average of the behaviour "For the purpose of raising environmental consciousness in the neighbourhood, on the site, at my school and so on, I demand from the authoritative units to carry out various activities" is 2,50.

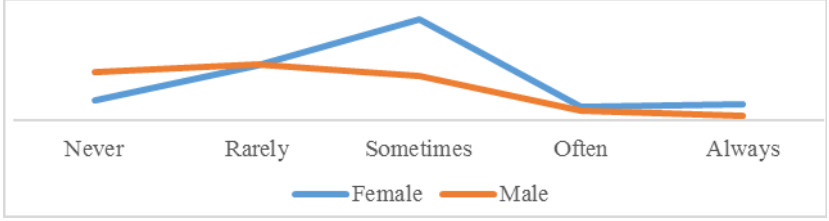


Figure 15: According to Their Genders**,** The Classroom Teachers' Making Efforts in the Neighbourhood They Live In in order to Raise Environmental Consciousness.

As seen on the Figure 19, a rather small portion of the male and female classroom teachers have given the answer "often" and "always" (14,5% and 8,7%, respectively).

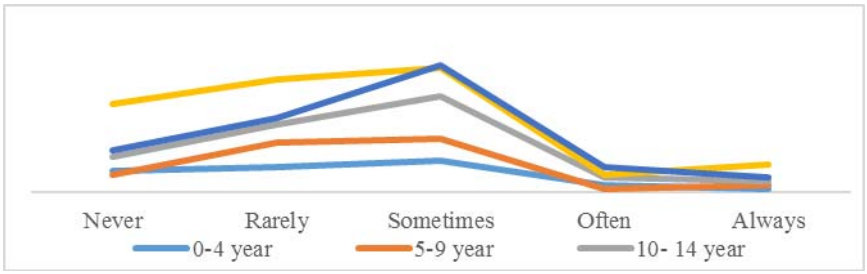


Figure 16: According to the working time period**, t**he classroom teachers' making efforts in the neighbourhood they live in order to raise environmental consciousness.

In the context of working time period, the frequency of performing this behaviour of the classroom teachers shows paralleism.

- The average of the behaviour "I follow periodicals, newspapers, books and internet resources increase my knowledge accumulation on the issues such as our world natural environmentand environmental problems." is at the level of 2,54.

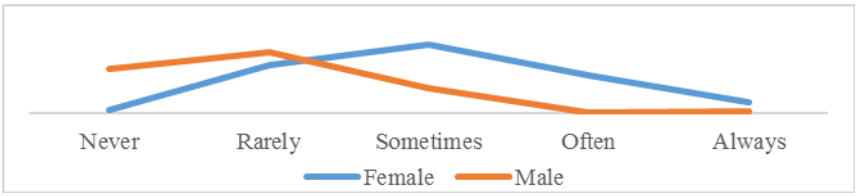


Figure 17: According to their genders, **t**he classroom teachers' following the publications related to the environment

When the classroom teachers are asked how they acquire the knowledge about the environmental system and the environmental problems and, whether or not they follow the periodic or non-periodic publications fur this purpose, the 40,5% of the female classroom teachers have given the answer "sometimes", 45,3% of the male classroom teachers have given the answer "rarely" (Figure 21).

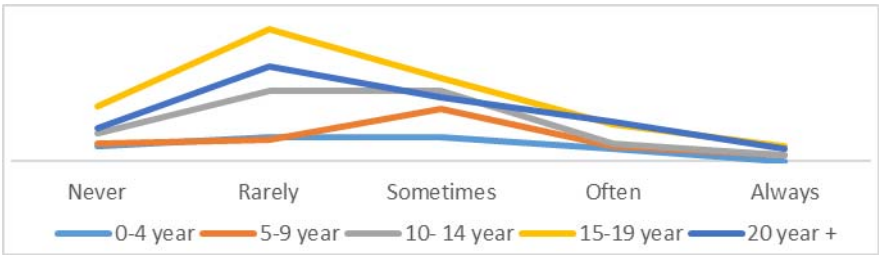
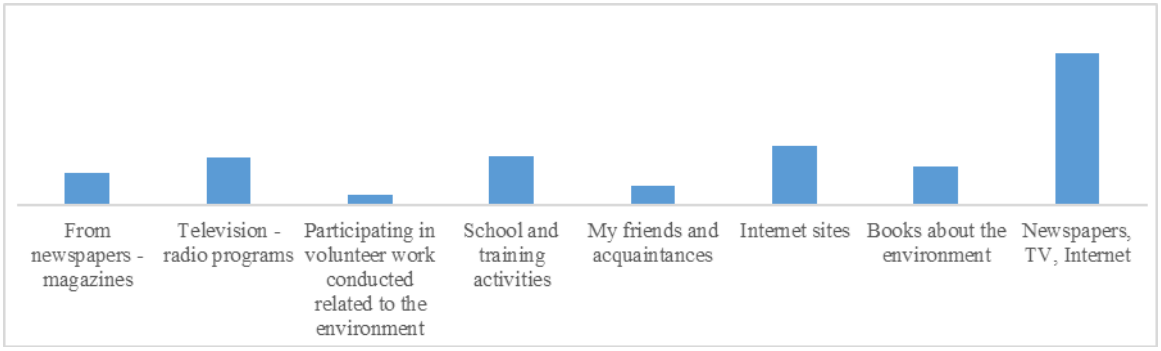


Figure 18: According to the working time periods, the classroom teachers' following the publications related to the environment

With regard to the working time perods, the responses of the teachers have concentrated on the chices "rarely" and "sometimes".

Within the scope of the field study, the classroom teachers have been asked through which channels they acquire knowledge about the issues such as our world, the environmental system, environmental problems and so on. The responses that the classroom teachers gave to this question is seen on Chart 4.



Grafik 4: The cannelss of the classroom teachers of acquiring the knowledge about the environmental system and the problems

As also seen on the Chart 4, while a very small portion of the classroom teachers acquire the the knowledge about the environment from the books related with the issue (9,4%), by participating in the volutary activities (2,6%) and through school-education activities (11,9%), an the rest of the classroom teachers obtain the knowledge about the environment - As Rorth stated in the part of functional environmental literacy (Roth,1992)- through secondary resources.

- Finally, the NGO memberships of the classroom teachers who have parcipated in the field study and responded the questionnaire have been investigated in order to determine whether or not they perform any activity at the operational level within the body of any non-government organization conducting works in the issues related with the environment. Accordingly, the NGO memberships of the classroom teachers are as follows:

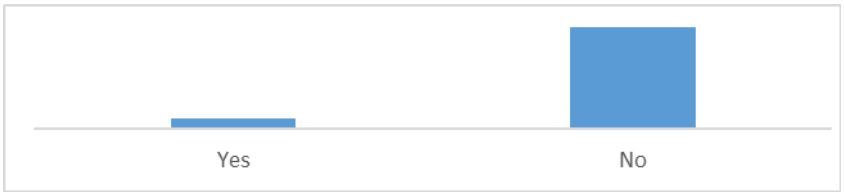


Chart 5: The NGO memberships of the classroom teachers

When the non-government organizations of which the classroom teachers are the members, while the 90,6%of the classroom teachers are not the members of any NGOs, the 9,4% of them are the members of an NGO. While a great number of classroom teachers who are member of an NGO are the mebers of a labour union related with the profession of teaching, and while only 1 classroom teacher each is the member of a citizen association and The Turkish Education Foundation, 5 classroom teachers (1,6%) are members of one non-government organization (TEMA) conducting activities related with the environment.

As a result, starting from the analysis made in the knowledge, behaviour, attitude and sensitivity sections above, it is possible to make the following determination: The classroom teachers participated in the field study are at *the functional environmental literacy* level of the environmental literacy dimensions that Roth defined in the scientific framework. Accordinly,

the classroom teachers who participated in the field study conducted in Bursa-Osmangazi County;

- They have basic level knowledge in environmental issues,
- They are aware of the positive-negative consequences of the human and environment interaction.
- A sense of worry prevails since they are wawre of the devastating damages of the environmental problems that the humanity is facing,
- However, they are not willing to make a fundemental change in their daily lives towards reducing the environmental problems.
- They do not carry out any activity at the operational level by playing a leading role in the framework of creating environmental consciousness in the social structure.
- They do not carry out activities at the operational level by taking part in an organization like a non-government organization in the context of reducing the environmental problems.
- Finally, they do not follow the scientific publications in order to increase their knowledge about the environmental issues. Moreover, they do not express their thoughts related with the environmental system and environmental problems in various academic platforms, by means of periodic-non periodic publications etc.

The field study conducted regarding the "Environmental Literacy of the Classroom Teachers" have revealed that the existence of the knowledge about the environmental system and environmental problems in the individuals can convert this knowledge into environmentally beneficial behaviour. In the meantime, that the attitudes, sensitivities and worries of the individuals about the environmental issues are towards protecting the environmental values can not bring along the development of the environmental consciousness (Erten, 2005; Erten, 2003).

In the 21st century we are in, the environmental problems have been threatening the existence of all of the living and non-living being primarily the mankind on nthe earth. In case of failure in producing the effective solution methods in shortest time possible, it is inevitable to experince an irreversible catastrophy. The only way to avoid this catastrophy is that the people abandon their current thoughts and behaviours. Education is the most effective tool for the eixtence of a sustainable environmental system. Environmental educations should be given from the earliest ages possible in order to create environmental consciousness and appropriate behaviour patterns.

However, in environmental education, an other matter which is as important as the individuals who are to receive the education is that the educators who will give the education being role models with their knowlwdge, attitudes and behaviours related with the environment. Eventually, as continiously indicated in the academic literature, the matters such as observation, imitation, etc. becomes significant as well as the knowledge given during the education process. Therefore, the educators are primarily required to be role models appropriate to the education given.

On 19.01.2011, in accordance with the protocol signed between the Ministry of Education, In-Service Training Department and TEMA, with a program consisting of 77 hours for the teachers, "Ecological Literacy Teacher Education" was given in Yalova. They can be spread all over the country by increasing the numbers and the types of similar educations. It is possible to develop different programs by cooperating with the Ministry of Education and the Universities.

As a result, the environmental literacy levels of the classroom teachres who are the first educators that the children encounter after their parents has an important place within the framework of the sustainable world target. Therefore, special programs should be developed towards classroom teachers who are currently in active service. In order to internalize the environmental consciousness in the teachers who are to give environmental educations, in-service training programs should be prepared and nature trainings-nature camps should be organized for the educators.

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HACETTEPE UNIVERSITY BIOLOGY TEACHER CANDIDATES' SMARTPHONE USAGE IN EDUCATION

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Abstract: In recent years, smartphone usage has grown regularly and become widely used in everyday life. The main aim of the emergence of the Internet is to facilitate easy, quick, safe access to information. Smartphones can perform not only features of ordinary mobile phones but also most operations that computers can conduct. Smartphones are indispensable part of both business life and everyday life. The aim of this study is to determine Hacettepe University Biology Teacher Candidates' smartphone addiction and their ideas for smartphone usage in education. The study sample consists of 91 students out of a total of 138 students attending the Department of Biology Education in Hacettepe University. With a view to measure smartphone Addictions, Smartphone Addiction Scale adopted into Turkish and validity and reliability of which was analyzed by Demirci *et al* (2014) was used. In addition, within the scope of the research, teacher candidates' views towards smartphone usage in education were detected.
Keywords: Smartphone usage in education, smartphone addiction, teacher candidates.

INTRODUCTION

The term smartphone is used to define mobile devices that can connect to Internet and support certain applications downloaded and installed by users (Hinton and Hjorth, 2013).

The inventor of the first mobile devices initially called the speech device is Martin Cooper. Cooper developed a prototype and made the first call over portable mobile phones in April 1973. However, this invention was not used for a commercial purpose not until 80s. After 80s, only the rich and businessmen began to own these devices by paying huge amounts of money. The first generation (1G) of these mobile devices entered into markets is used to define telephones applied with analogue technology. These phones are based on establishment of a cellular phone network containing various stations and they allow mobile usage of land phones conversations. At the end of 1980s, together with digital systems gaining more value, mobile phones were combined with digital technologies and adopted into these technologies. This case led to the development of the second generation (2G) of mobile telephones. 2G technology is based on global system for mobile telecommunication (GSM) and provides a variety of benefits to the user. Third generation (3G) phones began to be used at the beginning of 2000s. 3G telephones also defined as the first version of smartphones allow an increase in data capacity and speed. In addition, they allow usage of the different services such as digital photos, mp3 files, and multi-media messages. Called as the Fourth Generation (4G), smartphones have added a very distinct dimension to cellular phone usage by providing easy and fast Internet access and providing services such as video streaming (Siapera, 2012).

Smartphones are mobile phones that have higher levels of computing capability and connectivity compared to ordinary mobile phones. In addition to allowing users to make phone calls, these phones add various features found in PDAs, computers (receiving and sending e-mail, editing office documents, etc.). In addition, they can be used to create content regardless of its type (video, audio or text) (Phillips *et al*, 2011).

Smartphones bring a new dimension to the practical use of social media from the point of allowing continuous connection (Hinton and Hjorth, 2013: 123). As a result of supporting

various applications, people are always able to engage with social media everywhere. With location based services included in social networks such as Facebook Places and Foursquare, smartphones are used for the purpose of entertainment/games, also create a feeling of safety through informing family and friends by bringing far places closer (Hinton and Hjorth, 2013). Smartphones have now become indistinguishable from a computer, and they are increasingly used to conduct various activities by businesses of every scale.

The benefits of smartphones to businesses can be summarized as follows;
- It is easy to access e-mail accounts via smartphones, this decreases costs and increases productivity.
- Thanks to remote access to systems within the business, smartphones reduce phone calls and unnecessary visits.
- Thanks to navigation capability of smartphones, it is possible to reach desired locations with time and cost savings.
- With the GPS function, location sharing and tracking of employees can be achieved.
- High-resolution cameras allow collaboration and document sharing.
- Thanks to Wi-Fi feature, free internet access can be provided and the internet costs can be reduced during travels.
- It is possible to conduct data sharing and transfer from outside through systems within the organization (Ada, S., Tatlı, H.S., 2013).

The aim of this study is to determine Hacettepe University Biology Teacher Candidates' smartphone addiction and their ideas for smartphone usage in education.

METHOD

Research Model:

The research is in screening model that aims to describe an existing situation.

Study Group of the Research:

The study sample consists of 91 students out of a total of 138 students attending the Department of Biology Education in Hacettepe University.

Data Collection Tools

In the research, Smartphone Addiction Scale adopted into Turkish and validity and reliability of which was analyzed by Demirci *et al* (2014) was used. The researh is a Likert-type scale consisting of 33 items. Cronbach alpha internal consistency coefficient is 0.947 (Demirci *et al*, 2014).

Within the scope of the research, teacher candidates were asker three open-ended questions to determine their opinions about positive and negative effects of smartphone usage in education.

Data Analysis

Quantitative and qualitative analysis techniques were employed. The analysis was conducted through quantitative analysis techniques using SPSS package software with a view to detect teacher candidates' smartphone addiction.

Processes of coding, classification and table creation for biology teacher candidates' opinions on positive and negative roles of smartphones in education were carried out with the MAXQ software.

FINDINGS

1. Teacher Candidates' Smartphone Addictions

Arithmetic mean and standard deviation of teacher candidates' scores obtained from Smartphone Addiction Scale are given in Table 1.

Table 1. Teacher Candidates' Scores from Smartphone Addiction Scale

N	X	Ss
91	2.92	.76

According to Table, average of the scores obtained by teacher candidates is 2.92 and standard deviation is 0.76. The highest score that can be obtained from the scale is 6. Accordingly, it can be inserted that teacher candidates' smartphone addiction is moderate.

4. Biology teacher candidates' opinions on smartphones

Within the scope of the research, post-encoding classification of biology teacher candidates' opinions on positive and negative effects of smartphone usage in education is as follows:

4.1. Teacher Candidates' Opinions on the Role of Smartphones

Table 2 Biology teacher candidates' opinions on the role of smartphones

	Frequency	Percentage
Necessity	**46**	**36**
occupies a large part of our daily lives	1	0.80
being assistant in researches	4	3.20
getting information	1	0.80
required	2	1.60
making life easier	21	16.80
the most important development in human life	2	1.60
an indispensable object	4	3.20
a technological tool that provides benefits	4	3.20
useful	4	3.20
very useful	1	0.80
learning	1	0.80
Saving Time	**14**	**11.20**
instant access to information	1	0.80
instantly being informed of all	3	2.40
reducing the time to access information	7	5.60
life accelerating	1	0.80
saves time with useful applications	2	1.60
Loss of Time	**9**	**7.20**
a tool preventing people from fun activities in the outside world	2	1.60
negatively affecting development	1	0.80
causing disruptions in life	1	0.80
taking with social media applications	5	4.00
Interaction	**12**	**9.60**
effective	1	0.80
contact	7	5.60
allowing to communicate with people	4	3.20

Positive Effects	**5**	**4**
enjoyable	1	0.80
the right to use if required	1	0.80
savior	1	0.80
practical	2	1.60
Negative Effects	**25**	**20**
unnecessary	1	0.80
certainly harms human relationships	1	0.80
making people asocial	6	4.80
pushing people completely to virtuality	2	1.60
making people dependent on them	3	2.40
dangerous for health	1	0.80
accelerates the perception of consuming	1	0.80
harmful	4	3.20
restrictive of people's relationships with each other	6	4.80
Those Not Responding	**14**	**11.20**
Total	**125**	**100.00**

The generated codes are interpreted as a total of 38 different codes including 27 positive, 10 negative, 1 non-answering. Through these assessments, considering biology teacher candidates' perceptions towards "the role of smartphones" as a whole, it has become possible to evaluate these perceptions from the point of 7 different categories from their function and concept aspects:

Need: 36% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, opinions of 16.80% of biology teacher candidates regarding the fact that smartphone usage is "life facilitator" have come to the forefront.

Saving Time: 11.20% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, opinions of 5.60% of biology teacher candidates regarding the fact that smartphone usage "decreases the duration to access information" have come to the forefront.

Loss of Time: 7.20% of valid codes generated by biology teacher candidates were evaluated under this category. Among codings evaluated in this category, opinions of 4.00% of biology teacher candidates regarding the fact that smartphone usage "takes time with social media applications" have come to the forefront.

Interaction: 9.60% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, opinions of 5.60% of biology teacher candidates regarding the fact that smartphone usage is about "communication" have come to the forefront.

Positive Effects: 4% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, opinions of 5.60% of biology teacher candidates regarding the fact that smartphone usage is "practical" have come to the forefront.

Negative Effects: 20% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, opinions of 4.80% of biology teacher candidates regarding the fact that smartphone usage is "restrictive of people's relationships with each other" have come to the forefront.

Those Not Responding: 11.20% of valid codes generated by biology teacher candidates are evaluated under this category.

4.2. Biology teacher candidates' opinions regarding the positive effects of smartphone usage on education

Table 3. Biology teacher candidates' opinions regarding the positive effects of smartphone usage on education

	Frequency	Percentage
Saving Time	**38**	**41.84**
convenience of instant information acquisition	12	11.65
quick and easy access to notes on course as well	24	23.30
saving time	2	1.94
Loss of Time	**1**	**0.97**
problematic in terms of time management	1	0.97
Those Having No idea	**1**	**0.97**
no connection between the lessons and the use of smartphones	1	0.97
Positive Effects	**46**	**44.67**
allowing easy access to information	9	8.74
having positive effects on research	19	18.45
allowing converting information visually and vocally	1	0.97
being portable	1	0.97
providing convenience with applications	8	7.77
ability to translate	8	7.77
Negative Effects	**16**	**15.53**
adverse effect in courses	1	0.97
negative impact	1	0.97
Those Not Responding	**14**	**13.59**
Total	**103**	**100.00**

The generated codes are interpreted as a total of 16 different codes including 11 positive, 3 negative, 1 non-answering and 1 considering no connection between smartphone usage and courses. Through these assessments, considering biology teacher candidates' perceptions towards "the positive effects of smartphones on courses" as a whole, it has become possible to evaluate these perceptions from the point of 6 different categories from their function and concept aspects:

Saving Time: 41.84% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, positive opinions of 23.30% of biology teacher candidates stating that smartphone usage offers "quick and easy access to course notes" have come to the forefront.

Loss of Time: 0.97% of valid codes generated by biology teacher candidates are evaluated under this category. The only coding evaluated under this category is positive opinions of

0.97% of biology teacher candidates considering smartphone usage as "problematic in terms of time management".

Those Having No Idea: 0.97% of valid codes generated by biology teacher candidates are evaluated under this category. The only coding evaluated under this category is positive opinions of 0.97% of biology teacher candidates considering smartphone usage as "no connection between the lessons and the use of smartphones".

Positive Effects: 44.67% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, positive opinions of 18.45% of biology teacher candidates considering smartphone usage as "having positive effects on research" have come to the forefront.

Negative Effects: 15.53% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, positive opinions of 0.97% of biology teacher candidates considering smartphone usage as "negative influence in courses and "negative effects" have come to the forefront.

Those Not Responding: 13.59% of valid codes generated by biology teacher candidates are evaluated under this category.

4.3. Biology teacher candidates' opinions on negative effects of smartphone usage on education

Table 4. Biology teacher candidates' opinions on negative effects of smartphone usage on education

	Frequency	Percentage
Those Having No idea	**2**	**2.04**
no connection with courses	1	1.02
I have no idea	1	1.02
Positive Effects	**13**	**13.26**
spending time when bored in class	3	3.06
no adverse effects when used correctly	7	7.14
no adverse effects	3	3.06
Negative Effects	**51**	**55.1**
not to use books for research	1	1.02
getting wrong information while doing research	2	2.04
quickly forgetting things learned while doing research	2	2.04
spend much time on Internet while doing research	1	1.02
creating addiction	3	3.06
a tool hindering listening courses and studying	13	13.27
causing distraction	17	17.35
being always accessible is dangerous	1	1.02
easy to obtain, becoming unappreciative	2	2.04
adversely affecting motivation	10	10.20
lowering grades	1	1.02
negative	1	1.02
Those Not Responding	**17**	**17.35**
Total	**98**	**100.00**

The generated codes are interpreted as a total of 19 different codes including 17 positive, 1 negative, 1 non-answering and 1 considering no adverse effects. Through these assessments, considering biology teacher candidates' perceptions towards "the negative effects of smartphones on courses" as a whole, it has become possible to evaluate these perceptions from the point of 4 different categories from their function and concept aspects:

Those Having No Idea: 2.04% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, negative opinions of 1.02% of biology teacher candidates considering smartphone usage in courses as "no connection with courses" and "I have no idea" have come to the forefront.

Positive Effects: 13.26% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, negative opinions of 7.14% of biology teacher candidates considering smartphone usage in courses as "no negative effect when use correctly" have come to the forefront.

Negative Effects: 55.1% of valid codes generated by biology teacher candidates are evaluated under this category. Among codings evaluated in this category, negative opinions of 17.35% of biology teacher candidates considering smartphone usage in courses as "distracting" have come to the forefront.

Those Not Responding: 17.35% of valid codes generated by biology teacher candidates are evaluated under this category.

CONCLUSIONS and RECOMMENDATIONS

Gaining a seat in our lives more and more day by day, smartphones can be used as an effective and efficient learning tool in education. In this period when informal education is discussed, and as stated by teacher candidates, smartphones are important in terms of providing quick and easy access to knowledge that we need everywhere, and providing permanent information as ready-to-use information. In addition, smartphones are the easiest tools in users' hands to access social sharing tools. In our age when communication is crucial, they are important in terms of effective usage by teachers and teacher candidates in education. However, when not used as per their purpose, they bring along many adverse effects. As specified by teacher candidates, examples of such effects can be given such as distraction, creating negative motivation and addiction to smartphones.

Rapid spread of smartphones has begun to lead to pathological excessive use and smartphones addiction which can be defined as a new kind of addiction. Smartphone addiction problem in Turkey is seen more among young people and children who are more prone to this technology.

Addiction emerges as a function of the nervous system and connection to certain substance biologically such as alcohol and drugs. However, some researchers argue that there may exist behavioral addictions just like biological addictions such as alcohol and drug addiction (Comings, 1995; Stein, Hollander, & Cohen, 1994).

According to Hollender (1993), mobile phone addiction is expressed as a disorder, similar to obsessive-compulsive disorders, that causes compulsive behavior to to eliminate anxiety or a motive. However, there are no differences between these two behaviors. Accordingly,while

obsessive-compulsive behavior is conducted more to relieve anxiety, behaviors such as mobile and Internet usage are conducted for pleasure (Şar, A., H., Işıklar, A., 2012).

According to Griffiths (2003), anything that causes excitement creates addiction. Considering from this perspective, the use of mobile phone creates addiction since it provides excitement for an individual. Another approach that we can use to explain the mobile phone addiction is the behavioral learning theory. According to the behavioral approach, if a behavior is followed by saturation and pleasing situation (positive reinforcement) or a behavior assists in getting rid of a negative behavior such as tension and boredom (negative reinforcement), then this behavior increases and individual continues to conduct that behavior to take pleasure or get rid of negativity (Cüceloğlu, 1993). Considering mobile phone addiction from this perspective, mobile phone usage not only give pleasure to users but also relieves them from oppression or anxiety. Such a reinforcement is thought to cause addiction towards mobile phone (Şar, A., H., Işıklar, A., 2012).

Another approach that can be used to describe the mobile phone addiction is addiction general theory developed by Jacobs (1988). According to Jacobs, lower or higher stimulations, lower self-respect and negative early childhood experiences cause negative emotions and they disrupt homeostatic balance of individual. Therefore, individuals are inclined towards addictive behaviors to achieve escape from these negative feelings and redress homeostatic balance (Jacobs, 1988). It has been observed that individuals using mobile phones on high level have low level of self-respect and these individuals use mobile phone frequenqtly to increase their self-respect (Phillips, and Ogeil and Blaszczynski, 2011).

It is seen that studies related to mobile phone addiction rely on Internet addiction researches. In these studies, low self-respect and social skill problems are considered as main problems emerging in Internet and mobile phone addiction (Kring, Davison, Neale and Johnson, 2007).

As a result of the study conducted, a pathological addiction among biology teacher candidates towards smartphone usage is not present. Accordingly, in the knowledge-based society evolving continuously, it is necessary for teachers to become individuals who can effectively use technology in education and who can continuously benefit from technology in development process and adapt themselves. Consequently, the task of teachers training institutions is to educate teachers who can apprehend the importance of technology in life and necessity in educational process, who have also ability and self-confidence to effectively use technology in education process.

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HIGHER EDUCATION IN INDIA: A GEOGRAPHICAL STUDY

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Abstract: In the light on the ancient times, there were prominent universities of Nalanda, Takshashila, Vallabhi and Vikramshila which attract the scholars from all over the world in the field of higher education. The first three modern universities were established at Bombay (now Mumbai), Calcutta (now Kolkata) and Madras (now Chennai) in 1857 on the pattern of London University. Although the growth of higher education in British period was very slow. On the other side of scale, India has made significant growth since independence in terms of institutions, volume of enrolment and diversification of educational programmes. Higher education provides the capable manpower trained in arts, science, medicine, computer applications, agriculture and various technical and professional courses. At the national level, the number of universities is increased by twenty one times from 30 to 642 during 1951-2011. Against this, colleges increased by fifty times from 695 in 1951 to 34852 in 2011. This paper attempts to analyse the existing scenario of higher education in India. The main objective is to examine the spatial distribution of higher education among the major states[1] of India. This has been done to make a comparative study among the major states in terms area and population served by colleges and universities and secondly to check the influence of spatial distribution of higher education at gross enrolment ratio of the states.

Keywords: Higher Education, Colleges, Universities, Area, population, Gross Enrolment Ratio.

INTRODUCTION

Higher education is a key driver for the socio-economic growth of the country. India has made significant growth since independence in quantitative terms. As per All India Survey on Higher Education, 2011 revealed that there were 10.60 colleges served per 1000 km^2, on one hand and 2.88 colleges served per lakh population, on the other. Against this, there are 1.95 universities served per ten thousand km^2 on one side of scale, on the other hand 0.53 universities served per ten lakh population in India. It reflects the wider variations in terms of area and population served by colleges and universities in India. These variations are clearly visible at the regional level. It varies from a thousand km^2 was served by 236.84 college in Chandigarh, the highest to lowest with 0.31 college in Arunachal Pradesh. The range difference is 236.53. On the other scale, in the context of population it varies from a high of 6.65 colleges per lakh population in Puducherry to a low of only 0.62 colleges in Bihar. The range difference is 6.03. In the context of universities, it was high in National Capital Territory of Delhi with 1685.77 per ten thousand km^2 to a low of 3.58 in Arunachal Pradesh. The range difference is 1682.19. On the other side in population context, it was recorded high with 0.98 in Sikkim to a low of 0.02 in Bihar. The range difference is 0.96. There was absence of universities in some of union territories[2].

In the light of the above paragraph it is evidently clear that inter-state and Union Territories variations are much sharper. Thus, it creates a difficulty for the comparative study among all the states and union territories. Therefore, union territories and small states are excluded from the

[1] Major states are Haryana, Kerala, Tamil Nadu, Uttarakhand, Punjab, West Bengal, Himachal Pradesh, Uttar Pradesh, Bihar, Karnataka, Gujarat, Andhra Pradesh, Jharkhand, Maharashtra, Rajasthan, Odisha, Assam, Chhattisgarh Madhya Pradesh and Jammu and Kashmir.

[2] There is no university in Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep.

analysis for being smaller geographical units. In this paper, the attempt has been made for comparative study among the major states to figure out the states with higher availability and accessibility of higher education in India. There are basically two sections; In the first, the spatial distribution of higher education separately for colleges and universities with respect to the major states of India followed by index has been calculated to examine the inter-state variations and in the second section explain the influence or availability of higher education institutes on the Gross enrolment ratio of the states.

DATA SOURCE AND METHODOLOGY

This paper uses secondary data and it is available from different reports of University Grants Commission, New Delhi, All India Survey on Higher Education and Five Year Plan documents available from the Planning Commission, New Delhi. A spatial picture of higher educational scenario has been arrived at with the help of the four indicators of colleges and universities reflecting the dimensions with respect to area and population context. This has been done with the help of the composite index method. The index value for each indicator has been prepared by using ranking method, wherein the maximum obtainable score value for an indicator is assigned a value of first rank and the scores for the lower values are proportionately computed. This has been done in the light of area and population served by college/universities is converted into accordingly their ranks and these ranks are added to give the composite ranking of the overall picture of higher education. Accordingly, the ranking for the states of India has been calculated for all the indicators separately for colleges and universities and then arrived at a composite index of higher educational institutes for each of the state. In the following, an attempt has been made to discern the spatial distribution of colleges and universities in the states of India, 2011. Based on the index scores, states have been grouped into three levels of high, moderate and low. The range technique is used for the cartographic representation of the spatial distribution of higher education in a single map. The range between the highest and the bottom value is calculated and divided it by the three to figure out the interval for the three categories. The data have been presented through different tables and maps.

RESULTS AND DISCUSSION

Spatial Distribution of Higher Education

At the national level distribution of colleges and universities revealed wider inter-state variation in the country. According to the area and population contexts, four indicators are framed for the analysis with the specific units. These are given below:-

A. Number of colleges per thousand km^2
B. Number of colleges per lakh population
C. Number of universities per ten thousand km^2
D. Number of universities per ten lakh population

For the detailed analysis the available data have been divided into high and low as per the national average. Those placed above the national average are designated above as high and those below as low.

I. Area served by colleges above national average (10.60)

(i) For comparative analysis major states of India are compared with national level. At the national level, on an average 1000 km^2 is served by 10.60 colleges. In other words in these states, on an average approximately 100 km^2 area is served by one college. Of the total twenty states,

eight states have more than the national average. In this category, it ranges from a highest of 26.58 in Kerala to a lowest of 17.51 in Andhra Pradesh. The range difference is 9.07. In other words the states at the top have two times higher than at the bottom. Of eight states four states or fifty percent are located in the southern belt and these region lie in the state of Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh (Table1). And one western state, Maharashtra and three from the Northern region such as Haryana, Uttar Pradesh and Punjab.

(ii). Area served by colleges lower than the national average (10.60)

Table 1 shows that of the total twenty states, 12 or sixty percent have area served by colleges lower than the national average. It ranges highest of 10.15 in West Bengal to a lowest of 1.38 in Jammu & Kashmir. The range difference is 8.77. In other words the states at the top have seven times higher than at the bottom. There are two belts such as three states such as Jammu & Kashmir, Himachal Pradesh and Uttarakhand from the northern region and the second belt extended from Western region i.e. Gujarat, Rajasthan to Madhya Pradesh and Chhattisgarh in Central region and extended to the Eastern region such as Bihar, Jharkhand, Odisha, West Bengal and Assam**.**

It is observed that the coastal areas or Southern region of India are characterized with the beginning of educational centres by Britishers as first three modern universities were established in British India in 1857 in Calcutta, Bombay and Madras as well as Christian missionaries' spread education in southern states of Kerala and Tamil Nadu. Northern states like Haryana and Punjab are economically well states and Moreover topography of these areas are plain, which never constraints for the establishment of educational centres in these areas and also attracts the private sector.

The lower distribution of colleges is found in Himachal Pradesh, Assam, Jammu and Kashmir, and Uttarakhand. Due to their hilly terrain, harsh climate, scattered population is the main constraints for the opening of the educational centres. India's poorest and most backward states Bihar, Jharkhand and Odisha where government efforts are not sufficiently provide the higher educational centres. Rajasthan, Madhya Pradesh and Gujarat represent low distribution of colleges as Rajasthan is characterized by sharp differences in terms of terrain, most of the area is deserted which is not appropriate for educational centre. It is concluded that the Southern states and Northern states like Haryana and Punjab doing better as these are economically well states and their location and topography is also responsible factors for establishing the educational centres there.

Table 1: Major States: Area and Population Served by Colleges in India, 2011

S. No	Major States	No. of colleges per thousand km^2	No. of colleges per lakh population
1	Kerala	26.58	**3.09**
2	Haryana	24.00	**4.19**
3	Tamil Nadu	17.70	**3.19**
4	Punjab	19.02	**3.45**
5	Karnataka	16.00	**5.02**
6	Uttar Pradesh	20.04	2.42
7	Maharashtra	14.84	**4.06**
8	Andhra Pradesh	17.51	**5.69**
	India	**10.60**	**2.88**
9	West Bengal	10.15	0.99
10	Gujarat	9.08	**2.95**
11	Madhya Pradesh	7.05	**2.99**
12	Odisha	7.00	2.60
13	Rajasthan	7.80	**3.90**
14	Bihar	6.90	0.62
15	Uttarakhand	7.39	**3.90**
16	Assam	6.18	1.55
17	Himachal Pradesh	5.19	**4.21**
18	Chhattisgarh	4.33	2.31
19	Jharkhand	2.94	0.71
20	Jammu & Kashmir	1.38	2.44

Source: All India Survey on Higher Education (2011-12) GOI, MHRD Department of Higher Education, New Delhi 2014

II. Population served by Colleges higher than the national average (2.88)

(i). Table 1 gives an overview at national level where one lakh population is served by approximate three colleges. In other words one college is serving for approximate thirty five thousand inhabitants. Of the total twenty states, 12 or more than 50 percent states have higher than the 2.88. It ranges from a highest of 5.69 in Andhra Pradesh to lowest of 2.95 in Gujarat (Table 1). The range difference is 2.74. In other words the state at the top has twice time higher than that at the bottom. South-western belt, four states of the Northern region and one state from Central region are performing above the national average.

The southern states such as Kerala, Tamil Nadu, Karnataka and Andhra Pradesh have the highest availability of colleges due to the early advent of education. Among the Northern states except Uttar Pradesh and Jammu & Kashmir, states such as Himachal Pradesh, Haryana, Panjab and Uttarakhand recorded above the national average. Due to the hill states of Himachal Pradesh and Uttarakhand, government policies are playing important role for the development of higher education as they provide the education to the doorsteps of the peoples of the state. Western

region includes Gujarat, Rajasthan and Maharashtra and one state from Central region namely Madhya Pradesh as the ratio between the college and population is also high among these regions is also accountable for the above average category.

(ii). Population served by colleges lower than the national average (2.88)
Of the total twenty states, eight states are less than the 2.88. This range is highest of 2.60 in Odisha to a lowest of 0.62 in Bihar. The range difference is 2.00. In other words the state at the top has four times higher than that at the bottom (Table 1). One state from the Central region such as Chhattisgarh and two states from Northern region in Jammu & Kashmir and Uttar Pradesh observed with the population served by colleges is less than the national average due to the large population resides here. Eastern region such as Bihar, Jharkhand, Odisha, West Bengal and Assam have lower population served by colleges than the state average and these are the most backward states of India. It can be observed that population served by colleges is performed better than area served by colleges. In area served by college covered less than half of the states are in the category of above national average. Area and population served by colleges depict different scenario of higher education like states perform better in area served are not performed better in population served and vice-versa. Area served by colleges in northern state of Uttar Pradesh is above the national average but the population served by colleges is lower than the national average due to the huge population size resides there. On the other side, Madhya Pradesh, Rajasthan, Uttarakhand and Himachal Pradesh which are lower than the national average in area served by colleges, are performed better in population served. Through this discussion, it can be pointed that the physical, economical, social and political factors plays important role for the distribution of educational institutes in any region. Like in hill states, topography is the main factor for the opening up of the educational centres. In addition to this, dispersed population, scattered settlement are some constraints for the opening of the institutions in any region.

III. Area served by universities higher than the national average (1.95)
(i). Table 2 reveals that at the national average ten thousand km^2 is served by approximately 1.95 universities. In other words in these states, on an average five thousand km^2 area is served by one university. Of the total twenty states, half of the states or fifty percent have the area served by two universities. The highest number of universities served in Haryana with 4.98 to a lowest of 2.24 in Karnataka. The range difference is 2.74. In other words the state at the top has two times higher than at the bottom of the states. There are two belts observed which are above the national average one belt is recognized in Southern region such as Kerala, Tamil Nadu and Karnataka. And the second is extended from the five states from the Northern region namely Haryana, Punjab, Himachal Pradesh, Uttarakhand and Uttar Pradesh to two states from Eastern region such as Bihar and West Bengal.

(ii). Area served by universities lower than the national average (1.95)
Of the total twenty states, 10 or fifty percent have area served by universities lower than the 1.95. It ranges highest of 1.94 in Gujarat to a lowest of 0.49 in Jammu & Kashmir (Table 2). The range difference is 1.45. In other words the state at the top has four times higher than at the bottom. It is observed that the Western region namely Gujarat, Rajasthan, Maharashtra to Central region includes Madhya Pradesh and Chhattisgarh to eastern region such as Jharkhand, Odisha and Assam. Two states, Jammu & Kashmir from Northern region and Andhra Pradesh from Southern region are also below the national average. In Jammu & Kashmir due to the militancy factor acts

as an obstacle to open the universities in this state. Eastern region as said earlier is the backward region as these states have the poor population and demand for the higher education is very low.

IV. Population served by universities higher than the national average (0.53)

(i). At national level, ten lakh population is served by 0.53 universities. Of the twenty states, 11 or more than half of the states have higher than the 0.53. It ranges from a highest of 2.62 in Himachal Pradesh to a lowest of 0.56 in Andhra Pradesh. The range difference between the two is 2.06. In other words the state at the top has five times higher than at the bottom (Table 2).

Table 2: Major States: Area and Population Served by Universities in India, 2011

S. No	Major States	No. of universities per ten thousand km^2	No. of universities per ten lakh population
1	Haryana	4.98	**0.87**
2	Kerala	4.37	0.51
3	Tamil Nadu	4.50	**0.82**
4	Uttarakhand	3.74	**1.98**
5	Punjab	3.77	**0.68**
6	Himachal Pradesh	3.23	**2.62**
7	West Bengal	2.93	0.28
8	Uttar Pradesh	2.37	0.29
9	Bihar	2.12	0.19
10	Karnataka	2.24	**0.70**
	India	**1.95**	**0.53**
11	Gujarat	1.94	**0.63**
12	Andhra Pradesh	1.71	**0.56**
13	Jharkhand	1.51	0.36
14	Maharashtra	1.43	0.39
15	Rajasthan	1.31	**0.66**
16	Assam	1.15	0.29
17	Odisha	1.22	0.45
18	Chhattisgarh	1.25	**0.67**
19	Madhya Pradesh	1.07	0.45
20	Jammu & Kashmir	0.49	**0.88**

Source: As of Table1

(ii). Population served by universities lower than the national average (0.53)

Of the twenty states, nine states are less than the 0.53. The range is highest of 0.51 in Kerala to a lowest of 0.19 in Bihar. The range difference is 0.32. State at the top has thrice times higher than at the bottom (Table 2**)**. One state from the Northern region i.e. Uttar Pradesh, Madhya Pradesh from central region; Maharashtra from Western region and all the states from the Eastern region such as Bihar, Jharkhand, West Bengal, Odisha and Assam and one from southern state Kerala**.**

It is noticed that the Kerala, Uttar Pradesh, Bihar, West Bengal which are above the national average in terms of area covered are lower in population context. There is need for opening the universities in those states, where the universities is low than the national average. The government should focus on their educational policy and provide the educational institutions as the area and population contexts. National knowledge Commission also recommends the expansion of the number of universities to 1500 in the country.

Major States: Levels of Higher Education

Finally a composite index of higher education scenario is arrived by ranking method. The index value for each of the indicator has been proportionately computed. The composite index of major states which has been ranked four times according to the spatial distribution of each of the four indicators. The states having highest scores value has been assigned the first rank and the next highest the 2nd rank and so on and divided the summed ranks by four, corresponding to the number of indicators. Variations in the colleges and universities through composite ranking are brought out in the Fig 1. Therefore the composite rank shows the overall higher education scenario of the major states of India.

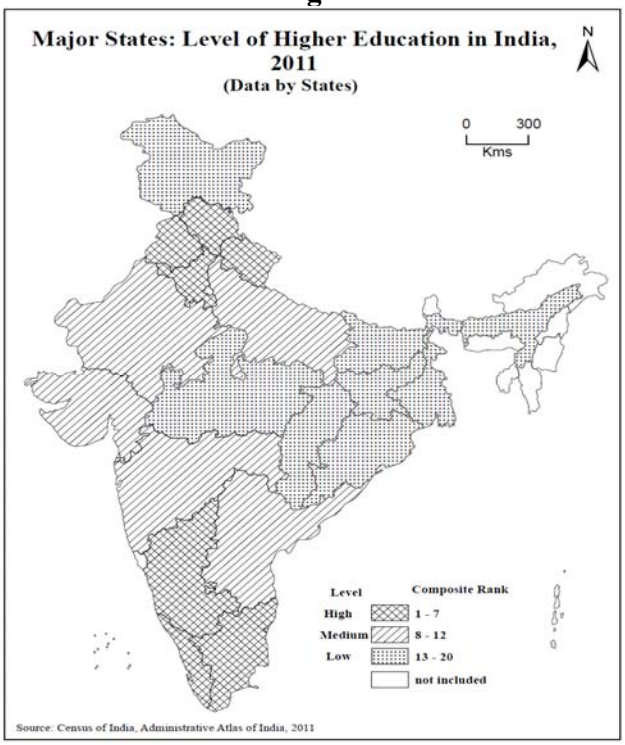
Regional Inequality in Higher education level

Among the major states, Haryana is recorded as the highest distribution of higher education among the major states of India because its value of the composite score is the least. Tamil Nadu is the next state followed by Punjab, Karnataka and Uttarakhand. The least spatial distribution of higher education is found in Assam whose composite rank is twentieth. Among the major states of India, composite index varies from a high of first rank in Haryana to a low of twentieth in Assam. The range difference is 19. In other words, the state at the top has a composite index value six times higher than that of the state at the bottom. The states are categorized into three levels: high, moderate and low. (Fig 1)

States with high level

Seven out of twenty states falls in this category. Haryana attained the highest rank. It is followed by Tamil Nadu, Punjab, Karnataka, Uttarakhand, Kerala and Himachal Pradesh. One-third states are included under the category of high level of higher education. One pocket is identify in the Northern states such as Himachal Pradesh and Uttarakhand are socially developed hill states where government policies play important role for the establishment of higher education institutes and Punjab and Haryana, both economically developed states as well as the plain terrain also an advantage to establish the infrastructure which is aggregately responsible for opening the educational centres. Another pocket is observed in the Southern region which includes the states of Kerala, Tamil Nadu and Karnataka. Due to the early advent of education by the Britishers and Christian missionaries in these states are responsible for the high level of higher education among these states.

Fig 1



States with moderate level

In five out of twenty states reported with the moderate level of higher education. The states falling in moderate category including Andhra Pradesh, Maharashtra, Rajasthan, Gujarat and Uttar Pradesh attained the eighth to twelfth rank. One-fourth districts are fall in this category. One pocket recorded from the Western region such as Rajasthan, Maharashtra and Gujarat. One states each from the southern and northern region such as Andhra Pradesh and Uttar Pradesh, respectively.

States with low level

In eight out of 20 states the distribution of higher education as a low. The West Bengal has the rank of thirteen and the last is Assam with twentieth rank. The states falling in this category is included West Bengal, Jammu & Kashmir, Madhya Pradesh, Odisha, Chhattisgarh, Bihar, Jharkhand and Assam. One pocket emerged from the Central and Eastern region such as Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Odisha, West Bengal and Assam. Rest of the one state located in the northern region such as Jammu & Kashmir.

In the light of the above discussion, the impact of the availability of higher education in the major states of India can be checked through the one indicator of accessibility. Therefore, in the following paragraphs Gross enrolment ratio (henceforth, GER) has been examined in the respective areas.

Gross Enrolment Ratio of higher education

GER is a statistical measure used by the United Nations to measure education index of a nation. In the context of higher education, Gross enrolment ratio is calculated from the ratio of persons of all ages enrolled in higher education institutions divided by total population in the age group 18-

23 and multiply by hundred. At the national average of 20.8 percent GER which lags behind to a great extent as compared to the developed as well as developing countries such as United States (95), Russia (77), United Kingdom (61), France (57), Malaysia (36) and China (24). (Institute for statistics database UNESCO, 2011).

Table 3 indicates that the GER of India is 20.8. Against the national average, the proportion varies from a highest of 40 percent in Tamil Nadu to a lowest of only 9.9 percent in Jharkhand. The range difference of 30.1 percent reveals that the state at the top is ahead of the state at the bottom by four times. The highest GER state is nineteen point percentages far above the national average. Half of the major states are above the national average such as all the states from the northern region except Uttar Pradesh, one state from the western region; Maharashtra and the entire southern region fall in this category. Other states are behind than the average. For an in-depth analysis, the states have been classified into two groups. The grouping is based on the national average. The states falling above the national average are treated as regions of high GER and those below as low **(Fig 2)**.

Table 3: Major States: Gross Enrolment Ratio of Higher Education in India, 2011

S. No	Major States	All Categories		
		M	F	T
1	Jammu & Kashmir	21.8	24.0	**22.8**
2	Haryana	28.3	27.7	**28.0**
3	Himachal Pradesh	24.6	25.1	**24.8**
4	Punjab	22.4	23.6	**23.0**
5	Uttar Pradesh	17.5	17.2	17.4
6	Uttarakhand	30.1	32.3	**31.1**
7	Gujarat	18.1	14.7	16.5
8	Rajasthan	20.6	15.5	18.2
9	Maharashtra	28.1	24.3	**26.3**
10	Madhya Pradesh	22.0	14.6	18.5
11	Chhattisgarh	11.0	10.1	10.5
12	Bihar	14.0	10.8	12.5
13	Jharkhand	10.2	9.5	9.9
14	Odisha	18.3	15.0	16.6
15	West Bengal	15.4	11.8	13.6
16	Assam	14.6	14.8	14.7
17	Andhra Pradesh	33.3	26.4	**29.9**
18	Kerala	17.8	25.6	**21.8**
19	Karnataka	24.9	22.7	**23.8**
20	Tamil Nadu	43.2	36.8	**40.0**
	India	**22.1**	**19.4**	**20.8**

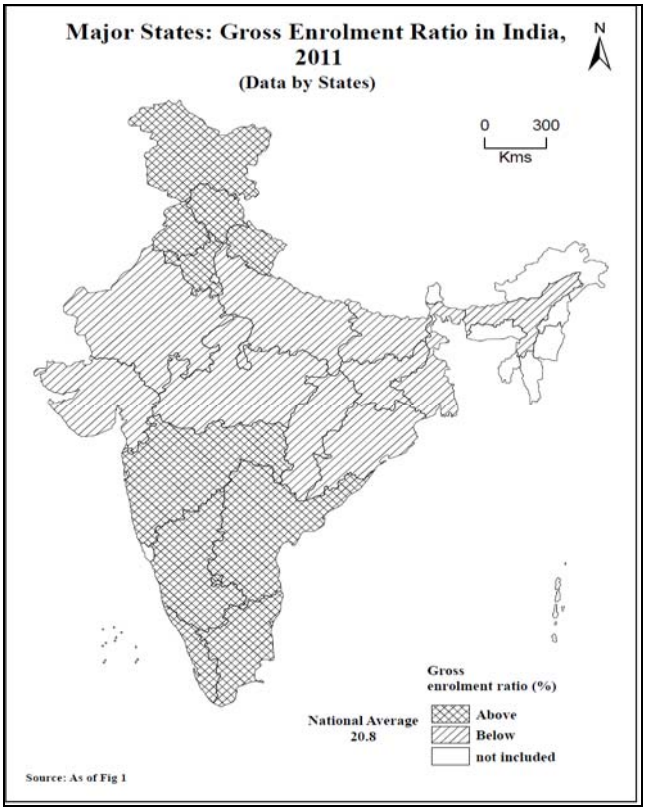
Source: As of Table 1

States having high GER than the national average (20.8 percent)

In 10 out of total 20 states, the percentage of GER is higher than the national average. Among these the proportion ranges from a highest of 40 per cent in Tamil Nadu to a lowest of 21.8 in Kerala. The range difference is 18.2 per cent. In other words the state at the top has twice times

higher than that at the bottom state. Due the higher availability of higher educational institutes in the southern belt influence the enrolment ratio in Tamil Nadu, Andhra Pradesh, Kerala and Karnataka as well as the early advent of education in these areas also aware the people regarding the importance of higher education. Moreover, among these states the literacy level is also high. Maharashtra the commercial capital of India where awareness among the people and secondly due to industrialization and better employment opportunities provoked the people to enrolled in higher education particularly in technical and professional education. The other pocket from the northern India where the socially and economically developed states are also responsible for the higher GER, moreover hilly states where various government policies and plans are also helpful for the higher enrolment ratio. (Table 3)

Fig.2



States having low GER than the national average (20.8 percent)

Half of the states reported lower GER than the national average. It ranges from a highest of 18.5 in Madhya Pradesh to a lowest of 9.9 in Jharkhand. The range difference is 8.6 per cent. In other words the state at the top has twice time higher GER than that of the state at the bottom. In this category one northern state namely Uttar Pradesh, two states from Western region; Gujarat and Rajasthan and Central region namely, Madhya Pradesh and Chhattisgarh and entire Eastern region such as Bihar, Jharkhand, Odisha, West Bengal and Assam are fall in this category. The reasons behind the low GER due to the many factors such as in Uttar Pradesh where the population share is highest and the availability of higher educational institutes are lower than the population required. Low proportion in Rajasthan is attributed to the physiographic constraints caused by the desert. Eastern region is characterized with the backward region in India, state of

Odisha, Bihar, and Jharkhand where poverty is also one of the main constraints which affected the enrolment level at the higher education. Among the major states of India, the highest rank is attained by the Tamil Nadu, and it is followed by the Uttarakhand, Andhra Pradesh, Haryana and Maharashtra. The bottom five states are Assam, West Bengal, Bihar, Chhattisgarh and Jharkhand. The significance of GER and availability of educational institutions in the major states is very well captured as the two have depicted a rationally high degree of rank correlation ($r = 0.84$) between the availability of higher education and the enrolment level.

CONCLUSION

The following main conclusions emerge out of the above analysis:-

- Wide regional variations are more predominance in area contexts than the population both in colleges and universities, respectively. Distribution of colleges and universities is affected by the historical, locational and physiographical reasons among the major states of India such as the southern region are performed better than the other regions of India due to the historical and locational advantages. On the other hand physiography plays the important role which is the major constraints that are responsible for the lower level of distribution of higher education. It is difficult to establish the infrastructure in the mountainous region (Himachal Pradesh, Uttarakhand, Assam) than plain areas (Punjab and Haryana) in the context of the locational aspect.
- Among the major states of India, Haryana attained the highest place with respect to the spatial distribution of higher education in area and population terms and it is followed by Tamil Nadu, Punjab, Karnataka, Uttarakhand and Kerala. On the other side backward states like Odisha, Bihar, Jharkhand, Chhattisgarh and Assam shows the lower distribution than the national average. On the whole it is found that the southern states (Andhra Pradesh, Kerala, Tamil Nadu and Karnataka) are far ahead in comparison to the northern states (Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Punjab and Haryana) of India. The lower availability of higher education and GER is recorded in the Eastern region (Bihar, Jharkhand, West Bengal, Odisha and Assam) of India as these are the most backward region and it is followed by the Central (Madhya Pradesh and Chhattisgarh) and Western region (Gujarat, Rajasthan and Maharashtra) of India. Analysis of data also revealed that the availability of higher educational institutes increased the enrolment ratios.

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IMPACT ASSESSMENT OF TECHNOLOGY USE TOWARDS THE AGGRESSION AND ANGER IN ADOLESCENTS

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Abstract: Individuals' communication values through using technology have changed substantially. While communication has simplified through technology, this convenience has brought in a lot of negativity. Today's technological tools as mobile phone, internet, computer and telephone has been involved in human life at very early ages, and this has affected people without them knowing. They considered such use of technological communication tools so naturally and, it has caused them to perceive as a part of their life and culture.
It is considered that the technology's negative effects on individuals' behaviour like anger and aggression causes the emergence of other problems. For this purpose, " Assessment of Technology's Effects on Adolescent Aggression and Anger" is intended for this study, which was applied to determine the opinions of students.
The population involved total 215 students studying during 2013-2014 and 2014-2015 academic year in a public school Lefkoşa Türk Lisesi and a private school Near East College in TRNC, Nicosia.
The survey was carried out in order to create a situation assessment about whether the use of technology on adolescents is effective on behaviour like anger and aggression. This research is a "Relational Scan" model that is located within the general screening models. It also is a descriptive study.
Whether the factors affecting the use of technology, which was attempted to determine with quantitative research models used change according to the demographic characteristics of students were examined in this study. With this aspect, this research can also be called Comparative Case Study. For quantitative data obtained from the analysis of data collected by survey and scale, SPSS 16 software was used and correlation, T_ test and F test statistics were used. In the analysis, the significance level was taken as $p < 0.5$.
According to the obtained data, students' use of technological tools affects anger and aggression. There is a significant difference between students' gender and their use of technological tools. Also the use of technological tools is higher among the female students than male students.
Keywords: Technology, adolescent, anger and aggression.

INTRODUCTION

Discussions and researches on the effects of technology on society have begun in recent years. Based on these researches, *"despite the close attention to the large-scale impact of the developments, how it may affect our immediate environment is not considered too much. At the entrance of the new technology to our homes, business places and living spaces, it is perfectly normal that some significant changes start to emerge in attitudes and behaviour"* (Naisbitt, 2004; Quotation:Beşli, 2007).

Many scientists refer to the period in which we live as the century of communication and technology (Erdemir, 2012). The developing technology in accordance with the requirements of the era has led to changes in human life. Communication is also affected significantly by changes occurring within a short time and, accordingly, mass communication devices have become indispensable in daily life. People became aware of the world through these devices and they can no longer live without them. Therefore, the mass media devices such as mobile phone, television, newspapers, the Internet is thought to influence negative actions in children and adolescents (Ülkü, 2013).

Today, many children and adolescents, has its own technological tools such as mobile phones and the internet and most of the time they provide communication through the internet. The replacement of face-to-face communication with the social networks has led to isolation of individual social relationships deteriorate over time. As a phenomenon that occurs in the process, communication is generally a social and particularly personal interaction. Individuals can socialize with communication. With the emergence of modern technology means of communication as a result of technological developments, changes began to occur in the communication process. Since interpersonal communication made through these tools, affection is inevitable. Mobile phones, televisions and computers are the most common means of communication used and they lead to the formation of interpersonal communication limitations (Özaydın, 2010).

Anger and aggression induced events in the living and working environments encountered and multiplied over time and it has become one of the significant problems of our age. In recent years, especially violent behaviour in schools, has increased remarkably (Yavuzer and Üre 2010).Anger and aggression are the feelings and behaviours that affect the development of the adolescent individuals and they profoundly affect the lives of individuals. Therefore, individuals should acknowledge, accept and easily talk about their anger and its negative results just as any other emotion and thoughts (Öz, 2005). Yavuzer (1992) and Kulaksızoğlu (2004) have stated that; anger and aggression is mostly encountered in adolescents and behaviour disorder and crime as a result of these emotions and behaviours, are observed most in this period. In addition, increased physical strength during adolescence and getting pleasure from the violence associated with the environment.

"Social networking is a type of online communication which is popular among adolescents"(Subrahmanyam, Reich, Waechter and Espinoza, 2008). The internet, which is becoming more useful day by day on obtaining information and using it and the accompanying social sharing networks, caused changes on well-established features of life and as well as the way individuals interact with one another while providing a comprehensive socialization among children and adolescents. (Subrahmanyam and Greenfield, 2008; Özmen, Aküzüm, Sünkür and Baysal, 2011).

Yağcı Gerçel (2009) reviewed the relationship between type and frequency of computer use among adolescents and anger and aggression levels in his study. As a result of the study, a statistically significant difference was not determined for anger and aggression between adolescents who play and do not play computer games and adolescents who play computer games in different places. Also, it has been determined that there is a significant difference between anger and aggression, and weekly hours of computer use by adolescents. According to the LSD test results, it was found that there is a significant difference between adolescents who use the computer for 4-7 hours and who use 16-19 hours and it was also found that there is a significant difference between adolescents who use the computer for 8-11 hours and who use 16-19 hours.

Dolu, Büker and Uludağ (2010) investigated the effects of violent video games on children and teenagers. According to the results of the study, it was found that particularly the violent visual media publications, attitudes of society against violence and the individuals' violent, aggressive and criminal attitudes and behaviours are all positively related.

Altınay's (2013), research named "The relationship between Internet and Computer Use and Aggression Among High School Students" has examined the relationship between internet and computer use and aggression among high school students. The population involved the students studying during 2011-2012 academic year in the secondary and high schools in the city centre of Isparta. Secondary schools located in Isparta province were classified according to the socioeconomic status of the neighbourhood and the information received from the provincial Department of Education. Among these schools, high schools with different socioeconomic status were determined through easy accessible way of sample selection. This study involved a total of 285 volunteer students; 126 male and 159 female. To collect data in the study "Aggressiveness Scale" is used. According to the results, there is a significant difference between the aggression scores of the students who stated that they use computer games and the Internet regularly and their genders. Males' scores are much higher. According to the results of their purpose of using the internet, it was found that there is a significant difference between their aggression levels. It was found that there is a significant difference between the choice of game genre (war and strategy) and their level of aggression. There is a significant difference between students who play violent games and their level of aggression.

According to the results of many different researches carried out by different people other than researchers, the media, especially television, are effective in some undesired actions. As a result of watching television for three or more hours long, the attention span reduces and children fail to fulfil required tasks and instead develop increasingly growing desire to have fun (Web et.al., 1992).

While the events caused by anger and aggression have increased at homes, workplaces and schools, they have become one of the most important issues of the 21st century and violence, particularly in schools has increased in recent years. For all these reasons, it can be concluded that anger and aggression is an emotion and an attitude that should be taken under control in a way that will contribute to the development of individuals in adolescence that is the reorganization of personality. Individuals must acknowledge and accept anger and also have the ability to express anger in a healthy way (Öz, 2005). Uncontrollable anger and aggressive behaviour, often negatively affect the lives of adolescent individuals and it causes the formation of new problems besides existing problems (Saydanoğlu, 2011).

METHOD

Quantitative research methods were used in this research. This research is a "Relational Scan" model that is located within the general screening models. It also is a descriptive study." Assessment of Technology's Effects on Adolescent Aggression and Anger" is intended for this study, which was applied to determine the opinions of students. The survey was carried out in order to create a situation assessment about whether the use of technology on adolescents is effective on behaviour like anger and aggression. Whether the factors affecting the use of technology, which was attempted to determine with quantitative research models change according to the demographic characteristics of students were examined in this study. With this aspect, this research can also be called Comparative Case Study. The survey that is used in this study to apply students is a Likert questionnaire type with 5 scale and includes a first section where the demographic structures of the students are measured, the second section where there is the students' use of technology and the third section that contains the statements developed to measure students' anger and aggression levels.

Working Group
This study was applied to the population that involved randomly chosen total 215 students studying in 9th and 10th grades during 2013-2014 and 2014-2015 academic year in a public school Lefkoşa Türk Lisesi and a private school Near East College in TRNC, Nicosia.

Data Collection Tools
In the study "About the Use of Technological Tools" and "Anger and Aggression" scale is used on the students as a data collection tool to assess the impact of the use of technology on adolescent aggression and anger.

The Student Scale "About the Use of Technological Tools":
Developed by Arnavut (2013) and used to perform validity and reliability studies, this scale was applied to the students. 93 articles were prepared by Arnavut (2013) to perform validity and reliability analysis on the scale. As result of the factor analysis, fifteen unsuitable expressions were excluded from the scope. To reveal the main components (subscales) of the scale, Principal Component Factor Analysis and Varimax Rotation were applied. As a result of factor analysis, five dimensions were emerged. Scale was structured as a five-factor and the articles of the factors were organized in terms of their content and structure as "View on Technological Tools" (24 articles), "Social Media" (12 articles), "the place of technology in the Life" (8 articles), "educational use" (9 articles), "Communication" (7 articles).

"Anger and Aggression" Survey:
A data collection tool used to measure the levels of anger adolescents in the study, "State-Trait Anger Expression Scale" is used which was developed under the name "Trait Anger Expression Scale" by Spielberger and his friends (1988). In the stage of validity and reliability of measurement tools, expert opinion has been taken. The scale has 34 Likert statements. Each item contained in these articles was expressed in the form of four scales as "Completely (4)", "Pretty (3)", "a little (2)", "No (1)". The resulting data are coded by giving a value from 4 to 1.

The obtained Cronbach's alpha values were calculated separately. These were found to be: 79 for Continuous anger size, 84 for Controlled anger size, 78 for showing anger size and 62 for suppressed anger size (Savaşır and Şahin, 1997).

Data Collection Process
In the process of collecting the data, students from a public school Lefkoşa Türk Lisesi and a private school Near East College were interviewed. The surveys applied to the students in this research, were held in accordance with the timetables that were agreed with the school administration and teachers after obtaining the necessary permits from the principals and the Ministry of Education and consulting with school management and teachers. The study data was collected during the fall of the 2013-2014 school year.

Data Collection Analysis
For quantitative data obtained from the analysis of data collected by survey and scale, SPSS 16 software was used and correlation, T_ test and F test statistics were used. In the analysis, the significance level was taken as $p < 0.5$.

In explaining the analysis results, averages calculated for each sub scales were considered to be students' anger and aggression levels. Students' average of anger and aggression has taken place in the options below.

In the study arithmetic average ($\overline{X}$), standard deviation (s), the lowest and highest values were used on the analysis of the data collected to answer sub-objectives.

Table 1: Score Limits of Five Grade Scale

Significance	Limits	*Perception-Opinion*
1	1.00-1.79	Strongly disagree
2	1.80-2.59	disagree
3	2.60- 3.39	undecided
4	3.40 -4.19	agree
5	4.20- 5.00	strongly agree

The average scores of all students in anger and aggression scale are calculated as shown in Table 1.

To test whether there is significance between the levels of anger and aggression, a t-test was performed and to analyse the differences or similarities between 3 or more groups ANOVA was used. If there were any significance among the variables, then the Post-Hoc LSD test was used.
In the measuring of the students' anger and aggression the average points have been calculated.

Results
In this section, the data obtained by the achieved results of the data analysis through data collection tools and the opinions of the participants were given in all sizes.

Results and Comments on the First Sub Problem
The first sub problem of the study was indicated, as *"Is there a significant difference between students' gender and their use of technological tools?"*

Table 2: Genders and technological tool use of students

	Gender	N	X	S	sd	t	P	P < 0.05 Means
	Female	94	2.96	1.06	213	2.781	.006	Significant
	Male	121	2.53	1.19				

In table 2, it was examined through the t-test analysis, whether there is a significant difference between students' gender and their use of technological tools. It was found that female students' average view on the use of technological tools is (=2.94) and male students' is (=2.53). As shown in the table above, there is a statistically significant difference between female and male students' use of technological tools. . Also the use of technological tools is higher among the female students than male students. Altınay et.al (2013) obtained a similar result in their studies and they found that the use of technological tools is higher among the female students than male students.

Results and Comments on the Second Sub Problem
The second sub problem is "What are the students' opinions on the use of technological tools?". The views of the surveyed students were examined and average scores were calculated on the following table.

Table 3: Students' opinions on the use of technological tools

Total1	N	Min.	Max.	Std. Deviation
	215	1,00	5,00	2,72 1,15

The average of the students' opinions on the use of technological tools were stated as indecisive (=2.72). It can be concluded that the students couldn't provide proper opinions due to their lack of information about the use of technological tools. It is thought it was difficult for individuals who have inadequate information about technology to provide an opinion about its advantages or disadvantages. The reason of a student's undesirable behaviour could be the lack of information and this problem can be solved with the help of a teacher (Çelik, 2002; Öztürk, 2002; Özdemir, 2004).

Conclusion and Recommendations

In this section, review results are described based on the findings provided in the research process and proposals are given based on these results.

There is a significant difference between students' gender and their use of technological tools. According to the data, female students use more technological tools than male students. In a similar research of Altınay et.al (2013) named *"the relationship between the High School Students' Internet and Computer Use and Aggression"* have found a significant difference between aggression scores and genders of students who indicate that using computer games and the internet on a regular basis. It was found that the ratio is higher for male students. It was determined that the gender is an effective factor in the use of technological tools.

The average range of students' views on the use of technological tools is stated as indecisive. It can be concluded that the students couldn't provide proper opinions due to their lack of information about the use of technological tools. It is thought it was difficult for individuals who have inadequate information about technology to provide an opinion about its advantages or disadvantages.

This study indicates the reasons and opinions for anger and aggression among adolescents due to the use of technology. The findings of study as *" Does the average duration of daily use of technological tools affect the anger aggression behaviours of students?"* and *" Does the use of technological tools have an impact on the anger and aggression among students?"* are being analyzed.

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IMPROVING CREATIVE WRITING SKILLS OF EFL LEARNERS THROUGH MICROBLOGGING

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Abstract: Online network technologies have begun to be used more in education domain due to opportunities they provide. Social Network Sites (SNSs) have become very popular and used as an educational medium. Within this perspective, the purpose of this paper is to investigate Social Network Sites in general and microblogging platforms in particular in terms of improving creative writing skills of EFL learners. For the purposes of the research, an explanatory sequential mixed methods design was employed. Quantitative data was examined through Social Network Analysis (SNA) and qualitative data was analyzed through content analysis. Research findings revealed that microblogging services, namely Twitter in this context, support creative writing activities can be used as a learning platform for EFL learners.
Keywords: English as a foreign language, creative writing skills, microblogging, social network analysis, content analysis

INTRODUCTION

Social media and Web have provided new opportunities in many aspects of the life and have changed our lives drastically. This change is called *Renaissance 2.0.* Accordingly, in a technology centric world, *Renaissance 2.0* reasoned a new kind of species called *Homo Iunctus*, who lives in a connected world and forms a superior connected being. Homo Iunctus inhabits on Web and Web functions as *a digital nest* where Homo Iunctus explore, discover and learn (Bozkurt, 2014). It is for sure that the paradigm shift emerged with digital technologies also affected generations whose perception of the life is strongly related to digital technologies.

DIGITAL GENERATION

It has been argued that the digital age is here, the net generation has arrived and therefore we should meet the future (Tapscott, 2008). Digitally grown up generations have different characteristics than previous generations (Tapscott, 1999; Howe and Strauss, 1991, 2000; Prensky 2001a, 2001b; Oblinger and Oblinger, 2005; Palfrey and Gasser, 2008; Jorgensen, 2003) because today's generation of young people have been immersed in a world infused with networked and digital technologies (Jones and Shao, 2011). The relationship among digital generations, technology and learning is explained with a metaphor which indicates the possibilities of digital knowledge age. Accordingly, Web 2.0, with all its attributes, appears to be a promising learning medium for the generations in digital knowledge age. It seems that digital generations followed the *white rabbit* and discovered *the Wonderland* in our networked globe. In this discovery, Web 2.0 represents the Wonderland with many opportunities as well as many challenges (Bozkurt, 2014). In addition to the many characteristics of Web 2.0, one thing that is salient is integration and use of online social networks by digital generations which caught much attention by educators because of the features they have.

ONLINE SOCIAL NETWORKS

Online social network sites are defined as "web-based services that allow individuals to construct a public or semi-public profile within a bounded system; articulate a list of other users with whom they share a connection, and view and traverse their list of connections and

those made by others within the system" (Boyd and Ellison, 2007; p.211). There is a distinction between SNSs and other types of computer-mediated communications because in SNSs, profiles are publicly viewed, friends are publicly articulated, and comments are publicly visible (Ahmad, 2011). Considering that learning is a social process, this distinction can be interpreted as a strength of the SNSs.

Presently, there are many popular and widely used online social network sites such as Facebook and Twitter. However, Twitter is examined in the scope of this research with an assumption that it facilitates creative writing due to restricted message length.

TWITTER: THE BLUE BIRD FOR MICROBLOGGING

Twitter, launched in 2006, is one of the online social networking services and microblogging platforms. Twitter is mostly known for its restrictions to limit a tweet (short message) to 140 characters. A tweet can contain text, visuals, videos and hyperlinks to enrich the message. Tweets can additionally contain timestamps and geolocation data. Twitter allows its users to create a profile and to subscribe other users by following them. Users can create a bio, upload a profile photo, a cover photo and link an URL to create a profile. Bio is a short description limited to up to 140 characters and used to introduce users to other followers.

Users can send direct message (DM: Direct Message is a private message which is also limited to 140 characters), use @ to mention a specific user and use # to refer, tag or categorize a specific topic. Registered users can read and post tweets while unregistered users can only read tweets. Users can favorite a message to indicate that they liked the tweet, or retweet (RT) to spread the message or reply to tweets. Real time tweet stream is shown through timeline and users can also follow trends which can be a topic or hashtag determined algorithmically to be one of the most popular on Twitter at that moment. Search box allows users to search the current conversations. Discover section surfaces personalized content tailored to users' interests. Twitter uses a bird logo (The mountain bluebird) which highlights its feature for crowd sourcing and word/bird of mouth. The bird logo represents freedom, hope and limitless possibility and highlights the importance of flocking with other birds to achieve a common purpose.

MICROBLOGGING IN EFL CLASSES

Microblogging can foster process-oriented learning due to the fact that it can allow continuous and transparent communication between students and lecturers (Ebner, Lienhardt, Rohs and Meyer, 2010) and they are used for teaching and learning activities in EFL classes successfully (Yunus, Salehi and Chenzi, 2012). Accordingly, there are three factors behind the success of Weblogs: Usability, collaboration and personality (Ebner and Schiefner, 2008):

- It is easy to blog (Usability): No special skills are necessary to create a new contribution
- It makes fun (Collaboration): People connect with each other, discuss topics they are interested in
- It belongs to me (Personality): Contributions are written from a subjective perspective. The own opinion can be published and reflects the own thoughts and feelings.

The basic difference between blogging and microblogging is the length of the messages (Java, Song, Finin and Tseng, 2007; Greenhow and Gleason, 2012). Compared to regular blogging, microblogging fulfills a need for an even faster mode of communication. By encouraging shorter posts, it lowers users' requirement of time and thought investment for content generation. The second important difference is the frequency of update. On average, a prolific

blogger may update her blog once every few days; on the other hand, a microblogger may post several updates in a single day. (Java, Song, Finin and Tseng, 2007). Considering Twitter's features, it is argued that it is a viable platform for creative writing.

ENGLISH AS A FOREIGN LANGUAGE (EFL) IN DIGITAL AGE

English is lingua franca of the globe and World Wide Web (Bozkurt and Ataizi, 2015) and one the most demanded language to learn. Since the early 1960s, dramatic changes have been witnessed in the ways that languages are taught (Kern and Warschauer, 2000). Firstly, computer assisted language learning and then network based language learning emerged as the innovative approaches to learn or acquire a language because integrating technology in language teaching/learning has numerous outstanding advantages both for the learners and the teachers (Aydın, 2014) and have great opportunities to improve language skills and areas (Morgan, 2012; Aydın, 2014).

In English language, there are four skills and two areas (Figure 1). Reading, writing, listening and speaking are the basic skills needed to communicate in target language. These skills are not isolated from each other; they all facilitate learning all together and have an interchangeable relationship. Grammar and vocabulary are the areas needed to improve language skills and to use target language more effectively and appropriately. All four skills and two areas are necessary for using language and developing language proficiency (Bozkurt and Ataizi, 2015). However, this research will focus on writing skill as it requires active engagement of the learners during as a productive skill.

BLOOM'S DIGITAL TAXONOMY

It is important to combine technology and pedagogy, which is called as *pedagogy 2.0* (Bozkurt, 2014). In effort to meet this need, Bloom's Taxonomy (Bloom, 1956) was updated for 21st century learners and emerging learning paradigms by Anderson and Krathwohl (2001). Churches (2008) updated it again for 21st century digital skills and added new action verbs to point how technology use is related to relevant skills. Accordingly, *remembering, understanding,* and *applying* are lower order skills while *analyzing, evaluating* and *creating* are higher order skills. In this taxonomy, creating is the most advanced skill in our digital age. Among the language skills, reading and listening are receptive skills facilitated through inputs, while speaking and writing are productive skills that can be observed through produced outputs. Within this perspective, though all the skills are important and interrelated with each other, writing is one of the most important skill as it requires employing more cognitive processes. On this ground, writing skill with creative output purposes poses as an important skill for EFL learners.

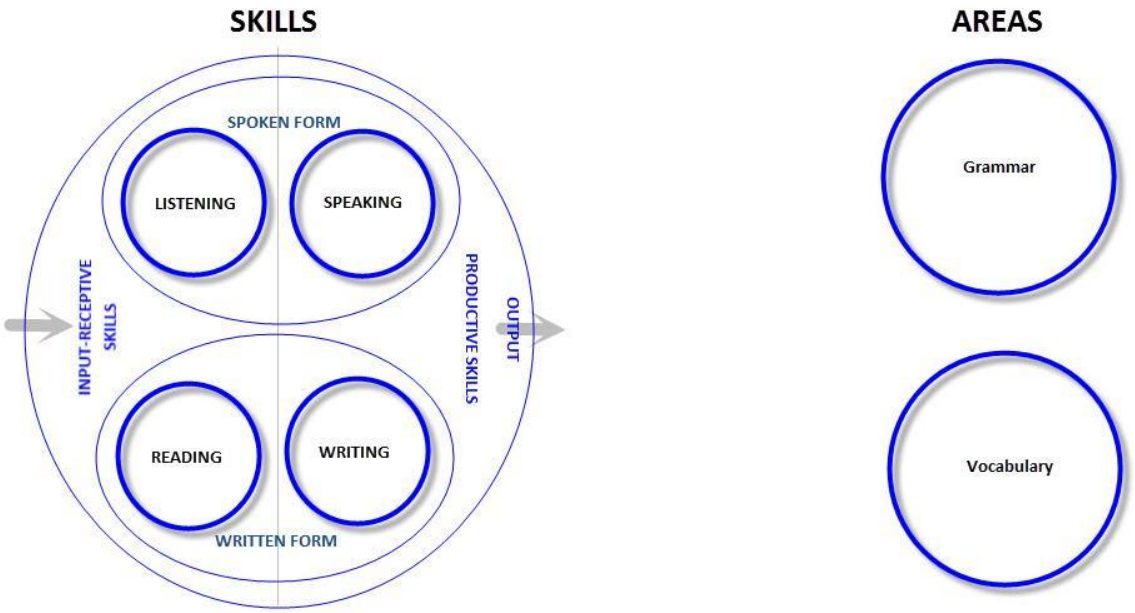


Figure 1. Language skills and areas (Bozkurt and Ataizi, 2015)

CREATIVE WRITING SKILLS

Creativity is difficult to define and a universal definition remains elusive. However, common words associated with creativity affirm that it concerns novelty and originality. Creative writers' surface original ideas through constructing their own creative texts and can generate novel responses and multiple interpretations (Fraser, 2006). On this basis, how does twitter help to improve creative writing skill?

Microblogging services, such as Twitter, are a way for improving creative writing skills as it limits the length of the sentence(s) and as it doesn't require advance proficiency in language (Bozkurt and Ataizi, 2015). Due to the imposed restriction on the message length, Twitter users learn how to express their ideas or questions clearly, concisely and articulately (Dunlap and Lowenthal, 2009; Dhir, Buragga and Boreqqah, 2013) and the use of Twitter fosters writing, comprehension, reading, and even critical thinking because users learn how to write effectively and address a large audience of people properly (Ebner et al., 2010; Dhir, Buragga and Boreqqah, 2013). In sum, the constraint in tweets requires brainstorming and ends up with creativity.

BITE-SIZED, MICRO LEARNING THROUGH KNOWLEDGE BYTES

Originally explained by George A. Miller in his eminent article "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information", bite-sized learning is about designing learning contents in chunks considering working memory and its capacity.

The terms knowledge bytes, bite-sized or micro learning refer to the same thing in essence. It means that learning content can be segmented into meaningful chunks. Thus, learners can grasp the content quickly, manage, consume, digest, understand and then remember easily. It is a solution for distracted learners' of 21st century who have shrinking attention spans. From the same point of view, yet a contrast angle, not only delivering bite-sized content, but also creating it can be an effective strategy to improve creative writing skills. It is believed that

learners should produce as much as they consume and should be active participants of the learning process.

PURPOSE OF THE STUDY

The general purpose of this study is to investigate a microblogging platform's potential for EFL students in terms of improving creative writing skills. We further examine interaction patterns of such an implementation within social network analysis (SNA) and additionally examine content produced by the participants and reveal their thoughts. On this basis, this research intends to seek for an answer for the following research questions:

- Are microblogging platforms effective for creative writing practices?
- What are the pros and cons of micro blogging platforms in terms of creating writing practices?

METHODOLOGY

Research Design

Based on the purposes of the research, an explanatory sequential mixed methods design was employed to analyze research findings. Explanatory sequential design consists of first collecting quantitative data and then collecting qualitative data to help explain or elaborate on the quantitative results. The rationale for this approach is that the quantitative data and results provide a general picture of the research problem; more analysis, specifically through qualitative data collection, is needed to refine, extend, or explain the general picture (Creswell, 2004). For quantitative data collection (1st phase), SNA and for qualitative data collection (2nd phase) content analysis and interview techniques were employed.

SNA provides powerful ways to map, summarize and visualize networks and identify key vertices that occupy strategic locations and positions within the matrix of links (Hansen, Shneiderman and Smith, 2010). In SNA, networks are usually visualized in a social network diagram, where nodes are represented as points and edges are represented as lines to conceptualize and to analyze them (Bozkurt et al., 2015). Content analysis is a research technique for making replicable and valid inferences from data to their context (Rrippendorff, 1980) and measuring the amount of something in a representative sampling (Berger 1991).

Sampling

The sample of this research in quantitative phase is 91 English prep students from Anadolu University, School of Foreign Languages who participated a four-week creative writing competition on Twitter. The demographics of the students are limited because the data was pulled from a micro-blogging platform. However, it is known that learners come from diverse academic backgrounds and they are the first year students who attend to English preparatory course in School of Foreign Languages. The sample of qualitative phase is a total of 5854 tweets and 2 students who participated creative writing competition and volunteered to join a semi-structured interview.

Procedure

The Twitter competition for creative writing is conducted at Anadolu University, School of Foreign Languages in spring 2015 term. The competition was promoted through Twitter account of institution. The participants were required to be a student at School of Foreign Languages and the participation was voluntary. Twitter competition lasted four weeks with different themes for each week determined based on the curriculum followed. Participants used #anadoluprep hashtag to join the competition. The winners of the first three weeks were

the students who tweeted the most and the winner of the last week was the student who tweeted the best tweet for each four weeks. The themes used for each week are as follows:

1. How do you think men and women are different?
2. If I had a second chance to live… I would/wouldn't…
3. How will the world change in 3000s?
4. The best place in Eskişehir after school is… because…

Strengths and Limitations

The implementation was completely online and all network data were collected. In other words, SNA represents all network interactions. In addition to strength of this research, there are some limitations. For instance, it is observed that some students tweeted for the sake of being winner of the week rather than joining to improve their English Language.

Data Sources and Analysis

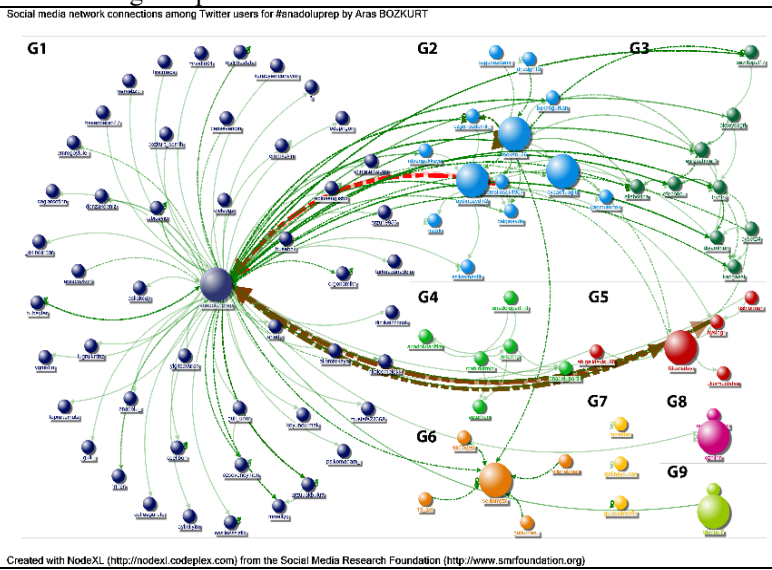
1st Phase: For quantitative data analysis, SNA was conducted according to following algorithms and metrics. In the directed graph, the graph's vertices were grouped by cluster using the Clauset-Newman-Moore cluster algorithm. The graph was laid out using the Harel-Koren Fast Multiscale layout algorithm. The edge colors, widths, and opacities are based on edge weight values. The vertex sizes are based on betweenness centrality values. The vertex opacities are based on degree values.

2nd phase: For qualitative data analysis, content analysis was used. Content analysis includes two types of data. First, the textual data of tweets collected through SNA and secondly spoken data recorded through semi-structured interviews with two participants who had high betweenness centrality values during the four-week creative writing competition.

FINDINGS

1st Phase (SNA): A total of 91 EFL learners posted 5769 tweets. The statistics and sociogram are given in Table1. Three students out of 91 didn't engage in other learners except tweeting (G7). In some components (sub-networks), connected/unified communities were observed (G2, G3, G4, G5, and G6). In G1 in which institution's twitter account can be seen in the middle, out-hub & spoke support network formation was observed. Interestingly, the vertices in G1 didn't interact with each other and only engaged with institution's Twitter account.

Table 1. Social Network Analysis of creative writing completion

Vertices: 94 Unique Edges: 85 Edges with Duplicates: 5769 Total Edges: 5854 Self-Loops: 1264 Connected Components: 5 Single-Vertex Connected Components: 3 Max. Vertices in a Connected Component: 85 Max. Edges in a Connected Component: 5820 Max. Geodesic Distance (Diameter): 4 Average Geodesic Distance: 2,1663 Graph Density: 0,0308853 Modularity: 0,019205	

2nd Phase-A (Content analysis of tweets): Researchers of this article examined all the tweets in terms of creativity. According to the research findings, Twitter's constraint in the length of the tweets force the EFL learners to produce creative writing. However, it is also observed that EFL learners usually ignored grammatical rules, in other words, EFL learners generally focused on function rather than form in terms of language use. Users mostly used emoticons to reflect their moods regarding to tweets. Some examples from 1st weeks' tweets are given in Table 2.

Table 2. Tweet examples for creative writing (from week one, 1st theme/Tweets were quoted as they were)

- wo is the difference between them i.e. wo men = wisdom of (wo) men
- Scientists say 'women learn foreign languages easier than men.' This is about women are men difference brain. #anadoluprep
- If a man says no' this mean is no but if a woman says 'no', this means ask me again #anadoluprep
- Women can focus on a few things at the same time but men can't #anadoluprep
- Female love going shopping. In fact, she just goes windows shopping from morning to night. Male cannot stand for this situation #anadoluprep
- Women feel men think. #anadoluprep
- A woman has more shoes during her whole life than a man. Women love shoes. #anadoluprep
- #anadoluprep If there is 3,99 Euro. Men see that like 4.00 Euro, women see that like 3,00 Euro :)))))))
- #anadoluprep women memorialize past, men live the moment.
- #anadoluprep Men think simple for an event women produce millions of scenarios.
- #anadoluprep A woman can cry for breaking her nail for hours but if man make an effort for hours he can't still understand her.
- #anadoluprep men forget and forgive but women never forget and seem as forgiving.
- #anadoluprep women mostly thinks emotional but man mostly thinks with sexual
- #anadoluprep Women use 20.000 words and mimics in a day in order to communicate.
- #anadoluprep Men use only 7000 words and gesture and facial expression in a day.
- #anadoluprep There are maximum 5 cleaning materials in men's bath. Women's bath remains incapable for her cleaning materials.
- #anadoluprep @anadolu_prep Shopping and Chocolate: two magical word for women
- #anadoluprep Man is a computer woman is the internet and they depend on each other
- Money can buy everything that a man wants like a beautiful woman or a good car but can't buy what a woman wants. #anadoluprep
- If woman screaming to you,still you have a chance to fix it. But if woman in silence, start worry about it #anadoluprep
- #anadoluprep A woman will pay 1$ for $2 item that she doesn't need but it is only on sale.
- Women spend much more money than men but some clothes deserve it. :((#anadoluprep
- male babies walk around distracted, female babies most of the time they spend observing their surroundings. #anadoluprep
- #anadoluprep Men and women may speak the same language, but we interpret words differently
- #anadoluprep Women are like a gold. Men are like a wood. Because, Men never know Women's value.
- #anadoluprep men attack with his punch. Women attack with her words.
- The difference between men and women. A woman thinks whole possibilities. #anadoluprep

2nd Phase-B (Content analysis of interviews):

The interviews revealed some interesting findings. First of all, interviewees reported that constraints in Twitter forced them to think about what they write and they paid more attention to word choice in addition to efforts for creative writing.

- "…I tried to use better adjectives… I improved my vocabulary and learnt new words while tweeting…"
- "I don't have any idea regarding grammar, but I improved my vocabulary."

Secondly, interviewees stated that they felt more motivated when creative tweets turned into conversations both with other EFL learners and instructors. It further helped for community formation by following each other.

- "...Commenting, mutual conversations are very important. It felt more like a dialogue [rather than a Twitter chat]"
- "There was a sudden increase in the numbers of my followers both from other participants in Twitter creative writing project and other followers from different networks. I really liked the idea that as I tweet my followers increased…"

Thirdly, interviewees highlighted the importance of the themes/topics for twitter. They stated that thought-provoking themes are more effective.

- "The first weeks' theme was great to debate, there was a great competition and sarcasm among participants."
- "The nature of the topic triggered mutual conversations…"
- "At the beginning, I was tweeting to be winner, but later I enjoyed the topic and realized that tweeting helped to improve my English…"

One of the interviewees also stated that in addition to writing creative tweets which can improve both creative writing and reading skill, recording small videos and sharing them with tweets can improve both speaking and listening skills.

- "We can tweet not only textual content but dynamic visuals such as videos… we can record, for example, ten second videos…"

The final interpretation was regarding participation of facilitators. In this research, facilitators of the twitter competition kept their presence to a minimum not to manipulate the process and see EFL learners' self-directed, self-regulated behavioral patterns. However, interviewees reported that the presence of the facilitator improved their motivation. However, researchers of this research want to stress that this issue can be related to cultural differences such as educational background and getting accustom to teacher-centered education. On this basis, it is believed that this finding may change in different cultural settings and worth further investigation

- "it is not only about tweeting, but getting feedback from instructors in addition to other EFL learners are motivating…"

CONCLUSION

In this research, microblogging for creative writing activates was examined through an explanatory sequential mixed research design. Accordingly, microblogging services, such as twitter, support creative writing activities because the constraints in the length of the tweets force learners to be more selective for word choice and to be more creative to express themselves in a single tweet which requires more involvement during the learning process. Besides, these activities support vocabulary learning which is an important area in language learning. However, it is also found that while the consideration improves creativity and vocabulary, use of proper grammar is usually ignored by EFL learners.

There are also some lessons learnt for instructors, facilitators and teaching/learning designers. Networked interaction requires thought provoking stimulus. This kind of stimulus provides more participation and improves motivation to sustain engagement and enhances interactions within the learning network.

This study also showed that networked learning activates through social networks are convenient for interacting socially and forming community among the learners. Assuming that learning in general and language learning particular is a social process, these kind of activities should be integrated into curriculum to transform language learning beyond the

classrooms and to transform it into a daily activity in online social networks, which is generally perceived as a routine by digital generations.

This research also provided some insights regarding the use of multimedia to support writing skill of a language. It is thought that by employing textual content, writing primarily and reading skill at backchannel can be improved. However, integrating additional videos can support speaking skill primarily and listening skill at the back channel. Within a holistic perspective, the four skills are interrelated and designing these kind of learning activities can lead to effective, efficient and attractive learning opportunities for EFL learners.

FUTURE DIRECTIONS

Based on the findings of this research, the following future directions can be taken into consideration:

- Online networks have become a part of daily life, digital generations usually use these virtual/online networks as an extension of their physical life and they are thought to be a convenient environment for the learners (Bozkurt, Karadeniz and Okur, 2015). In this sense, there is a need for further research based on connectivist theory and rhizomatic learning related to language learning.
- Use of multimedia is an important component of e-learning and m-learning activities. However, researchers can examine how to design and use multimedia to improve four language skills.
- Became popular with m-learning, learning content for EFL learners as a knowledge byte or bite sized learning needs further research and design principles of this kind of content should be defined.

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INTEGRATION OF LEARNING TECHNOLOGY IN SIERRA LEONE'S HIGHER EDUCATION SYSTEM: IMPLICATIONS AND CHALLENGES

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Abstract: This article examined the scope and relevance of integrating technology in Sierra Leone's higher education systems. It discusses the general scope of technology provision in HEIs across the country, and the effectiveness of the National ICT Policy in enabling effective delivery of targets like the Vision 2025 Plan to be achieved. The article also considers the implications of technology integration, more so for national delivery of effective pedagogic engagement and constraints faced by institutions in being effective at making the relevant impact to their stakeholders. The article conclude that integration of technology is an essential element for the effective delivery of flexible technology-mediated curriculum to students across the country, with the capacity for tutors / lecturers to identify differentiated teaching resources to cater for the variety of students' learning needs.
Keywords: Higher Education Institutions (HEIs); Sierra Leone; Learning Technology; Integration

Introduction

Sierra Leone, and more so after a decade of civil war which ended in 2001, have seen an expansion in higher education provision; this now incorporate both state and privately funded institutions under the provision / guidance of the 'Tertiary Education Commission (TEC)' as mandated by the government (Jackson, 2015a). The openness of higher education provision, particularly across all the different regions in the country is now making it possible intended aspirants to develop the will power / determination to further their studies as a way of enhancing their prospects for job opportunities upon graduation.

The education system in Sierra Leone, particularly the three established universities (University of Sierra Leone, Njala University and University of Makeni [UNIMAK]) in the current 21st century is still predominated by the old style didactic method of teaching and learning. This means that students' chances of being able to access higher education services, for example, remote and flexible teaching and learning materials is very limited as a result of the limited provision by individual institutions. While universities within the British West African colonies (Ghana and Nigeria) are making advances in forging teaching and learning through the provision of modern / remote learning technologies (Sarfo and Yidana, 2016; Ajadi et al, 2008), the situation in Sierra Leone is still no way near in terms of enabling learners to expand their learning opportunities through flexibility in their learning opportunities.

Even though higher education institutions are making relevant strides in implementing ICT strategy for student access, the system is still based on the old didactic approach, whereby lecturers are recycling notes [legacy] created years back, without experiencing the impact of dynamism in the global education system; this in many parts of the world, and more so in most of the West African English speaking states is based on the concept of '***blended learning***' approach. The emergence of ICT, and more recently flexible learning resources and platforms (e.g., MOODLE) has made it very much possible for a mix of learning style to be made possible; this is based on the concept of blended learning (University of the Free State, n/d: 5; Jackson, 2015b), an approach incorporating variety of learning approaches, for example, face-to-face / didactic learning and the use of ICT to enhance learning opportunities for learners.

Upheavals experienced by the country in the early 1990s to 2002 (a decade of civil crisis) witnessed infrastructural damages in the entire fabrics of the Sierra Leone economy, and which resulted in a standstill in the entire education system, with some HEIs (Njala University college then) having to relocate as a result of the destruction caused to teaching and learning resources (Jackson, 2016a). At a time when the country was experiencing an upturn in its economic performance, then erupted the deadly Ebola virus which also ruptured the entire education system to a standstill (2016c), and thereby leaving the government cash-strapped in terms of making real technological investment in HEIs to enable them to compete in the global market in the 21st century education.

A Review of the Role of ICT in Higher Education

The advent of flexible learning technologies is making it possible for Higher Education Institutions (HEIs) across the world to adopt flexible blended learning to improve learning opportunities of students (University of the Free State, n/d: 5; Gunga and Ricketts, 2006; Jackson, 2016b). For countries, particularly developed economies like the UK, USA, Australia and the newly industrialised Asian economies with integrated access provision for students to experience flexible learning, students are able to access greater opportunities in improving their grades and leaning opportunities / skills (Cutrell et al, 2015 and Jackson, 2015b).

Research conducted by Massy & Zemsky (1996), also in Antonacci (2002, p. iii) have highlighted the strength of integrating technology into HEIs as an improvement to academic productivity, particularly in terms of economic productivity / economies of scale, whereby an increase in present investment has the potential of enhancing students' output and an increase potential of higher quality / calibre of student recruitment. This is seen as both in terms of students' individual productivity in learning, and also flexibility in teaching and learning styles through distance learning provision available via dedicated learning platforms like

MOODLE and MOOC (Antonacci, ibid., and Jackson, 2015b). Scholars such as Twigg (2000) have argued in connection with cost implication of integrating technology at higher education level, but eventually allude to the fact that the overall gains are more in relation to a shift from focus on teaching and more in the enhancement of students' learning potential in accessing variety of learning opportunities (which incorporate blended and distance learning). As opposed to a more didactic / traditional classroom instruction setting where instruction is content based on a subject matter, Star (2001) according to Antonacci (2002: 13) proposes an alternative model in a situation whereby technology is used for content delivery prior to classroom / face-to-face teaching situation; this has the advantage of allowing more classroom time for processing of information as learners would have digested contents prior to classroom delivery, thereby giving more opportunity for discussion and classroom engagement.

All around the world digital technology is making its way in education, and more so in the new emerging economies in the Far East of Asia (China and India), where demand for higher education provision is on the increase as a result of adult learners seeking to engage in full time work and studies to increase their economic prospects (European Commission, 2014). Online technology is making it possible for learning (which used to confine to a specified location) to be accessed anywhere, and at any point in time with accessibility of technology devices like Laptops, Tablets and even mobile phones (Jackson, 2016b). As emphasised in the European Commission (2014: 10) report, technology integration into HEIs has created an opportunity for increased global diversity, and also *'enhanced collaboration between tutors and learners, and also improved tutor-tutor relationship through resource sharing*' (Jackson, 2015b).

Europe's effort has been geared towards encouraging HEIs to widen their curriculum provision through freely available resources like MOOC as a way of encouraging greater scope for lifelong learning, particularly for those who may see the need to engage themselves in continuous professional development and up-skilling (European Commission, 2014). Given the conservative approach of educational provision in western developed nations, more so in European nations, there has been a recognition of challenges faced, and hence the call for government policy and intervention to support and nurture culture change in meeting the 21st century demand for flexible education (European Commission, 2014: 11); such challenges may include doubts from traditional providers about quality of provision, but with greater intervention, there is a high scope for enhanced form of personalised learning and retention of students. Such integration has brought about high ramifications for pedagogical change through blended learning, incorporating technology-style learning with traditional classroom approach (Cutrell et al, 2015; 0liver, 2002).

As outlined by Bhasin (2012: 137), integration of digital classroom / technology in education (more so HEIs), requires highly skilled trained teachers / tutors, who nowadays are seen as facilitators of learning, rather than being the sole provider of knowledge; a summarised expression as a '*sage on the stage', to being a 'guide by the side*'. The introduction of such technology facilities like MOOC and other freely open-source platforms like MOODLE is making it possible for teachers / tutors to perform such facilitating role, without much of the physical interaction with students as used to be the case without technology medium. According to Bhasin (2002: ibid). UNDP statistics in 2001 indicated that almost 80% of tutors / teachers were not well prepared to use technology in meeting the growing demand for technology integration in the pedagogy of teaching and learning in the current Information Age. As highlighted in some of the outcomes from Jackson's (2015b) study, and also as expressed by Bhasin (2012: ibid), professional development through '*pre-service and in-service training*' are strongly recommended strategies to support full integration of technology in the learning process of HEIs.

The integration of technology in HEIs in many parts of Africa, as demonstrated by Sife et al (2007) in Tanzanian universities is very low despite opportunities available for open-source technologies, and as stated, the conducive environment provided by the government through the enactment in 2003 of the "National ICT policy and the Tanzania Communications Regulatory Authority Act (URT 2003). As typical of many developing nations, and in particular many Sub-Saharan African nations, there are obvious challenges which includes "lack of administrative support, more so in financing the continuity of ICT implementation, inadequate technical support to meet the demand of installing systems, and difficulty associated with the transformational process of HEIs in the African regions; based on Ehrmann (1995), there seemed have been a driven focus on just the installation of ICT into HEIs as opposed to their being a focus in integrating ICT pedagogical rational and focus, particularly that which is geared towards the enhancement of learning through supported enhanced learning technologies.

The focus on technology literacy can also be seen as the need for integrating all forms of [easy means] technology into HEIs pedagogy around the world; historical definition of technology literacy based on Georgina and Olson (2008) originated from the U.S. Department of Education (1996, par.1), is stated thus: "*computer skills and the ability to use computers and other technology to improve learning, productivity, and performance—[technology literacy] has become as fundamental to a person's ability to navigate through society as traditional skills like reading, writing, and arithmetic*". Typical of HEIs in the current Information Age, which as dictated by high level of competition amongst institutions, Shackelford, Brown, and Warner (2004: 7) noted that technological literacy should provide an individual with the capacity to "design, develop, control, use and assess technological systems and processes". In this context, institutions should be able to provide the necessary means

(learning platforms such as MOODLE and MOOC) through which pedagogical engagement can be facilitated to enhance the learning experiences of students / learners irrespective of where they may find themselves.

The central tenet of the need for technology integration in HEIs is to enhance students' learning experiences, which is mostly encouraged through blended approach; that which is supported by the use of flexible learning technology (e.g., MOOC), and backed by the application of variety of Wifi connected gadgets like PDAs, Laptops and Tablets (Jackson, 2016b; Sarfo and Yidana, 2016). Online survey conducted in the US to ascertain the future of online teaching and learning in higher education shows that institutions are really embracing online education, with the number of students enrolling in colleges and universities rising rapidly (Kim and Bonk, 2006). It is seen from the outcome of this survey that many states and institutions around the US are developing strategies to allow the smooth integration of flexible means of technology supported learning, and most importantly eradicating the myth associated with the difficulties of using relevant technologies as a means of pedagogical engagement, that is the enhancement of teaching and learning experiences for learners irrespective of location.

National ICT Policy / Strategy in Sierra Leone

Prior to 2006, there was a non-existence of ICT Policy in Sierra Leone, which is seen as the backbone of a country's driver of heading towards the digital economy. The national ICT policy document which started in 2006 and completed in 2007 is a starting point in the way forward in recognising the importance of technology, particularly in the educational development of Sierra Leone, but its remit is rather restrictive and too general to enable due cognisance and importance to HEIs provision in the country (Ministry of Information and Communications, 2009).

The implication of a national ICT Policy / Strategy can serve its purpose in facilitating the way forward in the achievements of socio-economic objectives. The Sierra Leone government has been instrumental in working with countless stakeholders within the country, more so higher education institutions, and backed by the support of its link with regional institutions like the Economic Community of West African States (ECOWAS), a 15-Member States institution that assembled in Ouagadougou on the 19th January 2007 to formulate ICT policy under the Supplementary Act A/SA1/01/07 entitled the '*Harmonization of Policies and of the Regulatory Framework for Information and Communication Technologies (ICT)*' (Ministry of Information and Communications [MIC], 2009). According to an excerpt from MIC (2009: 12-13), the establishment of a national ICT specific policy use in Sierra Leone is based on three key objectives as outlined below:

Political objectives of the ICT policy

- To enhance better transparency and facilitate communication with citizens through E-governance;
- To integrate Sierra Leone regionally and globally through the use of ICTs;
- To re-brand the image of Sierra Leone by providing information on progress and achievements in Sierra Leone and to promote the distribution of culturally sensitive materials through various ICT channels;
- To comply with the provisions of ECOWAS and the World Trade Organisation (WTO) General Agreement on Trade and Services.

Economic objectives of the ICT policy

- To improve efficiency in the public sector through effective use of ICT infrastructure, applications and services;
- To enhance competitiveness in the private sector; To enable global economic integration;
- To create new opportunities for Sierra Leoneans to become ICT citizens equipped to take advantage of a knowledge-based economy;
- To encourage the transition of the informal market to the formal market through ICT tools;
- To promote and support indigenous and foreign entrepreneurship in Sierra Leone;
- To enable growth in key areas such as Agriculture, Tourism, Mineral Resources, and Infrastructure development.

Social objectives of the ICT policy

- To improve the basic living standard of Sierra Leoneans;
- To facilitate and support the universal freedom of affordable access to information;
- To identify and implement all relevant procedures related to cyber security, electronic security and data protection to protect ICT users;
- To improve the education system through e-learning;
- To provide better assistance in the health sector through e-medicine;
- To promote and sustain the national culture and tradition through e-learning and local content application/software development;
- To reduce poverty by improving free flow of business opportunity based information to underprivileged areas and facilitating the growth of small businesses through innovative solutions;
- To engage the Diaspora in the development of Sierra Leone through e-interaction; To use ICT tools to bridge the illiteracy divide;
- To subsidise access for high-speed Internet subscribers in schools and national education institutions.

Such policy objectives as outlined above has emanated from the bitter experience of a decade of civil crisis which ruptured the country's economic fabrics and infrastructural base. Nevertheless, concerted efforts made by the government (more so MIC) in engaging different stakeholders across the country is a step in the right direction in enabling ICT usage to be set

as priority in leading the country to a sustained level of growth through easy engagement with its global partners.

Access to the Internet is a key driver in enabling the National ICT Policy to be adequately realised, and which has proved problematic in enabling some of the above outlined objectives to be achieved. The country is still struggling in keeping pace with the rest of the world in its delivery of ICT, particularly in the areas of e-commerce and education services at all levels (Mangesi, 2007). Indeed, tremendous efforts have been made in introducing ICT in the national curriculum, particularly at secondary school level, and more importantly as a degree course in some of the HEIs in the country. The low bandwidth coverage and high costs of service provision is making it quite impossible for ICT provision to be effectively realised in the country.

Encapsulated in the National ICT Policy is the Vision 2025 for Sierra Leone, which recognised the importance of technology as an important element for the sustained development of the country as a whole. With reference to Section 6 of the document the Vision 2025 Plan, MIC (2009: 14) in its preparation of the National ICT Policy noted the relevance attached to *technology* with the following key objectives:

- *Encourage and improve the teaching of science and technology at all levels of education;*
- *Improve science and technology to increase productivity in all sectors of the economy, including the informal sector; and*
- *Improve the use of science and technology to facilitate decision-making at all levels of society.*

There is willingness on the part of people to be engaged in up-skulking themselves in mastering ICT usage and application in different areas of professional like, but the lack of logistic / financial support is rendering such a vision impossible. The country is lagging behind the rest of the world in its provision of ICT services at national level; this is very well pronounced in providers' inadequate capacity to manage and deliver continuity of service provision to its customers / users, particularly in the area of e-commerce and education in enabling effective technology pedagogic engagement to facilitate flexible teaching and learning in the current Information Age.

Even with the National ICT Policy and its supported Vision 2025 Plan in encouraging effective teaching of technology at all levels, institutions (schools, colleges and universities) are ill-equipped in ensuring learners are well prepared to enjoy the benefit of technology-mediated learning that encourages choice(s) towards flexible learning spearheaded by the incorporation of differentiated teaching methods. Educational institutions are inadequately prepared due to lack of logistic support to facilitate the continued and sustained delivery of the country's technology Vision 2025 Plan; there is no evidence of relevant infrastructural

capacities present in educational establishments to ascertain readiness, with the exception of few departments (in institutions like IPAM and Njala University) where ICT is reserved for the teaching of specific technology related courses. While instructors (particularly those with specialised qualifications in technology / ICT) are keen to do the job, while the relevant tools to support their actions are non-existent, which in effect is rendering their skills redundant / outdated (Mangesi, 2007).

21st Century Higher Education Experience of Learning Technology Usage in Sierra Leone

HEIs in Sierra Leone are still behind in terms of integrating ICT to promote flexible teaching and learning (DFID, 2014). The three established universities have all made their presence through the creation of a website, but not necessarily integrated with enhanced technology facility for students to experience flexible learning opportunities. The newest of the established universities University of Makeni (UNIMAK) have some means of integrated learning facility, but only limits to the embedding of relevant course materials like course outline for students to plan ahead of the academic calendar. There are also other relevant materials like links to (journal and other) publication materials produced by teaching staff members. Given the limited funding capacity of the university (only privately funded from donations and students Fees), the administration must be commended for making some good strides in the direction of improving the pedagogical experienced of learners.

On the same token, Njala University which became autonomous from the university of Sierra Leone in 2005 is also making a head way in terms of its thoughts about enrolling a dedicated learning platform (MOODLE) to improve flexible learning for students. Currently, the appointment of a dedicated Director of ICT is making it possible for relevant course materials to be embedded on the university's website, but limited in terms of its capability to be used flexibly for students to be able to interact collaboratively with tutors / lecturers in producing and submitting online learning materials. In order for collaboration to be facilitated, given the fact that the university hosts campuses across the country, it is very vital that a dedicated flexible platform is rolled out in the immediate future. The university has great potential of attracting good level of quality students given the fact that relevant courses are developed to cater for the market needs of professionals.

The University of Sierra Leone being the oldest HEI in the country has three major institutions, namely Fourah Bay College (FBC), Institute of Public Administration and Management (IPAM) and the College of Medicine and Allied Health Sciences (COHMAS). Currently, the university hosts a single website and from which the three institutions are linked with essential resources. The website lacked integrated facilities to allow integrated learning resources for the enhancement of flexible learning in the 21st century. IPAM as a dedicated ICT-based delivery institution has some capacity to support students learning

through flexible provision, but this is also restricted as financial resources required to forge such progress is restricted. There is still a long way to go, particularly for constituent institutions to keep pace with the integration of technology in their curriculum provision, which in a similar not as already mentioned, is due to lack of adequate financial resources to create relevant investments to support the delivery of technology mediated facilities.

Implications of Learning Technology Usage and Challenges

The integration of learning technology in HEIs provision in Sierra Leone as already addressed in earlier sections is the way forward, not only for students in the country, but also as a way forward in improving the learning experiences of students, particularly through the availability of collaborative features with both students and tutors. Learning technology, be it MOODLE or MOOC comes with great benefits to institutions and stakeholders like students, who may from time to time be required to complete work within specified period of time. The added benefit of integrating learning technology into HEIs provision is access through variety of flexible and blended learning resources, and more so the added benefit of students working at flexible pace with the support of differentiated materials relevant in meeting their learning needs.

Sierra Leone needs to catch up with its regional counterparts in the delivery of a 21st century technology style learning as opposed to the current high dependence on didactic / face-to-face delivery of courses. Research evidence around the world have shown that a well-supported flexible style learning resource such as MOOC or MOODLE has the advantage of increasing students' independence and scope for access to variety of learning materials (Attwell and Hughesm, 2010; Bingimlas, n/d).

There has been a call to support the initiatives of Open and Distance Learning (ODL) in Sierra Leone through the following outlined government directives (Alghali et al, 2005):

- *Training of teachers and other education personnel through distance education*: this is a rather brilliant initiative, in which it is expected that ODL training will halve the number of unqualified teachers in schools across the country. As part of this initiative, the extra-mural department at FBC, University of Sierra Leone is to establish partnership with the Legon University in Ghana to develop distance learning course in Youth diploma. Similarly, the MA course in Educational Administration is expected to benefit too as course participants would gainfully engage in a 12-month ODL course.
- *Training of educational administrators in distance education*: this is considered a step forward too, with participants gaining from recognised masters courses and also postgraduate diploma in distance learning education.
- *Establishment of ODL Resource Centre*: a joint initiated venture between the Ministry of Education and Technology (MIST) and UNESCO. A brilliant venture with the benefit of

enduring great attention is paid to the development of relevant technology mediated courses with the support of expert link from HEIs in the country.
- *Setting up of FM radio station*: relevant to ensure information relating to ODL is broadcaster
- *Technology-mediated learning*: the remit of this is mostly confined to video training involving science courses.

Technology integration in HEIs' provision has the capacity to support mixture of both flexible blended-style type learning, with completely ODL provision in a bid to ensuring that the country move in the right direction as far as education is concerned in the current Information Age. Technology mediated learning in present age must not only be restricted to science and technology courses, but extended to incorporate courses in Humanities, Liberal Arts and the Social Sciences (Jackson, 2015b).

The integration of technology mediated learning has positive ramifications in developing both staff and students' capacity to be continuously engage in collaborative teaching and learning, particularly when the right type of learning technology is used. Choice as to which technology mediated learning tool is used to support the integration of technology in HEIs provision should be left with individual institutions; for example, whether MOOC (a more video style learning tool) or MOODLE (a collaborative learning platform), and in some cases both, is actually based on an institution's vision and capacity to take learning beyond the remit of the classroom environment, and much more so, in giving learners the choice to access variety of teaching and learning materials that suit their learning needs.

In the modern age, technology integration in HEIs provision, particularly in Sierra Leone comes with the benefit of synchronising students' performance and progress on a continuous basis (Jackson, 2016b). With this, students' attainment is more likely to be tracked through collaborative working partnership between personal tutors and individual course tutors / lecturers. Students can express their concerns about course delivery, and which invariably can also help delivery contents to be differentiated to address specific needs of learners. In a situation whereby course contents are soundly differentiated, and learners' progresses tracked (online marking with constructive feedback) on a continuous basis by tutors, the positive implications will obviously outweigh the negatives, which in developing economies are more likely to be the obvious cases of poor monitoring and inadequate review of implemented systems.

Challenges is an obvious concern when thinking about implementing technology mediated system in an institutional setting. In developing countries, particularly in a country like Sierra Leone, the challenges are enormous, considering the bitter experiences the country has witnessed in the past decade or two; the civil war which left the country in destruct of

infrastructural base to support the delivery of an effective technology-mediated system, and more lately the impact of the killer Ebola epidemic that left the country cash-strapped of delivering essential services like educating the future generation. The current systems' network support and cost, particularly for publicly funded educational institutions pose serious challenges, as HEIs are really not in the right state to set themselves in a competitive state of (flexible) educational provision when compared to their English-speaking West African counterparts like Nigeria and Ghana. The lack of adequate funding provision from government is an obvious problem facing HEIs in Sierra Leone, in comparison to developed nations where funding is normal based of accessible use per students (Jackson, 2015b); the current lack of technology funding is making it quite impossible for HEIs to see the reality of meeting their dreams of implementing effective technology to support flexible teaching and learning (DFID, 2014).

The lack of basic ICT infrastructure and inadequate manpower skills is also a challenge facing HEIs in Sierra Leone. Computer-based courses are delivered in most HEIs in Sierra Leone, but the present state of systems seemed quite slow, and old to support current requirements to build an effective integrated technology provision for HEIs in the country. The major problem is attributed to the lack of adequate planning in terms of meeting current rise in students' population, and also assessing needs requirements to support effective teaching and learning (DFID, 2014). Institutions lack the necessary manpower skills-base to support continuity in ICT service provision; this in part may be attributed to the low investment capacity of the government in focusing attention to technology investment for educational institutions in the country.

Conclusion

The continuity of HEIs delivery of education in Sierra Leone is in no doubt dependent on the implementation of efficient technology based systems / platforms, expected to meet the needs of the 21st century flexible style education, with blended approach to teaching and learning. In other parts of the world there is sufficient to point to the fact about technology's impact in transforming education beyond the remit of the classroom environment (Jackson, 2015b and Star, 2001). With the deployment of a flexible-style technology based system (e.g., MOODLE), pedagogic experience will be limitless in terms of defining the location of learning; there is the capacity for high level of collaboration to take place between tutors and students, and with facilitation of learning fostered through the creation of differentiated style learning resources for students.

It is never too late to make a start, and so, appropriate steps / strategies must be set in place by government in the first place (to meet the country's vision for 2025), and in this case, through adequate investment to help address financial bottleneck, and also to the administration of individual HEIs, the introduction of an efficient strategic plan for the integration of

technology, in departments or units like the learning resource centre (LRC) to address resource requirements for all learners. The following recommended points will serve as a way forward in helping HEIs meet the requirements for technology implementation:

- Adoption of specific technology mediated platform to enhance flexible teaching and learning, while at the same time recognising the need for effective CPD to ensure teaching staff are fully equipped to address the needs of learners in the 21st century information age.
- The creation of access to basic computer facilities for students, with possibility of individual email account for all students serving as the initial base for collaboration between students and tutors / lecturers.
- Ensuring sufficient research is done by specialists to enable specific technology-based requirements to be set up by individual HEIs. This must take into consideration provision for increase in students' population and course provision so as to make it possible for efficiency to be established in a sustainable manner.

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TEACHERS' THOUGHTS ON AND ATTITUDES TOWARDS MOTIVATION STRATEGIES

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ABSTRACT: Motivation represents an important issue in learning. Motivation in learning a second language differs from more general motivation due to the fact that second language learning requires acquisition of the four skills (i.e., reading, writing, speaking, and listening), involves cultural background, and necessitates new adaptations.The level of student motivation does not remain stable; demotivating factors cause decreases in students' motivation level. Thus, teachers employ motivation strategies in the classroom to help their learners regulate their motivation, avoid states of demotivation; thereby, help them persist in academic tasks. This study aimed to find out teachers' thoughts on and attitudes towards motivation strategies. Data were gathered through a questionnaire on motivation strategies, and they were analyzed through frequency tests. The findings suggest that teachers employ motivation strategies; however, they need to take student perspectives into consideration while applying the strategies.

INTRODUCTION

The research on motivation in second or foreign language learning, spanning decades, started with Gardner (1985). As a result of his study with his colleagues on the motivation of Canadian students learning French, he concluded that learners are motivated when they desire to communicate with second language native speakers. Because this interaction requires socialization, they have to make adjustments of a social nature (Gardner, 1985). After Gardner, many scholars investigated motivation in second and foreign language learning. Brophy (1999) and Wigfield and Eccles (1994) emphasize the value of the actual process of learning in their research: the more learners value the task, the more motivated they are. Deci and his colleagues (1991) state that if the learner chooses the tasks himself, this choice will provide fully self-determined behavior. The task will be important and valuable to the learner since he chose it himself. Williams and Burden (1997) state that decisions that determine action, the amount of effort to be spent, and the degree of perseverance are the key factors in motivation. Ames (1992) and Pintrich (1999) distinguish between goals for learning for the sake of learning and goals for getting normative evaluation such as good grades. Dörnyei (2001a) defines a motivation framework composed of three levels: the language level, the learner level, and the learning-situation level. The language level involves learning goals and language choice. The learner level involves learner traits such as self-confidence and need for achievement. The learning-situation level involves intrinsic and extrinsic motives and motivational conditions related to factors such as the course, the teacher, or the learning group. Motivation in second or foreign language learning courses differs from motivation in other courses. Second languages, as curricular topics, are like any other school subject but second language courses are not merely courses taught through discrete elements like a mathematics course would be (Dörnyei, 2001b). Gardner (1985) states that second language learning must be viewed as a central social psychological phenomenon. Thus, second language learning courses differ from other school subjects in the way in which they incorporate complex elements of second language culture. Dörnyei (1994) explains this complexity by emphasizing that "second language learning is an integral part of an individual's identity" (p. 274).

Demotivation

Learners of second or foreign languages often face problems during their learning processes. These problems often stem from demotivating factors that cause decreases in learners' levels of motivation. Dörnyei (2001b) identifies nine main demotivating factors (outlined in Table 1). Demotivating factors can influence classroom motivation because they obstruct high levels of motivation and persistence of motivation. Motivated and demotivated learners can easily be differentiated. "Academically motivated students infrequently need to be disciplined since they are interested in what is being said. When students are academically motivated, then teachers become professionally motivated. In short, the whole educational enterprise is strengthened (Spaulding, 1992). Demotivated students, on the other hand, generally cause discipline problems since they are not willing to engage in and are not interested in classroom tasks. The higher the level of students' motivation, the better classroom atmosphere and more successful learners we have. Teaching and learning are interrelated and motivation promotes the quality and benefits of this interaction, in addition to the interrelationships between teachers and students.

Table 1. Demotivating Factors (from Dörnyei, 2001b)

Source of demotivation	Causes of demotivation
Teacher	Teacher's intolerance or aggressive behaviors Lack of commitment to his or her profession Lack of competence in the language being taught His or her teaching style and the teaching method
Inadequate school facilities	Large classes Multi-level groups Frequent change of teachers and methods
Student's reduced self-confidence	Student's failure in the past Lack of success
Student's negative attitudes toward the second or foreign language	Student's personal reasons for disliking the target language
Compulsory nature of second or foreign language study	Compulsory language courses without any alternatives to choose from
Interference of another foreign language being studied	Two foreign languages learned at the same time
Student's negative attitudes toward the second or foreign language community	Student's negative attitudes toward the culture or the community of the target language
Attitudes of group members	Negative attitudes of other students in the classroom
Course book	Student's negative evaluation of the course book as useless, difficult, or uninteresting

Motivation in second language contexts has a significant impact on learner engagement and academic success. Recent studies on motivation in second language learning mainly focus on demotivation, self-management, and self-regulation strategies of second language learners.

Teachers of EFL courses in state universities in Turkey often face demotivation problems in their classrooms. These motivational problems may stem from the demotivating factors described by Dörnyei (2001b). Both the teachers and students should share the responsibility for classroom demotivation. Depending on their motivational beliefs, students might employ motivational self-regulation strategies to deal with these problems. Since demotivation may cause disengagement in academic tasks and subsequent failure, teachers' employment of motivation strategies as part of second language instruction may help to solve demotivation problems in the classroom. Dörnyei (2001b) listed more than 100 motivational techniques in *Motivational Strategies in the Language Classroom*. The techniques were grouped as:

- Set a personal example with your own behavior
- Recognize student's effort and celebrate any success
- Promote learners' self-confidence
- Create a pleasant and relaxed atmosphere in the classroom
- Present tasks properly
- Increase the learners' goal- orientedness
- Make the learning tasks stimulating
- Familiarize learners with the L2 culture and L2- related values
- Promote group cohesiveness and set group norms
- Promote learner autonomy

According to the results of H. F. Cheng & Z. Dörnyei (2007), a study conducted with Taiwanese teachers on motivational strategies, Dörnyei (2001b) suggested that displaying motivating teacher behavior, promoting learners' self- confidence, creating a pleasant classroom climate and presenting tasks properly are transferable across diverse cultural and ethno- linguistic contexts. Another result is that although communicative and game- like activities are not promoted in Taiwanese EFL settings due to the test- driven teaching culture and the perception of learning as a serious work not to be wasted by games. The study shows that Taiwanese teachers appreciated the student effort in the learning process.

THE STUDY

As the study H. F. Cheng & Z. Dörnyei (2007) suggests, teachers can be effective on student motivation with the strategies they use as part of their instruction. This study aims to identify Bülent Ecevit University Prep School teachers' thoughts on and attitudes towards the use of the motivation strategies they may use in the classroom and they may apply in their instruction. To gather data, Dörnyei's (2001b) motivation strategies questionnaire is conducted to Bülent Ecevit University Prep School teachers. The teachers were asked to respond to a 4-point Likert scale (not important, partially important, important, very important) to find out their thoughts on and attitudes towards motivation strategies. The data is analyzed using SPSS, frequency tests. The list of strategies used Dörnyei (2001b) in the study is as follows:

- Set a personal example with your own behavior
  - Show your enthusiasm for teaching (17)
  - Increase the amount of English you use in the classroom (38)
  - Share with students that you value English as a meaningful experience (39)
  - Be yourself in front of students (46)
- Recognize student's effort and celebrate any success
  - Monitor students' progress and celebrate their victory (8)
  - Remind students the benefits of mastering English (9)
  - Make sure grades reflect students' effort and hard work (15)
  - Encourage students to create products (26)
  - Promote effort attributions (41)

    - Recognize students' effort and achievement (45)
- Promote learners' self-confidence
    - Show students you care about them (2)
    - Encourage students to try harder (27)
    - Provide students with positive feedback (33)
- Create a pleasant and relaxed atmosphere in the classroom
    - Bring in and encourage humor (1)
    - Explain the importance of the class rules (5)
    - Teach self-motivating strategies (14)
    - Avoid social comparison (40)
    - Make tasks attractive by including novel and fantasy element(42)
- Present tasks properly
    - Give clear instructions by modeling (6)
    - Design tasks that are within the students' ability (11)
    - Present various auditory and visual teaching aids (44)
- Increase the learners' goal- orientedness
    - Encourage students to set learning goals (10)
    - Give students good reasons as to why a particular task is meaningful (24)
    - Make clear to students that communicating meaning effectively is more important than being grammatically correct (32)
    - Ask students to work toward the same goal (34)
    - Encourage students to use English outside the classroom (37)
- Make the learning tasks stimulating
    - Introduce various interesting topics (12)
    - Make tasks challenging (13)
    - Break the routine by varying the presentation format (18)
    - Use a short and interesting opening activity to start each class (20)
- Familiarize learners with the L2 culture and L2- related values
    - Familiarize students with the cultural background of L2 (4)
    - Invite senior students to share their English learning experiences (7)
    - Help students develop realistic beliefs about English learning (19)
    - Introduce authentic cultural materials (31)
- Promote group cohesiveness and set group norms
    - Allow students to get to know each other (3)
    - Establish good rapport with students (22)
    - Encourage peer teaching and group presentation (23)
    - Encourage students to share personal experiences (26)
- Promote learner autonomy
    - Let students suggest class rules (16)
    - Involve students in designing and running the English course (21)
    - Find students' needs and build them into curriculum (25)
    - Give students choices in deciding how and when they will be assessed (24)
    - Create a supportive classroom climate that promotes risk-taking (29)
    - Teach students learning techniques (35)
    - Adopt the role of a facilitator (36)
    - Allow students to assess themselves (47)

FINDINGS

The teachers were asked to respond to a 4-point Likert scale (not important, partially important, important, very important) to find out their thoughts on and attitudes towards motivation strategies. Frequency tests are used to analyze the data.

Table 2. Set a personal example with your own behavior

		1	2	3	4		
		% Percentages				Mean	Std
17	Show your enthusiasm for teaching	0	18.2	27.3	54.5	3.36	.790
38	Increase the amount of English you use in the classroom	0	0	36.4	63.6	3.64	.492
39	Share with students that you value English as a meaningful experience	0	9.1	40.9	50	3.41	.666
46	Be yourself in front of students	0	9.1	45.5	45.5	3.36	.658

The results presented in Table 2 indicate that the teachers emphasize setting a personal example with their own behavior just by using English in the classroom.

Table 3. Recognize student's effort and celebrate any success

			1	2	3	4		
			% Percentages				Mean	Std
8	Monitor students' progress and celebrate their victory		0	4.5	40.9	54.5	3.50	.598
9	Remind students the benefits of mastering English		0	9.1	36.4	54.5	3.45	.671
15	Make sure grades reflect students' effort and hard work		4.5	18.2	31.8	45.5	3.18	.907
26	Encourage students to create products		4.5	45.5	40.9	9.1	2.55	.739
41	Promote effort attributions		4.5	9.1	45.5	40.9	3.23	.813
45	Recognize students' effort and achievement		0	0	45.5	54.5	3.55	.510

As shown by the data in Table 3, recognizing students' efforts and achievement, and monitoring their progress while praising their success is important. Also, reminding them the benefits of mastering English is important.

Table 4. Promote learners' self-confidence

		1	2	3	4		
		% Percentages				Mean	Std
2	Show students you care about them	0	4.5	36.4	59.1	3.55	.596
27	Encourage students to try harder	0	4.5	45.5	50	3.45	.596
33	Provide students with positive feedback	0	4.5	40.9	54.5	3.50	.598

As the results described in Table 4 suggest it is important to promote students' self-confidence by showing that teachers care about them, encourage them to try harder and providing them with positive feedback.

Table 5. Create a pleasant and relaxed atmosphere in the classroom

		1	2	3	4		
		% Percentages				Mean	Std
1	Bring in and encourage humor	0	18.2	50	31.8	3.14	.710
5	Explain the importance of the class rules	0	0	54.5	45.5	3.45	.510
14	Teach self-motivating strategies	0	4.5	59.1	36.4	3.32	.568
40	Avoid social comparison	4.5	13.6	31.8	50	3.27	.883
42	Make tasks attractive by including novel and fantasy element	4.5	54.5	31.8	9.1	2.45	.739

As seen in Table 5, teachers emphasize explaining the importance of the class rules to create a pleasant and relaxed atmosphere in the classroom.

Table 6. Present tasks properly

		1	2	3	4		
		% Percentages				Mean	Std
6	Give clear instructions by modeling	0	0	31.8	68.2	3.68	.477
11	Design tasks that are within the students' ability	0	4.5	40.9	54.5	3.50	.598
44	Present various auditory and visual teaching aids	0	4.5	27.3	68.2	3.64	.581

The results presented in Table 6 indicate that it is important for the teachers to present tasks properly by giving clear instructions, designing tasks within student ability level and using various teaching aids.

Table 7. Increase the learners' goal- orientedness

		1	2	3	4		
		% Percentages				Mean	Std
10	Encourage students to set learning goals	0	18.2	50	31.8	3.14	.710
24	Give students good reasons as to why a particular task is meaningful	0	0	54.5	45.5	3.45	.510
32	Make clear to students that communicating meaning effectively is more important than being grammatically correct	0	4.5	59.1	36.4	3.32	.568
34	Ask students to work toward the same goal	4.5	13.6	31.8	50	3.27	.883
37	Encourage students to use English outside the classroom	4.5	54.5	31.8	9.1	2.45	.739

As seen in Table 7, teachers tend to avoid student goals for learning English, they only emphasize explaining why a particular task is meaningful.

Table 8. Make the learning tasks stimulating

		1	2	3	4		
		% Percentages				Mean	Std
12	Introduce various interesting topics	0	13.6	40.9	45.5	3.32	.716
13	Make tasks challenging	0	13.6	54.5	31.8	3.18	.664
18	Break the routine by varying the presentation format	0	4.5	31.8	63.6	3.59	.590
20	Use a short and interesting opening activity to start each class	0	13.6	27.3	59.1	3.45	.739

As shown by the data in Table 8, it is important to use a short, interesting opening to start the lesson and break the routine by varying the presentation format.

Table 9. Familiarize learners with the L2 culture and L2- related values

		1	2	3	4		
		% Percentages				Mean	Std
4	Familiarize students with the cultural background of L2	0	18.2	63.6	18.2	3.00	.617
7	Invite senior students to share their English learning experiences	9.1	36.4	36.4	18.2	2.64	.902
19	Help students develop realistic beliefs about English learning	0	13.6	40.9	45.5	3.32	.716
31	Introduce authentic cultural material	4.5	18.2	59.1	18.2	2.91	.750

The results presented in Table 9 indicate that familiarizing learners with L2 culture and L2-related values are not important for the teachers.

Table 10. Promote group cohesiveness and set group norms

		1	2	3	4		
		% Percentages				Mean	Std
3	Allow students to get to know each other	0	9.1	40.9	50	3.41	.666
22	Establish good rapport with students	0	9.1	68.2	22.7	3.14	.560
23	Encourage peer teaching and group presentation	0	0	68.2	31.8	3.32	.477
26	Encourage students to share personal experiences	0	22.7	40.9	36.4	3.14	.774

As seen in Table 10, promoting group cohesiveness and setting group norms are not important for the teachers. Also, as the results presented in Table 11 indicate, promoting learner autonomy is not important for the teachers.

Table 11. Promote learner autonomy

		1	2	3	4		
		% Percentages				Mean	Std
16	Let students suggest class rules	4.5	45.5	40.9	9.1	2.55	.739
21	Involve students in designing and running the English course	4.50	40.9	40.9	13.6	2.64	.790
24	Give students choices in deciding how and when they will be assessed	0	18.2	72.7	9.1	2.91	.526
25	Find students' needs and build them into curriculum	0	4.5	45.5	50	3.45	.596
29	Create a supportive classroom climate that promotes risk-taking	0	4.5	50	45.5	3.41	.590
35	Teach students learning techniques	9.1	9.1	36.4	45.5	3.18	.958
36	Adopt the role of a facilitator	0	18.2	40.9	40.9	3.23	.752
47	Allow students to assess themselves	0	13.6	45.5	40.9	3.27	.703

CONCLUSION

This study aims to identify Bülent Ecevit University Prep School teachers' thoughts on and attitudes towards the use of the motivation strategies they may use in the classroom and they may apply in their instruction. The results indicate that promoting student self- confidence is important for the teachers. Explaining the importance of the class rules is an important motivation strategy for the teachers. It is also important to monitor student progress, recognize student's effort and celebrate any success, and remind students the importance of mastering English. The teachers emphasize finding out students' needs and building them into curriculum. Breaking the routine by varying the presentation format and using a short and interesting opening activity to start each class are other important motivation strategies.

The results have important pedagogical implications for EFL in preparatory schools of Turkish universities. Firstly, it seems that the teachers are mostly interested in properly presenting their lectures properly. Secondly, the fact that they monitor their students' progress, and recognize their effort and celebrate their success may be considered as teachers' interest in the assessment. Thirdly, teachers are not interested in motivating students by promoting their autonomy. However, learner autonomy is a very important issue in language learning as indicated in the literature; autonomous people are intrinsically-motivated, perceive themselves to be in control of their decision-making, take responsibility for the outcomes of their actions and have confidence in themselves (Deci& Ryan, 1985; Bandura, 1989; Doyal& Gough, 1991).

Fourthly, teachers do not seem to emphasize familiarizing learners with the L2 culture and L2- related values; however, as stated in the literature (Gardner, 1985), students who have positive feelings towards the second language speaking community are more successful in learning a second language. Fifthly, increasing learners' goal- orientedness is not important for the teachers; however, as Ames (1992) states that the goals that learners set for themselves (learning/ performance goals) during their learning process determine their motivation. Although students with learning goals aim to gain competence in the skills being taught, students with performance goals seek to gain positive judgments of their competence. However, both groups of students tend to keep trying when they face problems and, as a consequence, their motivation increases. As a result, this study indicates that teachers employ motivation strategies; however, they need to take student perspectives into consideration while applying the strategies.

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TEACHING AND LEARNING PROCESS: THINKING AND PROBLEM SOLVING

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Abstract: The highest capability level in thinking and intellectual skills is problem solving. This is to say that educational activities should be directed not only to increase knowledge acquisition but also to develop the skill of problem solving. Problem solving is defined as seeking ways out from difficulties and challenges. The process of problem solving includes identifying problem, planning strategies in order to solve the problem, determining the right strategy, implementing the problem solving action, and evaluating the overall process and result of the action.

INTRODUCTION

Nowadays, the world has come to the knowledge era. This era marks the shifts of time from the era of agriculture (before 1880), the era of industrial revolution (1880 – 1985), the era of information (1955 – 2000), to the era of knowledge (1995 – present). In facing the new era, the skills needed to survive in the 21th century are different with those needed in the era of industrial revolution. According to Galbreth (1999), among the vital skills are skills of thinking and problem solving. Thus, a question comes up as to why thinking and problem solving skills are considered necessary in the world of education as produced from a series teaching process carried out by teachers and learning process carried out by learners?

Education directed to welcome the future must be able to develop thinking abilities and desire in analyzing and understanding problems scientifically (Joni, 1989). As stated by Ardhana (1992), giving learning experiences in rational, critical, and abstract thinking is the direction of future education. Educational experts in general admit that problem solving ability is one of many important objectives of school instructional programs because problem solving is the highest ability in thinking skills and intellectual skills (Gagne, R.M., 1975; Gagne, Briggs, & Wager, 1992; Resnick & Klopfer, 1989; Barba & Rubba, 1992; Marzano, Pickering, & McTighe, 1993). The fore, school education goals must not only increase knowledge acquisition, but must be able to develop thinking ability and problem solving (Tenyson, 1989 as quoted by Simonson & Frey, 1989), because problem solving ability is the highest mental activities (Polya, 1981).

Thinking and problem solving instructional topics have received more attention by psychological researches in 1980s. This attention is based on the rapid changes and challenges in the society which needs people to have problem solving abilities (Bransford, et.al., 1986; Marzano, et.al., 1988; Maezano, Pickering, & McTighe, 1993). When the problem solving ability has been processed, one is not only able to solve similar problems, but is also expected to be able to solve different problems in daily life (Gagne, E.D., 1985; Gagne, R.M., 1977; 1985; Bransford, Sherwood, and Reiser, 1986; Sieger, 1991).

UNDERSTANDING PROBLEM

According to Tennyson (1989), a problem is a condition where knowledge stored in the memory is not ready to do a problem-solving task. In other words, a problem-solving task is new, although knowledge already possessed can be used to solve a problem (Bell-Gredler, 1986; Travers, 1982). Gagne' (1985) argues that a problem is when there is an objective but the way to attain the objective is not yet identified. Hayes (1989) gives an example about a

problem like this: someone is on one side of a river and wants to cross the river, but he cannot cross it. Frederickson (1984) classifies a problem into two types, namely, well-structured problem and ill-structured problem. A well-structured problem is a problem in which the objective, solving algorithm, and the information needed to solve the problem are available. For example, a well-structured problem in completing the width of a triangle: the triangle formulas, the length of the side, and the height have been known. Whereas an ill-structured problem has the following characteristics: the objective going to be attained is more complex and less definite, the information needed is blank or vague, and there is no formula that can be used to solve the problem (Simon, 1978). Problem solving, according to Polya (1981), is finding a way out for every difficulty and it is full of obstacle to achieve the objective. When someone is solving a problem, he is not merely learning to apply all the knowledge and principles, and controlling the thinking process (Gagne', E.D., 1985; Gagne', R.M. 1977; 1985; Marzano, 1980, et al., 1988). The key factor in problem solving is the application of the various parts of the experiences already possessed in order to come to the solution (Deighton, 1974).

PROBLEM SOLVING

A problem solving is a process of how knowledge is organized and represented symbolically in the long-term memory in order to be activated efficiently when problem solving occurs (Reif and Heller, 1982). Problem solving process contains: (1) understanding the problem to be solved, (2) classifying various actions that will be taken, (3) selecting in action, (4) identifying obstacles, (5) conducting an action, (6) evaluating what has been done (Gagne', Briggs, and Wager, 1988) and Hayes (1986) classify the strategy of problem solving into two phases, namely problem representation and solution.

Problem solving occurs in all subjects (Gagne', 1985); in natural sciences it is called inquiry approach, and in social sciences the term role play is used (Walter, 1980). Arithmetic is one of the subjects that focuses on mathematics in the elementary school and emphasizes problem-solving (Walter, 1980; Brewer, 1992). A report from commission by the Conference Board of Mathematical Science (1966) in England emphasizes the importance of problem solving in learning mathematics because it speeds up the students' independence and thinking. Publication by the National Council of Teacher of Mathematics (NCTM) in 1980 stated that in North America and Canada, the curriculum and mathematics learning in elementary school have given attention to problem solving. International Congress on Mathematics Education (ICME) in 1984 in Adelaide (Australia) has selected problem solving as the main topic discussed. Countries such as Brazil, Japan, Italy, Portuguese, Sweden, and England have been emphasizing problem solving as an important and principal part in mathematics learning (Lester, 1994).

Through problem solving, students are expected to be able to transfer the various knowledge possessed to face various problems. Transfer occurs when the knowledge already learned can be used to solve a new problem (Travers, Pikaart, & Reunion, 1977). The research findings conducted by Vesta and Walls (1967) and Witrock and Cook (1975) show that Robert Gagne' learning hierarchy is an example of positive transfer of the relationship between prerequisites tasks and super ordinate tasks (Glaser, 1976; White, 1976; Gagne', R.M., 1974: Travers, 1982).

According to Hayes (1989), representations in problem solving consist of two types, namely internal and external representations. An internal representation is a medium for someone in thinking that consists of comprehending a problem, relating the problem with the knowledge

already possessed, and constructing the solving strategy. The external representations are an activity done to comprehend the problem and its strategy through pictures, sketch, diagrams, writing symbol, and constructing equivalence through other media outside one's self. Doing external representations may help to solve problems. Sometimes, problems can be solved by internal representations, for example to calculate 10 x 10 for certain students, it is not necessary to do external representations, but is needed for others. Many problems need internal and external representation at the same time to solve. In the study of problem solving process, researches are directed to see the see comparison done by problem solvers who are categorized as expert and beginner. Experts having richer are able to construct more difficult problems by doing chunks (Atkinson, Atkinson, and Hilgard, 1983), to automatically size the capacity of the higher cognitive awareness process (Glaser, 1990) and to use less steps (Barba & Ruba, 1992). Experts work forward strategy and novices work backward. Experts and novices are not different in using general strategies, but very different in using specific cognitive domains (Gagne', E.D., 1985; Alexander & Judy, 1988).

Therefore, the strategy used to solve a problem in a certain domain will be different from that used to solve a problem in another domain. The following are examples of the researches that revealed problem solving in various specific domains, such as physics (Reif & Heller, 1982; Zajchowski & Martin, 1993), biology (Smith & Sims, 1992; Lavoie, 1993), chemistry (Bunce, Gabel, & Samuel, 1991), health (Kagan, 1988), language (Palumbo, 1990; Lundsteen, 1970), ill-defined (Klein & Weitzenfeld, 1978), and mathematics (Kilpatrick, 1969; Polya, 1981; Riley, Greeno, & Heller, 1983).

There are five different characteristics between experts and novices in solving problem, namely, (1) experts' schemata is richer; (2) experts emphasize more on problem structure, whereas beginners emphasize more on surface feature; (3) experts are more aware of the strengths and the weakness as a problem solver; (4) experts are better in monitoring and arranging the efforts of problem solving; and (5) experts give more attention to finding out the solution of problems (Lester, 1994). According to Foshay (1991), problem-solving researches conducted by instructional designers must always be related to the representation of knowledge and strategy done by expert and novice problem solvers. Kilpatrik's research finding (1969) about students' problem solving process and Lester's (1994) about characteristics of experts and novices will contribute important benefit to designing instructional strategy, especially the strategy of content organization. Through the instructional strategy that is relevant to the condition of learning, such as the student's individual characteristics, and the characteristics of the subject, the instruction will be more effective, efficient, and interesting (Reigeluth, 1983).

Based on the above discussion, problem-solving achievement is very important for students. Therefore, with problem solving skills, students are expected to be able to transfer their knowledge acquired in one subject to another subject. In addition, students are expected to be able to solve problems in their daily life. Anyhow, research on problem solving is not much found, also, as well as research on students' process of problem solving. Therefore, it is important to conduct research related to problem solving process and the different characteristics between expert problem solvers and beginner problem solvers.

LEARNING CAPABILITIES

Learning capabilities is an ability or capability obtained through learning (Gagne, 1975). Some experts present concepts and description of learning achievement. Gagne (1975) calls it human capabilities, and other experts call it as taxonomy of education objectives (Bloom,

1979), level of performance (Merrill, 1983), and intellectual structures (Guilford, 1967 as quoted by Martin & Briggs, 1986).

Based on the idea stated by Gagne' (1975), Bloom (1979), Merril (1983), and Guildord (1967), there is a similar idea that learning achievement of intellectual skill is a hierarchy, starting from simple to complex. The most complex learning capability is problem solving because this capability needs various prerequisites concepts and principles as the subordinates.

Among the four ideas stated above only Gagne' (1975) who explicitly stated that problem solving capability is the highest hierarchy. Nevertheless, in the level of performance, problem-solving capability is not mentioned explicitly. "Find" performance is the highest hierarchy capability (Reigeluth, 1983). Similarly in the Bloom's taxonomy, in the level of application, analysis, synthesis, and evaluation concern with problem solving aspects. Whereas in Guilford' cognitive structure, in the content, systems, transformation, and implication are as the intellectual structure which concern with problem solving aspects.

HOW DO WE PROCESS INFORMATION?

The main assumption that underlies information-processing theory is the principle of information flowing system and knowledge representation in the human memory. Human memory is an active system in selecting, organizing, and changing information into information code, and storing it in the memory. Information obtained in an environment is transformed from one structure to another structure, through receptor, register sensory, short-term memory, long-term memory, response generator, and effectors (Gagne', R.M., 1975; Gagne, E.D., 1985). According to Gagne' (1985), information processing flow starts from an environment and is then received by a receptor. The receptor sends a code in the form of electro-chemistry impulse to brain. From the receptor, the information is then enters the nerve system through sensory register. The information is encoded by the sensory register in the structured form. The information is stored in a short time. According to Bell-Gredler (1991), the data are stored for about 0.5 – 2.0 seconds to be analyzed. The information selected to be analyzed then enters the short-term memory. Some meaningful information is then sent to the long-term memory to be stored permanently.

In short-term memory, the information is endured for 10 – 20 seconds, more or less the same with two pieces of information (Gagne', E.D., 1985; Bell-Gredler, 1991). Encoding and sending information to the long-term memory which can be send back to the short-term memory is called working memory. The short-term memory emphasizes the length of time when the information is stored and the working of conscious memory, whereas the working memory emphasizes the functions. For example, someone who must recall something which has been learned before, must take the thing from long term memory and then send it to the short term memory as the working memory, the information then reappears.

The information that reappears from the short-term memory as well as from the long-term memory is done through response generator that functions to transform the information into action. The neural message will move the effectors, which then produces a performance. To move or change the needed information needs the role of executive control and expectancies. For example, a student who has expectancy about what stimulus from outside he will perceive, encodes it in the memory, and transforms it into an action.

HOW KNOWLEDGE WORKS TO SOLVE PROBLEM

Gagne' and White (1978) and Gagne' (1978, 1985) stated that principally knowledge is described mentality in the form of proposition, production, and image. Proposition is as a basic unit of information, an idea, or a concept. The same propositions form a propositional network. Production is a relationship among the proposition that form a causal relationship (if …. then …..). The form of proposition is used to describe declarative knowledge, whereas production is used to describe procedural knowledge. Impression is used to store information that cannot be formulated in the form of proposition or production. There have been many studies related to how to increase declarative and procedural knowledge, and problem solving strategies. The finding showed that the declarative and procedural knowledge do not belong to two exclusive forms of knowledge but are interrelated (Gagne', 1985).

In problem solving, there is an interactive relationship between declarative and procedural knowledge. Someone who is solving a problem before doing procedural action (comprehending the problem and finding the solution), must first organize the knowledge possessed related to the problem to solve. Organizing knowledge possessed is to activate the declarative knowledge, whereas sequencing actions consisting of representing a problem, finding the solution, and evaluating the solution is procedural knowledge (Riley, Greeno, and Heller, 1983).

DIFFERENT PERSONS, DIFFERENT PROBLEM-SOLVING STRATEGIES

Many studies related to word problem have been conducted. Meta-analysis conducted by Kilpatrik (1969) and Lester (1994) showed that researchers on mathematics problem solving principally can be classified into five kinds, namely problem solving ability, problem solving tasks, problem solving process, problem solving instructional programs, and teachers' influence towards students' problem solving abilities. Studies on problem solving abilities are directed to see the comparisons of process done by expert problem solvers and novice problem solvers.

The finding showed that there is a difference between experts and novices in solving problems (Atkinson, Atkinson & Hilgard, 1983; Swanson, O'Connor, & Cooney, 1990). Experts are faster in representing the problems based on principles, whereas novices are superficial for certain attributes. An expert has rich schemata in solving problems compared to a novice. The difference between an expert and a novice lies on the procedures of problem solving efforts. Novices tend to focus on strategy, whereas experts are able to find an effective way, generalize, and evaluate the steps of alternative ways that will be conducted (driven by schemata). Many studied conducted describe the differences of problem solving strategies between experts and novices. The differences discussed focus on the schemata relevant to the problem solving. The experts schemata are based on the principles of problem solving ways using more principles and procedural knowledge. Simon and Simon (in Gick, 1986) differentiate the strategy used by experts called as working forward, and the novices as working backward.

Dewey (as quoted by Rich, 1972) describes problem solving process as "a complete act of though: (1) a felt difficulty, (2) its location and definition, (3) suggestion of possible solution, (4) development by reasoning of the bearing of the suggestions, and (5) further observation and experiment leading to its acceptance of rejection". Marzano et al. (1988) state that problem is as a process, namely thinking process and the application of the acquired knowledge.

Problem solving process is described by Newel and Simon (1972) through a computer

simulation called General Problem Solving (GPS) which consist of (1) stating a problem, (2) what has been known and its legal operator, (3) deciding objectives and sub-objectives, and beginning to solve sub-problems, (4) using objectives as a means of evaluations progresses, if possible the sub-objectives must be formulated again. Gagne', R.M., Briggs, & Wager (1988) state that a number of processes done in solving problems contains of deciding the concepts of problems which will be solved, classifying the action sequences, choosing an action, identifying obstacles, solving problems, and checking again the statements of objectives. Whereas according to Tennyson (1989), the cognitive process in problem solving consists of analyzing the given situation, arranging a conceptualization of situation, confirming the specific objectives used to handle the situation, and arranging a possible solution. Finally, Gick (1986) states that steps in solving problems principally consist of two steps, namely representing the problem and the problem solving actions. Polya (1981) states that problem solving is finding the way out for something difficult and full of obstacles to attain the predetermined objectives. Problem solving process in mathematics, according to Polya, consists of four steps of seeing, planning, doing, and checking. More specifically, Eicholz (1989) suggested five steps which need to be done, namely, comprehending what is being asked, finding data needed, planning what must be done, finding the answer by computation and correction the answer again.

Talking about solving problems delivered through question, Dwiyogo (2001) conducted a research on categorizing learners based on their academic achievement by using protocol method of thinking alout and clinical interview. The achievement group of learners consist of those with high, intermediate, and low achievements. Through the algorithm of solving the problems, it was concluded that there were five steps of problem solving carried out by students of third grade, that is, (1) understanding the problem, (2) representing the problem, (3) determining the operation model, (4) calculating, and (5) concluding the answer. Figure 1 shows a clear picture of thinking process in problem solving carried out by third graders.

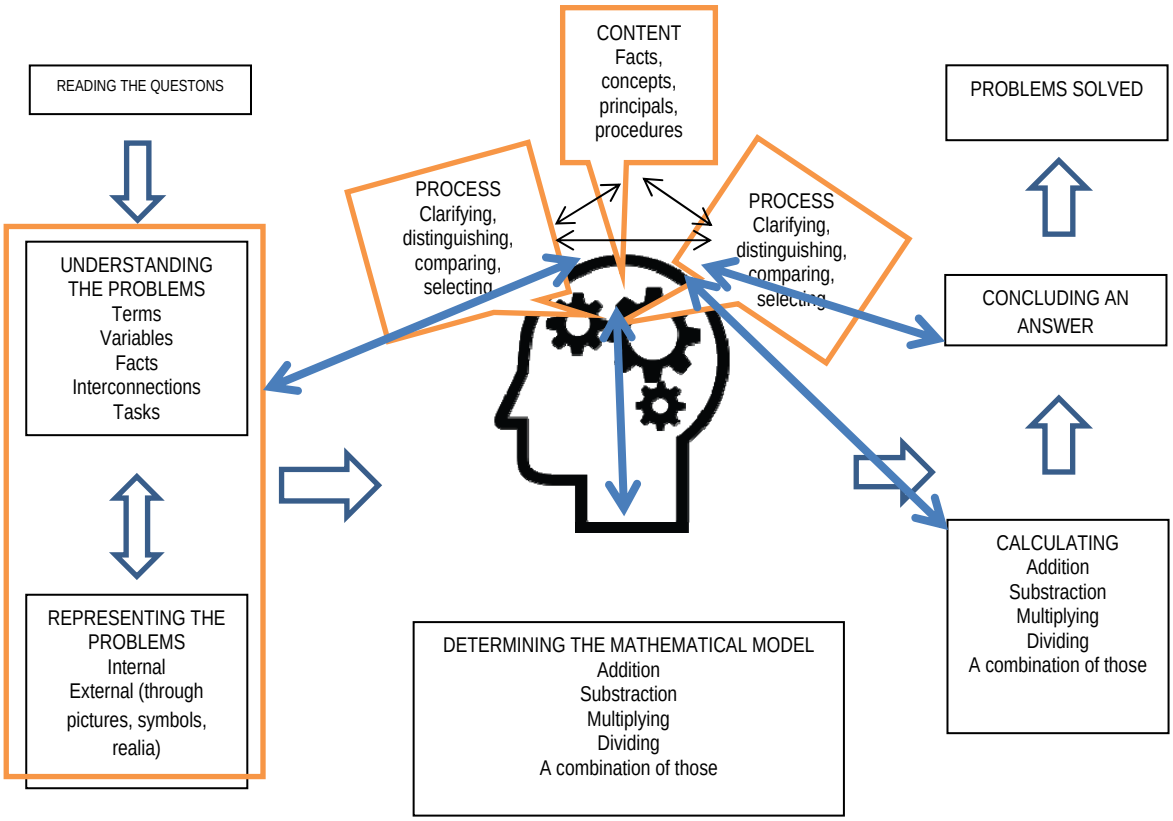

Figure 1. A theoretic model of learning process in solving problems in the form of story for third graders (Dwiyogo, 2001).

Based on the five process of problem solving, the following findings are obtained: (1) learners with high achievement are always able to obtain higher percentage of correct answer than those with intermediate and low achievements; (2) learners with intermediate achievement are sometimes able to obtain higher percentage of correct answer than those with low achievement; (3) learners with high achievement are always quicker in finding the correct answer than those with intermediate and low achievements; (4) learners with intermediate achievement are sometimes quicker in finding the correct answer than those with low achievements; (5) learners with high achievement are always able to use the shortest way to find the correct answer than those with intermediate and low achievements; (6) learners with intermediate achievement are sometimes able to use the shortest way to find the correct answer than those with low achievements; (7) learners with high achievement are able to select the most accurate and more varied operational model and use mathematical principals well, while those with low achievements hardly find the accurate operational model and use less varied model; and (8) learners with high achievement always check their answers by substituting the found numbers back into the questions, while those with low achievement hardly do that.

CONCLUSION

From the finding above, it can be concluded that there is a consistent difference between learners with high achievement and those with low learners in terms of the process of problem solving. The difference lies on the number of steps to solve the problem. The high achievers are able to solve problems more effectively, rapidly, and in a way that mathematical principals have given.

This finding is considered beneficial to instructors in designing a teaching and learning process that puts the emphasis on the learners. In order to design a problem solving learning process by using questions in the form of story, one needs to take into account programs and materials in the form of algorithm. That way, there will be options for learners who both are able and not able to answer the question to select from.

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THE COMPARISON WITH THE WORLD OF COUNSELING AND GUIDANCE TRAINING AND PRACTICE IN TURKEY

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Abstract: This study compared Turkey's counseling and guidance programs to those of other countries to find the most relevant applications and training models. In recent years, it has been observed that counseling and guidance practices that are considered as more of a psychological help are given a training certificate. Every country has its own different needs and problems according to culture that impact the results of counseling and guidance. All of these different countries' programs are generally influenced by applications from the United States of America. Overall, this study examined counseling and guidance applications developed in Turkey from the past and present and made some suggestions about what the future applications might appear like, considering developments and applications from around the world.
Keywords: Counseling, guidance, practice, education

INTRODUCTION

Counseling and Guidance in different countries has different rationales and formats, depending on the requirements and chosen forms of enforcement. First, how perceived counseling and guidance services and where and for what purpose the countries according to the requirements of the economic, social and cultural lives of annoy. In some countries very young human resources taking into account how they can use counseling and guidance services more efficently. Students in the vocational educational and training institutions, the purpose of personal/social lives, they're going to make routing decisions. For example there are the alcohol and substance use in Jamaica (Palmer, Palmer, & Payne-Borden, 2012). In contrast, Japan in recent years, the economic crisis and the problems connected to help the citizens of individuation depend on it is being organized (Iwasaki, 2005; Watanabe-Muraoka, 2007).

The American Counseling Association (ACA) adopted a definition that focus on the counseling process and that incorporated mental health, psychological, and human development principles (Remley & Herlihy, 2010). Consensus definition of professional counseling. Counseling is a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals.

The standards include a definition for professional counseling, a common training cirriculum, an established code of ethics, the development of national and regional associations, licensure, and federal recognition (Spurgeon, 2012). The Council for the Accreditation of Counseling and Related Educational Programs (CACREP) has established a set of standarts designed to articulate a professional counselor identity and to provide programs with a set of basic core competencies necessary for compotent practice as a professional counselor (Spurgeon, 2012).

There are eight common core areas CACREP believes to be relevant for professional counselors. These areas are based on research that has established their importance in helping an individual to live optimally within his or her environment. These areas include (a)Professional Orientation and Ethical Practice, (b) Social and Cultural Diversity, (c) Human Growth and Development, (d) Career Development, (e) Helping Relationships, (f) Group Work, (g) Asessment, and (h) Research and Program Evaluation (CACREP; 2010).

Training in Counseling and Guidance in The World

Examining the development of the counseling and guidance training and practice in some countries, there are different applications of the training and practice in United States of America. Some examples can be shown for this training and practice of counseling and guidance in some countries. Counselor training programs were established within Australian universities from the 1980s onward. Initially, they were embedded within professional education programs such as education, psychology, or social work. Establishment of dedicated counselor training programs in universities occured mostly at the postgraduate level. Thirty-seven higher education bodies that provided counseling education courses existed in Australia in 2011, with a total of 143 courses. Australian counselors focus on alcohol and other drug counseling, community counseling, school counseling, family and marriage counseling and rehabilitation counseling (Schofield, 2013).

Counseling and guidance without any training from Brasil is not allowed. The size of the given services at school, and more vocational guidance services by psychologists (Midgett & Hutz, 2012). In Canada's more educational and vocational guidance service of counselors that is perceived as individuals. Counselors work in different areas. Counseling and guidance services in schools are mostly being exercised by the teachers. These people don't have any formal training. Canada masters and doctorate level in many areas of education in college counseling is done (Robertson & Paterson, 1983). Venezuela has a master's program in the field of family and marriage counseling; certification for school counselors in venezuela is still in process (Montilla & Smith, 2009).

Mexico also started counseling, psychology and Psychiatry practices. Only community master egree of counseling training is done. Counseling, Mexico is perceived as psychological help. Psychological counseling, there is no any certificate or license in the field of education (Portal, Suck, & Hinkle**,** 2010).

Although there is evidence that the number of MHOs has increased (McKenzie, 2008) there is a scarcity of data on the proactice of professional counseling and current trends in Jamaica. There are few official figures on the number of trained counselors and the credentialing procedures that they undergo. However, there is solid evidence of three major factors contributing to the emergence of counseling in Jamaica: (a) spiritual support of the church, (b) introduction of the Ministry of Education's Prevention Education Program, and (c) the establishment of counseling training programs.

In Africa, school counseling and guidance programs started the same way they in the United States of America. They began as a response to the changing needs of the society and of the people. There were no standarts of training or practice which were widely accepted throughtout the context. Classroom teachers became the pioneers of the profession and helped the student with their social, personal, academic, and career concerns (Hassane, 2011). Teachers who responded to the needs of the students were, in some cases, given in-service training to begin these new functions, which they performed in addition to their regular teaching activities. It was not until much later that training of school counselors started in higher education instiiutions in several countries in Africa. Some school counselors were also trained in universities overseas especially in Britain, France, United States, and Canada (Okon, 1983).

According to Aluede, Adomeh, and Afen-Akpaida school counseling began in Nigeria in 1959 and in 1976 the Counseling Association of Nigeria (CASSON) was formed to promote

the profession (Hassane, 2011). Mc Fadden and Djassoa (1985) pointed out that Togo started to train vocational guidance counselors after independence in 1960 in foreign universities.

In Ethiopia, the terms counseling and guidance were introduced in the educational literature in response to the changing needs of the society mainly as a result of the political, economic, and social impact of the revolution (Yusuf & Bradley, 1983). Training of school couselors started in 1966-1967 with the offering of a counseling and guidance course at Addis-Ababa University (Hassane, 2011).

Currently, the University of Ghana, Legon, offers counseling and guidance courses and the University of Cape Coast also offers a Bachelor of Education program with a major in counseling and guidance. Graduates from these programs become guidance coordinators. The University of Cape Coast also offers a Master of Philoshopy (Counseling) program. The University of Education, Winneba, trains guidance coordinators at the bachelor's level. Furthermore, the counseling and guidance Unit of the Ghana Education Service (GES) trains guidance coordinators through seminars and workshops. These programs have been very helpful in the training of guidance coordinators to meet the needs of the increasing number of students. Guidance coordinators are the trained personnel in counseling who run guidance programs in schools. They are based in the school districts and they go around the schools to conduct counseling and guidance activities. The school guidance coordinators are teachers who have volunteered to conduct guidance activities (Hassane, 2011).

In Zimbabwe, the Ministry of Education created a schools pyschological services. 1990-2000, in 1990 a Zimbabwe high school teacher began training as a counselor at the University of North Alabama in the United states. In 1994, the first university guidance and counseling program was formed at the University of Zimbabwe Center for Distance Education (UZCDE) and a curriculum for counselor training was developed at UZDCE in 1996. In 2001, Zimbabwe Open University (ZOU) launched a counseling degree program that offers a bachelor's and master's degree. The programs is generally geared toward civil servants, such as teachers and health care workers (Kimberly, Richards, Zivave, Saunsuray, Govere, & Beatrice, 2012).

As rapid as the economic boom, the counseling profession in South Korea has witnessed tremendous growth over the past 20 years. An increasing number of counseling programs esatablished in colleges and universities, the emergence and development of professional counseling associations, the diversification of work settings where professional counselings are employed, the expansion of goverment funding for youth counseling policies, and sustained efforts to develop culturally relevant counseling theories and techniques suitable for South Koreans have enhanced the recognition and professional status of the profession. The advancements of the counseling profession can be attributed to numerous social changes affecting the mental health needs of people: a rising unemployment rate among young people under 30; a suicide rate among the highest in the world; exacerbated intergenerational conflicts; an extremly competitive educational environment; and an unprecedented increase in foreign workers, international students, and foreign women who are married to South Korean men. However, there are stil a number of challenges for further growth with which counseling professionals are struggling. For instance, there is no counselor licensure system in South Korea, thus production a number of unqualified paraprofessional who practice counseling in their private agencies. Also, there is no standardized counselor training model agreed upon among counselor educators (Lee, Suh, Yang, & Jang, 2012).

History of Counseling in Japan. The term counseling was first introduced to Japan in the 1950s. When the Japanese education system was reformed on the basis of recommendations by General Headquartres. Included in these reforms, psychology, counseling and vocational guidance were introduced from the United States. The most influential U:S: figures in Japan's counseling history are Donald Super and Carl Rogers (Grabosky, Ishii, & Mase, 2012)

Japan is an island nation with a long tradition of collectivist cultures that focus on group and harmonious relationships. As the nation grew economically, however, more people began to ambrace materialism and an individaulistic lifestyle, resulting in gradual changes in traditional values and social systems (Iwasaki, 2005; Watanabe-Muraoka, 2007). Japan's cultural shift away from collectivism has caused a number of social problems requiring mental health and counseling services (Grabosky et al., 2012)..

In schools, bullying, school refusal syndrome, and violence among teenagers have become more severe (Iwakabe, 2008). Furthermore, National Police Agency (2009) there have been more than 30.000 sıicides each year since the late 1990s (Grabosky et al., 2012).

In this context, recognition of the need for counseling has heightened among the Japanese public (Iwasaki, 2005), and there has been a growing need for counselors to help people manage life changes and interpersonal conflicts, reduce stres, make career decisions, learn problem-solving skills and communication skills, maintain social connection, and cope with other psychological difficulties (Nagatsuka, Mukai, Fukuhara, Renge, Sasaki, Nair, & Naito, 2005).

The field of counseling in Japan is still in a state of confusion, and there is not yet a unified definition. There are ambiguous overlaps between counseling, clinical psychology, and psychotherapy, and these words are sometimes used synonymously without distinguishing the identity of their respective areas (Watanabe-Muraoka, 2007).

In 2006, school couselors were employed in 10,158 schools throughout Japan, a dramatic increase compared with 154 schools in 1995. More than 80 % of school counselors are certified clinical psychologist in MEXT, 2007. The majority are placed in junior high schools, which cover Grades 7 to 9. They are amployed-employed by a board of education in a prefecture (similar to a state in Uinited States) and sent to a school as an outside professional. School counselors travel to their assigned schools once per week to provide 4 to 8 hours of services In college settings, counselors are placed in 80 % to 90 % of higher education institutions in Japan; however, the number of full-time college counselors remains limited (Grabosky et al., 2012).

Since the mid-1980s, many professional organizations began issuing a variety of counseling-and-psychology-related certificates. For instance, in 1988, the Japanese Certification Board for Clinical Psychologist (CBCP) was founded. With increasing problems in schools (e.g.,bullying) since the late 1980s, the Japanese Ministry of Education began placing CBCP-certified clinical psychologist as schoolcounselors in junior high schools (Iwakabe, 2008).

As of 2011, no graduate programs in counselor education or counseling psychology exist in Japan because counseling has not yet been recognized as a distinct specialty within psychology (Watanabe-Muraoka, 2007).

Guidance counselor pioneered regulation for counseling and pyschologists are following suit through the philippine psychology act of 2009, which will regulate pyschology and create a professional regulatory board for licensing psychologists. Although mental health providers have the same mission, hierarchy dictates that a doctoral-level counselor or psychologists has the highest rank, followed by the master's-level counselor. Twenty-three universities and colleges offer graduate studies in guidance and counseling, counseling/clinical psychology and counselor education. Most programs offer master's degrees and a few offer doctoral degrees, most of which follow the practitioner-sceientist model (Ma, Tuason, Maria, Catipon, & Ma, 2012).

There are counseling programs in the UK, often counseling and guidance or career counseling and guidance master's and certificate programs. However, the guidance is not used with the concept of the work of counseling. Among the concepts of psychological counseling and psychotherapy in the United Kingdom, in General, are used interchangeably. At the moment, United Kingdom as a counselor to study the psychological as yet there is no legal minimum combining. Counseling is seen as more of a second career in England. Most of those involved in the education of counseling, nursing, social work, teaching. For people with disabilities in schools, organizations, businesses, youth centers, alcohol, drugs and AIDS are interested in issues of lilerler-related organizations (Korkut-Owen, 2007).

Ireland also provides training in psychological counseling offers a range of full-time and part-time education institutions. One of them is psychological counseling center. In addition, psychological counseling and psychotherapy Association of Ireland by a 2-year training is provided (Korkut-Owen 2007). Ireland also is seen as a vocational guidance (Chamberlain, 1983).

Counseling began emerging in Greece during the 1950s. Greece was influenced in the development of career guidance and counseling (Loizos & Ivey, 2012). Counseling as a specialized service offered by a trained professional did not exist in Greece until recently. Greece has been traditionally characterized as a collectivistic culture (Nezlek, Kafetsios, & Smith, 2008; Triandis, 1994).

Although some aspects of urban family life in Greece have now shifted from collectivist to individualistic traditional Greek culture remains more collectivistic than the individualistic tradition of most western countries from which counseling developed as a specialty (Loizos & Ivey, 2012).

The initial appearance of counseling, as related to career guidance, occured when career guidance was introduced by the Ministries of Labour and Education in the 1950s. In 1953, the fist course on career guidance was introduced in the teachers' academies as part of the future elementary teachers'curriculum. Since 1971, several training programs have been conducted by OAED for career counselors. Those programs, which required participants to complete 900 hours of theory and 300 hours of practice, were designed to prepare qualified career counselors to staff the organization as well as other employment agencies (Loizos & Ivey, 2012).

An effort to introduce career guidance in the school curriculum during the 1950s and 1960s did not succeed. It was in 1985 that Educational and Career Guidance was implemented during the 3rd year of junior high school and 1st year of senior high school. The educational reform act of 1997 also reformed school and career guidance, which then became connected

with counseling. The reform act made it clear that vocational development was closely related to vocational psychology and psychological counseling (Loizos & Ivey, 2012).

In 1993, a graduate program in career guidance and counseling began at the university of Athens; individuals who completed the program earned a master's degree (Loizos & Ivey, 2012).

Presently, psychological counseling in Greece is being practiced by psychologists, counselors, social workers, and other professionals privately and also in (a) mental health centers, (b) several higher education institutions ans sanme private schools, (c) parental counseling groups conducted by the Ministry of Education, local parishes, and schools; and (d) health and social service centers (e.g. hospitals, rehabilitation centers) (Loizos & Ivey, 2012).

The first official counseling and counseling pyschology graduate programs with systematically organized theoretical and practical training started in 2009 (Loizos & Ivey, 2012).

Denmark also practices educational and vocational guidance services. There is no undergraduate or graduate education over psychological counseling and guidance. The Board of the National Educational and Vocational Guidance is responsible for guidance (Korkut-Owen, 2007). In Denmark, there is also the concept of counseling/psychology or psychological counseling with a counselor/psychologist. Denmark also has a special education program guide for psychotherapists. Denmark also has psychological counselors that primarily work at individual psychotherapy mental health centers (Dixon & Hansen, 2010).

Counseling in Switzerland is situated within the framework of psychiatry and psychology. As counseling becomes a more sought-after form of intervention in Switzerland, professional clinical counselors are immersed in competition with psychologist, pyschiatrist, and other helping professionals for their place. Among practicing counselors there are psychiatrist, psychologists, psychoanalysts, and psychotherapists some of whom have formal training in counseling skills. As the profession of counseling forges its way in Switzerland, many counselors start full-or part-time private practices (Thomas & Henning, 2012).

Psychological counseling is performed by psychologists in the Czech Republic. Prague, Brno and Olomouc have programs in psychology at the universities conducted by master builders. In the Czech Republic, as a psychotherapist, counselors, work independently. Psychological counseling services are carried out by psychologists in schools (Simons, Hutchison, & Bastecka, 2012).

Austria also made as guidance and counseling for university students in the social work of guidance and counseling. Primary and secondary-level services, educational counselors are taught by teachers (educational counseling teachers) in Austria. All the teachers from the professional counseling and guidance and is responsible for giving information. Career counselor, psychological teaching certificate and short courses and in service training field after graduation.

Belgium offers no counselor education program. Psychology graduates and people with some degree of clinical psychology graduate, works as a counselor. Estonia also has vocational guidance services. In this area, employees often school psychologists. There are runs study

counselors who are called in Finland. However, there is no psychological counseling and guidance trainings. France also has counselors, philosophy, sociology, history, economics, etc. that are chosen from among the undergraduate education graduates and trained in a special center for a year. Counseling and guidance in educational institutions in Bulgaria's work as a work of vocational guidance. Vocational guidance activities are carried out by the Ministry of labour and social policy-controlled centers. Cyprus is mainly vocational guidance services are available. Services are made by the school psychological counselors. Those who graduate from the graduate level teaching psychological counseling and guidance in education. Netherlands is a few weeks of training is sufficient to give guidance services in schools (Korkut-Owen, 2007).

Spain is also the basis of the regional counseling and guidance services and the municipal and the National Ministry of education, culture and sport, the Ministry of work and social issues, such as the level of the Central Government. Counseling and guidance services instead of bearers guidance technicians. These individuals are psychology, pedagogy, law, sociology, business management, social work, such as the graduated ones (Korkut-Owen, 2007).

In Sweden, primary and secondary education, educational and vocational guidance service, a three-year career as a professional psychological counseling program for those who have a diploma. Some universities are undergraduate and graduate training in vocational guidance.

Italy, psychological counseling and guidance, there is no any training and service. Italy does not have any college education. Professional certificate programs training of counselors. These programs are three years in duration. Italy is also counselors by psychologists. Italy is also counselor and counselling in schools service. Counselors in the areas of pedagogy, education, medicine, and psychology are those that graduated licensing. Counselor generally works privately. Italy, the only University of Siena, in an area called the master's degree in education is given to the relationship counseling (Remley, Bacchini, & Kreig, 2010).
Vocational guidance services in schools in Lativia are given by teachers and non-expert people. Hungary also has counseling and guidance services in all schools. However, these tasks are carried out by people who do not have a counselor. Poland are in the form of professional information. There is no training of counseling and guidance. Romania also facilitates counseling and guidance services, psychology, pedagogy, sociology, and social services are carried out by graduates of. Some universities have started to give a high degree-level education (Szilagyi, and Paredes, 2010). Russia does not have any university education in this field. The services are carried out by school psychologists in schools (Christine, Kuzmina, & Nadyuk, 2012).

As we have seen, both in Africa and Europe and the Far East countries, not counselors License programs, organized by the associations and related organizations, certification programs, and graduate or doctoral programs in their proffesional lifes. For example, in Africa, the majority of schools, school counselors are employed to work, volunteer teachers from a few weeks of courses are cultivated. The far East and in Europe is mostly a physician, psychologist, social workers for those who want to work as a counselor for certification through the psychological and graduate programs. For example, Japan, Jamaica, the United Kingdom and Sweden are carried out by psychologists in counseling and guidance applications. According to their own social problems, counseling practices in these countries. In these countries who export about different applications of counselling services, while by the counseling and guidance are no hesitation about the recipe. In addition, a discussion about counselors, vocational titles in each country. Topics discussed include how to better counselor

training, which functions more ethical and legal regulations should be taken into consideration, what are the common deficiencies, counselors, professional boundaries, can be solved in parallel as the border violations, problems are how to jobs.

In 1967, Faculty of Social and Administrative Sciences in Hacettepe University was the first graduate education program in the field of Counseling and Guidance in Turkey. Not long after, Bogazici University initiated the graduate program in Counseling and Guidance (Kuzgun, 1991). After the Act on Higher education, since 1982, Hacettepe University, Department of Educational Sciences Section, depending on the Education of Psychological Services, has maintained a program called the Counseling and Guidance Program. The Department of Educational Sciences, in relation to the other branches of this department, has been created by opening joint courses for the first two years of undergraduate study (Özgüven, 1999).

Current Status in Turkey

In Turkey, counseling, counseling and guidance, guidance, guidance and counseling, educational psychological services, counseling psychology are sometimes used interchangeably, sometimes. As can be seen in the discussion, separate alleged counseling or counseling psychology has different perceptions, as it does abroad.

The undergratuate of counseling and guidance training in Turkey, each year 6000 students choose to study in this area (www.yok.gov.tr). Except for a limited number of university departments which do not have enough faculty members in the counseling and guidance these students qualify to receive an education. In addition, a significant number of faculty members in charge of counseling and guidance training received by faculty from different fields have been filled in. In this case, what is the title of the profession, what is the function of the counseling and guidance the emergence of problems or natural.

Turkey has examined the numbers and distributions of the department branches of the faculty members: Counseling and guidance in training, Turkey 35 provinces, 86 in the program (24 second learning); total student quota 6007. Programs in charge of the distribution faculty members of 53 Professor, 57 Associated Professors, 197 Assistant professor, a total of 307. According to the distribution of this faculty, universities from the stunning results. In Counseling and Guidance Departments, working 37 Professors in İstanbul, Ankara and İzmir, 19 associate professors in İstanbul, Ankara and İzmir. 102 Assistant professor in İstanbul, Ankara, İzmir, Eskişehir, Konya and Adana provinces (www.yok.gov.tr).

As can be seen, a majority of the limited number of faculty members are in the realm of the university and city. However, there are 86 counseling and guidance undergraduate programs in our 35 cities. This means that many major cities and universities outside of the counseling and guidance programs do not include enough faculty member. Degree programs, with an average of 160–180 credits and 50–60 pieces from class and from the basic issue of the Council for Accreditation of Counseling and Related Educational Programs (CACREP) expressed many universities considering the eight-counseling and guidance degree programs are non-issues in the fields of the faculty members in charge of lectures.

Some of the counseling and guidance undergraduate programs were examined, there are the more number of education lessons from the counseling and guidance lessons. This program contains philosophy of education, history of education, schools, teaching principles and

methods, training management, as well as educating lessons. The aforementioned courses there is not a connection with the counseling and guidance.

Whereas, in the United States examined, taking into account the school counseling graduate programs; the program comprises courses such as statistical, psychological tests, and psychopathology, developmental psychology, school counseling, professional counseling, secondary education counseling, counseling theories, counseling techniques, interview techniques, counselling in primary education, children, and adolescents with advice, research methods, ethics, psychology of learning, group counselling, couple and family counseling, sexual counseling. CACREP accredited programs in the United States, the organization specified by the Counseling and Guidance, Counseling and Guidance programs should be in the subject areas of education. These subject areas: (a) Professional Orientation and Ethical Practice, (b) Social and Cultural Diversity, (c) the Human Growth and Development, (d) Career Development, (e)Helping Relationships, (f) the Group Work (g) Asessment, and (h) Research and Program Evaluation (CACREP; 2010).

Today, there is need for counseling and guidance in the field of labour and many very quickly due to the newly opened provincial universities in the counseling and guidance was opened to undergraduate programs. Students who graduate from universities that they perceived as incompetent and functioning institutions, persons and damaging the social dignity of the profession. However, to function as an effective counselors should be one of the characteristics according to social dignity Cormier and Cormier (1997). Unfortunately, Today, the school have gained extremely negative social perception regarding the correct definition and recognition of a counselor.

In Turkey, one of the mistakes that is subtracted from a education job of counseling and guidance, and should be, according to education job the title of the field and profession. Which is profession defined according to the drying of the working area? For example, are there serving nurses Physicians as a educators in schools? Are these nurses and doctors for working in schools as a nurses teacher, a doctor teacher? A mechanical engineer from the Engineer who works as a salesman in the profession is the title? counselors can work in different institutions. Counseling and guidance even as I wrote in the introduction of counseling in the areas of education, health, social assistance, are to work in industry. In this case, it's an educational thing, how come only the counseling and guidance graduates as “guidance teacher” called. Then, a social welfare institution, for example, working in a nursing home from here onward as a teacher or guide a counseling and guidance graduate awarded by the industrial organization and the counseling and guidance runs graduate awarded by guidance teacher you scroll? It is not a profession, title, title of the teacher guide Turkey Ministry of National Education, Counselors work in a lineup that was created for the title of personel (Kuzgun, 1991). ACA also pointed that, as stated by the Turkish Association of Ethics Booklet, counseling and guidance graduates vocational title is counselor. According to areas of expertise, this is the tittle to the front of school, Industry, careers, mental health, family and marriage, such as adjectives by adding professional titles. For Instance, School counselor, career counselor, mental health counselor, family and marriage counselor.

Turkey is also one of the omissions in the field of counseling and guidance where-master's and PhD programs are not created according to the different areas of expertise. However, Especially in the United States counseling and guidance is applied according to the different areas of expertise, including counseling and guidance for master's and doctoral training. Counseling and guidance field itself cannot be named as a masters and PhD in the same name

space. Counseling and guidance field itself cannot be created with the same name as the master's and doctoral programme. Psychology graduate programs after undergraduate program such as planned social psychology, clinical psychology, Industrial Psychology, developmental psychology, and students only in that area. After counseling and guidance undergraduate programs are to be created according to master's and doctoral programs such as a school counseling, family and marriage counseling, career counseling, mental health counseling. Already in the United States, that's exactly what the application is.

Today, we asked each of us in our work as we start exposing who we are just using the professional. In Turkey, none of counselor does not specify master's and doctoral licenses titles like, the school counselor or family and marriage counselor or mental health counselor. They writes master's and doctoral degrees in the Education Sciences on diploma. Which Educational Science, Educational Measurement, educational programs and learning assessment? educational administration and Supervision? Counselors, which one of these degree?

Undergraduate, graduate and doctoral education or have completed one of the counseling and guidance, but done in a professional application is an application itself, science instructor is counseling and guidance field course, quite serious problems**.** Doğan and Erkan (2001) as his study, counseling and guidance training in the course of teaching staff that 82% of there is no any experience related to the subject area. We have described the most important criticism of our students on the subject of well-being and appropriate responses to questions asked by the student. He evaded a teaching element of the implementation of the non-space, or area of a problem this is. Whereas counseling and guidance training one of the most overrated supervision commensurate to abroad. Made on the research counselors work values, the most important counselors at the beginning of the value is seen giving their supervision (Busacca, Beebe, & Toman, 2010).

Yeşilyaprak (2007) sums up the wrong approach in counseling and guidance services in Turkey. 1. Guidance and Counseling usually recognize children who need special education, diagnostics, perceived as the services and applications to help their training was carried out according to this approach. 2. counseling and guidance services to high school graduates to college can be a solution to the problem of clutter door is seen as a life buoy. That is why the National Education Basic Law "Orientation" guidance, depending on the policy requirements will emphasize sounds. So, the counseling and guidance services are considered only as a manpower planning. Yeşilyaprak criticizes this and "But just PDR services," Orientation "frame take on it in particular" social utilitarianism / economic development, "and so also the philosophy of this area highlight the approach is contrary to the approach to the purpose".

The criticism and recommendations related to the counseling and guidance in Turkey were examined. Many experts believe that there should be a independent department of the counseling and guidance undergraduate programme. In counseling and guidance training there are different areas of expertise for master's and doctoral levels. The title counselor must be awarded to the counseling and guidance graduates.

With the influence of the world's applications, in Turkey, what will happen to the name of counseling and guidance undergraduate programs? What will happen to the title of counselors? Counseling and guidance training programs are independent in undergraduate, and have different areas of expertise in graduate, and doctoral programs, working with important deficiencies in the legal regulations. According to the basic function or functions of

counselors it not certain what type of training they will receive. Some counselors see issues with psychological health, some counselor see issues with education work, and some counselors see issues with special education. The duties and powers designated to the work of counselors in the areas of professional counseling are issues such as vocational fields that parallel to the borders not plotted. What are the basic problems of the my country and the requirements for counseling and guidance? Economics, immigration, loneliness, individuation, alcohol and substance abuse, children and adolescents ? Counseling training programs should raise the basic function or functions for which the counselor trains for; perhaps the goal should be more than one of them. What is more important is how to make a training schemeover counseling and guidance training; certificate programs, degree programs? Graduate programs are made to be a section of the structure change and counseling and guidance independent to departments in undergraduate programs, and graduate programs must be created according to areas of expertise.

Professional Identity

Counseling profession believed that a unified counselor identity was important and served multiple benefits for professional counselors (Spurgeon, 2012).

Initially in the United States of America, in 1957, teachers were trained in summer institutes to be certified as school counselors. However, accrediation groups soon created required extensive training to be certified as guidance counselors (Remley & Herlihyt, 2010).

The professional identity of counselors has been a topic of discussion and debate among researchers (Gales & Austin, 2003; Hanna & Bemak, 1997; Hill, 2004). Auxier, Hughes and Kline (2003) purported that counselors-in-training needed to establish a professional identity before they could begin to develop a professional counselor identity. The first principle in the 20/20 Vision for the future of counseling involves the development of a professional identity for professional counselors (American Counseling Association, 2009). Hansen (2010) stated that the move towards professionalism has yielded good results for the counseling profession and has helped to establish the unique nature and scope of practice for the counseling profession. Reserachers have emphasized the impotance of a professional identity and have demonstrated the necessary component parts the profession must adhere to (Cashwell, Kleist, & Schofeld, 2009; Gibson, Dollarhide, & Moss, 2010; Reisetter, Korcuska, Yexley, Bonds, Nikels, & McHeniy, 2004).

Gibson et al. (2010) concluded that current definitions of professional identity seem to center on three themes: self-labeling as a professionanl, integration of skills and attitudes, and the perception of context within the professional community.

Title problems of staff to carry out the counseling and guidance services has actually always been ongoing since the start of these services in Turkey. When we look at what is happening in retrospect official documents the titles, it found that perhaps as many as several will not appear in any other profession (Pişkin, 2006).

In the 1980s, in Turkey, in counseling and guidance services, people have taken guidance course was operated as “guidance teacher.”. Guidance teachers, due to the fact that counseling and guidance services for people originated from lectures, giving information, monitoring, evaluation, supervision, and as a guide for telling the truth, did not show to be fulfilling development functions (Özoğlu, 1986). Özoğlu noted that this situation, by taking a course in counseling students, is caused by counselor misunderstanding and orientation and can be observed in Turkey today with appropriate counseling and guidance applications.

Turkey's Ministry of National Education appointed people who graduated from counseling and guidance programs and awarded them the title "guidance teacher," but Özoğlu preferred a profession with vocational qualifications and noted that the professional duties were incompatible with the counseling and guidance services generally identified with the profession. Upon examination of the associated title(s) abroad, the counseling training was found to be mainly in relation to master's graduates, and the titles awarded were Counselor, School Counselor, and Counseling Psychologist. Therefore, Turkey's use of "guidance teacher" was not used in countries abroad that promoted counseling and guidance training.

Kuzgun (1991) notes that in 1989 the Council of Higher education gave the title "guidance teacher" to counseling and guidance graduates, while school administrators and teachers began to facilitate the acceptance of counselors. Kuzgun (1991) states that given the real guide can be viewed as a facilitator of communication guidance teacher title opinion. Kuzgun (1991) notes that this title was appropriate and does not mean the quality of the work the title of psychological counselor.

Kuzgun (1991) also stated that counseling and guidance graduates were given the title of counselor in the United States of America. People working on counseling and guidance services in schools were given the title of school counselor. He also noted that guidance counselor "in the title field is a remote and represent the wrong title."

CONCLUSIONS

Owen (Özyürek, Korkut-Owen, & Owen, 2007) in search of excellence in the profession of counseling in the United States, the first step is a profession like a net, is the development of precise and distinct identity. According to Owen, with the increase in public awareness of the information in the field of psychological counseling, psychological counseling is a profession separate from the field. According to Owen, Turkey, American and European psychological counselors that you've become similar challenges.

There are some applications that need to be performed in the areas of counseling and guidance in Turkey in short, medium, and long term. First of all, in the short term, structural sense, counseling and guidance in educational sciences department, and must be an independent section on its own. With this change, according to masters and doctoral programs in the areas of expertise of counseling and guidance must be created and only they should be given training in their education diploma graduates. Counseling and guidance undergraduate programs should be closed and only according to the master's and doctoral programs in the areas of expertise for training. What purpose is required to take advantage of the counseling and guidance field in Turkey? Is the primary function(s) of counseling and guidance in Turkey? Where are the Turkey's problems in the ranking. What purpose has been given in the counseling and guidance services in Japan, Jamaica, Ghana, Korea. In Turkey, what is the public demand. Basic function, routing, protection-prevention, development must be the community which feels the need. In Turkey, contemporary targets of counseling and guidance practice had not been created in 2014. In contrast, the 60-year-old targets were still accepted. These targets as appropriate, and not modify the community demands for age, after all, counseling and guidance practice is as a profession has become non-functional a professional in Turkey.

This function and the goals you have set your counseling and guidance license you will not be able to plan, master's and doctoral programs. Accreditation of training programs must be

maintained in the medium term the counseling and guidance. Must be proactive to take the role of the profession-oriented arrangements. As for the professional staff person or institutions must be supplied by the accreditation of educational programs, should not be allowed the opening of nonaccredited courses. In the long term in Turkey and legal regulations related to counselors to rectify the wrong while work needs to be done in the different application areas for the new statutory regulations should be provided.

School counselor in preparing the guidance programs, schools, environmental requirements and rigorous programs without problems. As a result, psychological counselors at school and around the people when the truth emerges and kills himthat he can't offer requirements issues. The reason for this is that Turkey, in accordance with the basic function and the counseling services in which what was used for the problem and requirements is unspecified. When the purpose of the subject to tell the student to class the instructor might not know. Especially as a counselor itself which are not aware of this, mostly don't care at all instructors. As a result, counselor who graduated went to provide effective service to the institution.

Yeşilyaprak (2007) said that some of the expected developments in the field of counseling and guidance are: (1) a crisis-oriented approach that is a more developmental approach, (2) recommending an order of protection and prevention function, (3) advicing instead of long-term counseling giving weight to short-term counseling, and (4) prefering solution-oriented approaches. In addition, psychological counseling training for different business areas to appropriate educational programs are ongoing, and counselors not only public institutions, provision of work refers to privite practice. According to Yeşilyaprak (2007) counseling programs will be expected to be accredited and graduate programs will be separated by areas of expertise.

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THE EFFECT OF PPSE PREPARATION PROCESS ON SOCIAL LIFE BASED ON TEACHER CANDIDATES' VIEWS

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Abstract: This study aimed to examine the views of university students studying in different departments (Turkish language, music, science, social studies, preschool and elementary education) of the Education Faculty of Pamukkale University in the 2014-2015 school year on the effect of the Public Personnel Selection Examination (PPSE) on social life. In the study, the "Open-Ended Question Survey on PPSE for Fourth Year Teacher Candidates" developed by the researchers was used. The open-ended question form was administered to the teacher candidates in their free time on a voluntary basis. The data were transferred to the computer environment and exposed to content analysis. The codes and themes were identified by both researchers. These codes and themes were presented in tables and interpreted. As a result of the study, the teacher candidates stated that in the process of preparing for PPSE, the exam negatively affected their budget, communication with the environment, personal relationships and participation in social life. In addition, they asserted that their levels of anxiety and stress increased due to the pressure from their environment and families in this process.
Keywords: PPSE, Teacher Candidates, Social Life, Anxiety.

INTRODUCTION

The importance of teachers and the education system in community development is an undeniable fact. Accordingly, the quality of the education system and teachers trained are of great importance. Developing reasonable educational policies for teachers, as an important part of the education system, to be trained and get appointed would large affect the future of a country. However, it is not possible to say that the Turkish Ministry of National Education and Higher Education Council produce long-term and effective policies. In recent years, getting appointed after graduation seems to be a major problem, or even an obstacle for teacher candidates. In the appointment process of the Ministry, the scores in PPSE, that is described as a selection examination, are considered rather than candidates' grade point averages in their diplomas from education faculties. Particularly, the difference between the number of teacher candidates and the number of teachers needed being large increases the importance of this test. Teacher candidates prepare for a test like a racing horse in their last year at university Having many moral and material problems, teacher candidates buy resource books, go to courses and practice test techniques to prepare for the test. On the other hand, PPSE, which is seen as an important step selecting and appointing teachers, has been a matter of discussion in the education world since its first administration.

Because the teaching profession requires a special talent, it is inevitable to meet a set of criteria to be able to be accepted to this profession. To perform their job in a professional way, teachers need to be equipped with an adequate level of knowledge on their subject area, teaching profession, education system and educational policies (Özden, 2002, 30). The goal of the process of teacher selection should be to select the right teacher having the adequate qualifications. Today, the selection of teacher candidates at every stage has had its place and importance in countries' agenda as in the past (Dilekmen, Ercoşkun&Nalçacı, 2005: 308). In Turkey, to be able to get appointed, teacher candidates have to be successful in the general knowledge, general ability and educational science sections in PPSE. For this reason, as university entrance exam is important in the Turkish education system that is based on tests,

PPSE is that important in determining the future of teacher candidates (Karataş&Güleş, 2013).

Within the past of the tests administered to appoint teachers, the Ministry of National Education administered a "Teaching Proficiency Exam" between the years 1985-1991. After a short period of time, the Centre for Student Selection and Placement (CSSP) administered the "Public Profession Test" in 2001, and then the "Public Personnel Selection Examination" for appointing teaching as of 2002 (Safran, Kan, Üstündağ, Birbudak&Yıldırım, 2014; Yüksel, 2004). Previously, teachers used to be appointed directly, but today they need to take PPSE and obtain a high score. Those who are successful in the exam are appointed within the available positions allotted by the Ministry of Finance. In other words, PPSE comes teacher candidates' way as an important obstacle in entering the profession (Okçu&Çelik, 2011). PPSE results are the primary determinant in the appointment of teacher candidates.

With a regulation in 2002, the Ministry decided that being successful in PPSE was as a prerequisite for teacher appointments (Official Gazette, 2002). A minimum score for each subject area was also set by the Ministry and the applications of those whose PPSE scores were below that minimum score are not accepted. Those whose applications are accepted are sorted based on their scores and teachers are appointed in accordance with the allotted number (Yüksel, 2004).

In the literature on teachers' acceptance to the profession, the criteria and systems that are followed in Turkey seem to be also used with respect to teacher training in the world in general. Most countries take precautions to improve the qualifications of the teachers that they appoint or employ. Exams similar to the Public Personnel Selection Examination (PPSE) that has been administered for quite a long time in Turkey can be seen in Germany, Austria, France, Spain, Luxembourg, and some states of the USA. These exams are sometimes paper-based, or can be based on interviews as in Belgium, Greece, Holland and Portugal. The exam that is used in Turkey is a central examination administered by CSSP. However, in many developed European countries, central examinations are rare because education is tied to local administrations. For example, whereas teacher candidates are employed in England by the schools that they applied through interviews, the situation is different in France. In France, the "Teacher Training Institutes" found within each university conduct a progressive set of exams consisting of a written exam, a sample lesson teaching and interviews measuring interests and attitudes towards the profession. A central examination, similar to the one in Turkey, is administered in the USA. This examination, which is called the National Teacher Examination, consists of three main sections including a pre-profession skill test (i.e. equal to the general culture and general ability sections of PPSE), subject area test (i.e. towards the subject area of teachers) and teaching knowledge and skills test (i.e. equal to the educational science section of PPSE). Although the examination is central in the USA, the teacher assignment or employment is not central. Each state set its own employment conditions and employ teachers by evaluation different sections of the exam differently. PPSE in Turkey and NTE in the USA have similarities in many aspects (Konca, 2010).

One of the main characteristics of PPSE is that it ensures the supply and demand balance in teacher employment. However, it also creates competition among teacher candidates. Teacher candidates' having anxiety related to PPSE and needing support from different organisations to be successful in the exam led to the emergence of private courses that help them prepare for PPSE (Atav&Sönmez, 2013; Karataş&Güleş, 2013; Kuran, 2012; Orbay&Öner, 2006). The fact that the variety of question types increased in the course of time also triggered the spread of private courses (Karataş&Güleş, 2013). Accordingly, the private courses towards PPSE became widespread across Turkey. Therefore, teacher candidates have difficulties in preparing for the exam in their final year as well as making payments for these private courses.

According to the data of Education and Science Employees Syndicate (Egitim Sen), while 22.814 teacher candidates among 127.973 taking the KPSS exam were employed in 2003, this rate of 40.922 out of 263.055 in 2013 (Egitim Sen, 2013). As is seen, in 2013, around 222.000 teacher candidates were unemployed after taking the exam. In 2014, 221.492 teacher candidates took PPSE. Among these teacher candidates, 132.743 applied for assignment, and 39.64 were assigned as teachers (Tarhan, 2015: 142). PPSE being obligatory for teacher assignment and not all teacher candidates being able to be assigned as teachers increase the psychological and financial problems that teacher candidates experience in the process of preparing for PPSE. The idea of failing in the exam and not being able to be assigned as a teacher causes a set of disturbances in individuals. Factors such as heavy work load, pressure from the environment and family, not being able to spare time for social life and financial problems are some of the reasons that increase anxiety levels of teacher candidates. To contribute to the solution of these problems and provide a scientific insight to the decisions to be taken for teacher appointment policies, this study was regarded as necessary. The aim of the study is to determine the effect of the process of preparing for PPSE on social life based on the views of teacher candidates studying their fourth year at an education faculty. In life with this aim, two research questions were addressed in the study:

1. How does the process of preparing for PPSE affect teacher candidates' social and personal life based on their views?
2. How does the process of preparing for PPSE affect teacher candidates' relationship with their families based on their views?

METHOD

In the study, case study design, a qualitative research method, was used. Case study aims at revealing existing samples of experiences with a question of how (Yıldırım & Şimşek, 2013). Among the case study designs, holistic single case design was used, and the views of the teacher candidates regarding the effects of the PPSE preparation process on them were examined. In single case designs, there is a single analysis unit (an individual, an institution, a program, a school, etc.) (Yıldırım&Şimşek, 2013).

Regarding case study as a method, Creswell (2007) described it as a qualitative research approach in which the researcher deeply examines one or more cases that are limited in time. Themes based on a case or cases are formed through data gathering tools including many sources (observations, interviews, visual-audio, documents, reports).

Participants

The participants of the study were 81 undergraduate students studying their fourth year at the Education Faculty of Pamukkale University in the fall term of the 2014-2015 academic year. The distribution of students across departments is as follows: Social Studies Education (n=18), Preschool Education (n=13), Elementary Education (n= 16), Science Education (n=11), Turkish Language Education (n=13) and Music Education (n=10).

Data Gathering Tool

In the study, the "Open-Ended Question Survey on PPSE for Fourth Year Teacher Candidates" developed by the researchers was used to gather the research data. A literature review was conducted while preparing the form, and the questions were formed accordingly. The open-ended questions were consulted to the views of four faculty members who were experts in the area. The survey was finalized based on the feedback received from the experts

with an personal information form added. The form administered to the teacher candidates consisted of three open-ended questions and a personal information form.

Data Gathering and Analysis

The open-ended question survey was administered to the teacher candidates in their free time on a voluntary basis. Prior to the analysis of the data gathered through the interviews with the teacher candidates, they were transcribed and transferred to the computer environment. The surveys administered to the participants were examined one by one, and it was checked whether the surveys were filled in accordance with the instructions stated. The survey forms were given a number starting from 1. The data were then analysed by both researchers. To determine the consistency of the codes identified during the examinations, an agreement percentage was calculated. To calculate the reliability coefficient for each question, the formula (Reliability=Agreement/Disagreement+Agreement x 100) was used. The reliability coefficient for the first question was 92, for the second question 82, and for the third question 88. The codes that were related were combined, and the themes were formed. Quotations were gathered under similar statements to explain the codes, and these were presented in tables.

FINDINGS

In this section of the study, the findings obtained from the analysis of the data were presented in tables and interpretations were made. As a result of the analyses, the themes "Social Problems Experienced in the Process of Preparing for the Exam" and "Relationship with Families" were revealed. The participants were firstly asked how PPSE affected their social life, and based on their answers, the theme "Social Problems Experienced in the Process of Preparing for the Exam" and the codes under this theme are presented in Table 1.

Table 1. Themes, Codes and Frequencies Revealed from the Data

Themes	Codes	Number and Percentage of Those Who Stated Views on Codes
1. Theme: Social and Personal Life	1. Limitation of Social Life	29 (%36.70)
	2. Inhibition of Personal Development	22 (%27.84)
	3. Psychology of Loneliness	21 (%26.58)
	4. Not being affected	7 (%8.86)
2. Theme: Relationship with Families and Finance	1. Pressure from Family	25 (%30.86)
	2. Financial Problems	40 (%49.38)

As is seen in Table 1, the theme "social and personal life" was revealed based on the codes "limitation of social life, inhibition of personal development and psychology of loneliness". Most of the teacher candidates (n=29, 36,70%) stated that PPSE limited their social life. The rate of those who said their personal development was negatively affected

were also high (n=22, 27,84%). The teacher candidates (n=21 26,58%) expressed that in the process of preparing for PPSE, they were in a psychology of loneliness due to studying and this negatively affected their communication with their social environment. The rate of the participants who said they were not affected by the preparation process (n=7, 8,86%) was lower than the that of others.

Similarly, as is seen in Table 1, the theme "relationship with families and finance" theme was revealed based on the codes "pressure from family" and "financial problems". Within the code "pressure from family", 25 teacher candidates (30,86%) stated that they had various problems related to their families in the process of preparing for PPSE. The participants had difficulties with their families and the immediate environment of their families due to reasons such as the stress of preparing for the exam and the possibility of not being able to be appointed. This situation also made the preparation process harder. Within the code "financial problems", 40 teacher candidates (49,38%) stated a view. Situations such as having difficulty in making payments for the course, regarding the expenses in PPSE preparation process as meaningless, and not being able to meet their own needs due to the test fees caused disturbance in the participants.

Findings for the First Research Question and Interpretations

The teacher candidates' views related to the codes "limitation of social life, inhibition of personal development, psychology of loneliness, and not being affected" under the theme "social and personal life" are presented in Table 2.

Table 2. Views related to the codes "limitation of social life, inhibition of personal development, psychology of loneliness, and not being affected" under the theme "social and personal life"

Codes	Teacher Candidates' Views	f	%	Total frequency and Percentage
Limitation of social life	The high level of stress caused by the fear of unemployment negatively affects our social life.	7		29 (36.70%)
	Thinking that I have to study hard for PPSE causes limitations in my social life.	5		
	PPSE has totally captured me. I sometimes want to do things like going out and have fun, but I give up when I think of PPSE.	3		
	My success in PPSE determining the future of my life led me to isolate myself from social life.	3		
	I want to have a social life, but it seems weird when my friends study and I don't. That's why I study hard.	3		
	I can't take part in social activities because I prepare for the exam. We can't be free like in our first years at university.	2		
	Because PPSE is a milestone in my life, I study more and go out less.	3		
	I feel self-reproach when I spend time outside, so I gave a break to my social life.	3		

Inhibition of Personal Development	I study for the exam instead of using my time in courses to develop my skills.	7	22 (27.84%)
	I can't find the time for my social life because of studying. Even if I participate in a social activity, I feel uncomfortable because I spend time outside and don't study.	5	
	I can't find time for myself because of studying for PPSE.	3	
	I reduced the time I spend for social activities.	5	
	I can't find the time for reading, concerts and university clubs because of studying.	2	
Psychology of loneliness	Our behaviours towards the people around us changed due to stress. I have less friends who want to see me.	5	21 (26.58%)
	You have poor communication, chats, sincereness and environment. I couldn't get along with my friends.	7	
	I have a life away from my family because I prepare for the exam.	7	
	I allot the time that I would spend with my friends or family to PPSE. I have a life to myself.	4	
Not being affected	Because I'm not a person with a busy social life, it didn't affect me much. I can do what I used to do before.	4	7 (8,86%)
	PPSE contributes to teacher candidates' development in terms of its content. That's why I enjoy and motivate myself while studying. It doesn't affect my social life negatively.	3	

As is seen in Table 2, as the anxiety of unemployment experienced in the process of preparing for PPSE affected teacher candidates' inner world as well as causing problems with their friends. With respect to the teacher candidates' views in all the codes under the theme of social life, the situations that were mostly mentioned included those such as "studying hard, stress due to the process of preparing for the exam, pressure from the family and environment, not being able to allot time for social activities, loneliness, and guilty conscious because of not being able to do what they want" As can be seen in the quotations, teacher candidates go through a busy work pace to prepare for PPSE. Most of the participants stated that PPSE negatively affected their interaction with their environment, social relationships and participation to social activities. Twenty-nine teacher candidates (36,70%) asserted that the process of preparing for the exam limited their social life. Twenty-two teacher candidates (27,84%) said that they were away from the activities that wanted to participate due to the busy work pace, the fear of unemployment, and pressure from family and environment. Whereas 21 participants (26,58%) thought that PPSE destroyed the communication with friends and reduced the sincerity, four participants (5,06%) asserted that they allotted the time that they would spend with family and friends to PPSE.

Findings for the Second Research Question and Interpretations

The codes "family pressure and financial problems" were identified to answer the second research question, and the theme "family relationship and finance" was revealed. The teacher candidates' views on these codes are presented in Table 3.

Table 3. Views on the codes "family pressure and financial problems" under the theme "family relationship and finance"

Codes	Teacher Candidates' Views	f	%	Total frequency and Percentage
Pressure from Family	I have problems with my family because they pressure me to prepare for the exam.	8	9.87	25 (30.86%)
	It will be hard to face my family if I don't get the score I need in PPSE.	7	8.64	
	I will be in a bad position against the environment of my family (e.g. relatives, friends) if I fail in PPSE.	5	6.17	
	My family's expectation that I will be successful in the exam increases my anxiety even more.	3	3.70	
	I feel uncomfortable when my family tells me to study even though I do.	2	2.46	
Financial Problems	Studying for PPSE caused financial problems in my life.	10	12.34	40 (49,38%)
	I could do better things with the money I paid to the private course.	8	9.87	
	My family both pays for my private course and sends me pocket money. I feel bad against my family.	7	8.64	
	The book expenses also give me a hard time apart from the course expenses.	4	4.93	
	If a teacher candidate has financial difficulties, his/her preparation for PPSE and employment gets even more difficult.	3	3.70	
	I had to work to pay for the course fee.	3	3.70	
	Spending money for PPSE decreased my life quality. I can't spare money for the things I want to do.	2	2.46	
	I think I waste my money by preparing for PPSE.	2	2.46	
	I can't find a source to pay for my course fee.	1	1.23	

As is seen in Table 3, 25 teacher candidates (30,86%) stated that they "had problems their families in the process of preparing for PPSE". Eight teacher candidates (9,87%) said "they had pressure from their families", seven candidates (8,64%) said "they would feel bad against their families", five candidates (6,17%) said "they would be in a difficult position if they fail in the exam", three candidates (3,70%) said "the pressure from their families to be successful in the exam caused stress", and two candidates said "they had problems with their

families regarding their studying performance". When the the code "family pressure" was examined, the teacher candidates were found to have problems regarding the probability of being successful in the exam with their families. The quotations show that the teacher candidates not only had negative feelings related to their family but also the environment of their family. They stated that "they would have problems in many aspects if they failed the exam".

Forty teacher candidates (49,38%) stated that they stated views related to the financial problems they had in the process of preparing for PPSE. Remarkably, 10 teacher candidates (12,34%) asserted that "they had financial problems in the process of preparing for PPSE". On the other hand, eight participants (9,87%) said "they could do better things with the money they paid to the course", seven participants (8,64%) said "they were uncomfortable because their family both paid for the course fee and gave them pocket money", four participants (4,93%) said "the books that they bought for PPSE challenged them economically", three participants (3,70%) said "preparing for PPSE was difficult for teacher candidates with financial problems", three participants (3,70%) said "they had to work to pay the course fee", two participants (2,46%) said "their life quality decreased because of paying the course fee", two participants (2,46%) said "the money spend for PPSE was meaningless", and one participant said "they could find a source to pay the course fee". When the quotations regarding the code "financial problems" were examined in overall, the teacher candidates were found to have financial problems due to preparing for PPSE (e.g. course fees and buying books). Families supporting teacher candidates financially also caused difficulties for them. Moreover, some teacher candidates had to work to overcome the difficulties stemming from the process of preparing for PPSE. They thought they could spend the money they invested in the process of preparing for PPSE more meaningfully. The teacher candidates and their families experienced serious financial problems due to PPSE in students' final year at university.

RESULTS, DISCUSSION AND SUGGESTIONS

With regard to the process of preparing for PPSE, the teacher candidates referred to situations such as "studying hard, stress due to the process of preparing for the exam, pressure from the family and environment, not being able to allot time for social activities, not being able to spend enough time with friends, and thus the feeling of loneliness, or guilty consciousness when they participate in social activities". The process of preparing for PPSE causing various difficulties and the fear of unemployment worn out the candidate psychologically. According to the results of the study, 51 teacher candidates (64,54%) stated that PPSE negatively affected their communication with their environment, personal development and participation in social activities. Twenty-one teacher candidates (26,58%) asserted that they had a life away from their family and friends because of the heavy study load in the process of preparing for PPSE. Karadeniz and Demir (2010) also revealed similar findings in their study. They reported that teacher candidates preparing for PPSE were born out psychologically because of the exam, and the preparation process negatively affected their participation in social, sports and arts activities. This result is consistent with the study of Sezgin and Duran (2011). They reported that PPSE negatively affected most participants' communication with the environment and social relationships. On the other hand, seven teacher candidates (8,86%) emphasized that due to not having a social life at university, the heavy coursework did not influence their social life. Based on the data, it was found that the heavy work load and the idea of getting a high score and get appointed negatively affected teacher candidates' participation in social activities.

Twenty-five teacher candidates (30,86%) stated that they had various problems related to pressure from their families in the process of preparing for PPSE. The situations that the candidates mostly encountered regarding the pressure from family were families pressuring them to prepare for the exam (n=8, 9,87%) and a psychological process that they would experience when they failed the exam (n=7, 8,64%). The teacher candidates felt themselves bad towards their family and also the environment of their family in the process of preparing for the exam. Failing the exam was a situation for the participants that was highly negative and needed to give an account of. The findings revealed are consisted with previous research. Gündoğdu, Çimen and Turan (2008) aimed to identify teacher candidates' views on PPSE in a study with third and fourth year students from different departments of an education faculty. A questionnaire was used as the data gathering tool, and the teacher candidates were found to be afraid of the pressure from their family and environment when they would not be get appointed as a result of PPSE. Sezgin and Duran (2011) investigated the effects of PPSE on social life in a study with 47 teacher candidates graduated from the social studies and Turkish language teaching departments of an education faculty and took the exam the same year. According to the results of the study based on semi-structured interviews, 35 teacher candidates (74%) stated that their relationships with family and friends weakened in the process of preparing for the exam. Temur, Özkan, Atlı and Zırhlıoğlu (2011) aimed to identify teacher candidates' level of anxiety regarding PPSE in a study with 250 participants of fourth year students from nine different departments of an education faculty. At the end of the study, a significant relationship was revealed between parents' attitudes and teacher candidates' levels of anxiety towards PPSE.

According to the 40 teacher candidates (49,38%) participated in the study, serious financial problems were experienced to pay for the expenses came up in the process of preparing for PPSE. These financial problems affected the candidates as well as their families. The candidates (n=8, 9,87%) thought that they could have a better life with the money they spent to prepare for PPSE. Families paying for their course fee caused the candidates feel bad towards them (n=7, 8,64%). As the teacher candidates had difficulty in paying the course fee, they also found it difficult to pay for book expenses (n=4 4,93%), and some of them had to work (n=3, 3,70%). This situation creates inequality of opportunities in terms of preparing for the exam. Preparing for PPSE brings many financial problems for the teacher candidates. This preparation process that candidates go through in their last year at university and the expenses in this process can be meaningless for them. These expenses could be used for more meaningful activities such as cinema, personal development, music and books. This result support the results of Gündoğdu, Çimen and Turan (2008).In their quantitative study with teacher candidates, the researchers found that the candidates experienced financial problems in the process of preparing for the exam. In a quantitative study with 539 teacher candidates, Karataş and Güleş (2013) found that there was a need for support activities such as courses and seminars while preparing for PPSE. On the other hand, what kind of problems teacher candidates experience in the process of preparing for PPSE seems to be a topic that has not been widely studied in the literature. Of course, teacher candidates experience problems such as anxiety, worry and stress in the preparation process. However, the fact that the reasons behind these problems could be financial deficiencies. Unfortunately, private courses turning the PPSE preparation process to an opportunity and directing teacher candidates to these places to prepare for the exam is a reflection of capitalism on life.

The following suggestions are offered based on the results of the current study: Teacher candidates start studying for PPSE mostly in their fourth year at faculty. Studying hard in the last months is not enough to be successful in the exam. For success, there is a need for preparation in a longer period and in a planned way, and practices should be implemented to overcome test anxiety. Expanding this process throughout the last two years would make

them spend more time for their social lives. In addition, consciousness-raising programs should be organised so that families can support teacher candidates in this process. Families should be informed about the content of PPSE. Psychological Counselling and Guidance departments of universities should support teacher candidates in the preparation process. The financial problems experienced by teacher candidates in the process of preparing for PPSE and their reflections on the candidates should be comprehensively investigated by researchers. Inequality of opportunities due to financial problems should be examined from a scientific perspective by both educators and economy specialists.

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THE KNOWLEDGE AND THOUGHTS OF NINTH GRADE STUDENTS ON THE CONCEPTS RELATED TO THE SUBJECT OF ENERGY[1]

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Abstract: In the research, knowledge and thoughts of the secondary school, ninth grade students about the concepts within the subject of energy, were aimed to be described in details. In this respect, the research was figured as a descriptive case study. As for the participants of the research, they were consisting of 85 students who were students at the ninth grade of three different Anatolian High schools in the city of Ankara. The research data was gathered in the spring semester of 2013-2014, and the data was gathered via the form of determining the thoughts of students about energy, at the beginning of the research process, and at the end of the process via energy concept form. The data gained by the research has been resolved by the descriptive analysis method. Besides, in order to support the statements of the students in the research, semi-structured interviews were carried out with %20 of the students from each class. In the conclusion of the research, it was revealed that the students had deficient and wrong information about nuclear energy among the concept of energy, types of energy, energy conversions and energy sources. It was determined that the students think, in terms of energy, as comprehensive, difficult, related with all the subjects of physics, basis for all the subjects, related to daily life, requiring the ability of interpretation, being difficult also in primary schools, and an abstract issue.
Keywords: Energy, energy protection, energy conversion, energy sources, student thoughts.

INTRODUCTION

The branch of science that is dependent on the universal events and progressive in accordance with the developments in technology is called “Physics” (Karakuyu, 2006). Within the branch of Physics, on the other hand, the subject of energy which has an important place in the universe, is handled (Jones & Dugan, 2003; Serway & Beichner, 2008). That is because apart from the science of physics, many events in the universe can be explained by the concept of energy (Ellse, 1988). Also in our country, energy has had a very important place in our lives in terms of many factors like tendencies to different energy sources, energy conversions, benefiting from renewable energy sources, vehicles, stoves etc. working with solar energy, dams, oil sources and natural gas (Ertaş, Şen & Parmaksızoğlu, 2011). Today, due to limited and daily running out energy sources, it is observed that the existing problems about energy sources are on the rise. For these problems, it is considered that the teaching of the subject of energy, based on the structuralist learning approach, would be affective in educating individuals who are sensitive to environment and interested in renewable energy sources, and that the subject will be more important in time (Koçak, 2008). Besides, with this current appearance of the renewable energy on the agenda, it is observed that there is a rise in the number of studies carried out about energy recently (Bilen, Özel & Sürücü, 2013). When the studies about the energy in the recent years are inspected, it is observed that the students have errors about the concepts in terms of energy (Ellse, 1988; Konuk & Kılıç, 1999; Ogborn, 1990; Solomon, 1982; Stylianidou 1997; Stylianidou, Ormerod & Ogborn, 2002; Trumper, 1998; Çoban, Aktamış & Ergin, 2007; Yürümezoğlu, Ayaz & Çökelez, 2009). In the

[1] This study is based on a chapter of Sevim Bezen’s MA thesis.

researches of Çoban, Aktamış and Ergin (2007), Seçer (2008) and Hırça et al. (2008) which were carried out in order to reveal how the concept of energy was perceived, it was determined that the students structured the concept of energy in their minds with alternative concepts like kinetic energy, the energy present in the living things, that they had difficulties in understanding the concepts, unable to put into practice the theoretical information they had, and had unscientific ideas. In the research, carried out by Küçük, Çepni and Gökdere (2005), Yuenyong and Yuenyong (2007) and Ogborn (1990) while it was determined that the students defined energy as electrical, potential, heat, mechanical energy, it was revealed that they took energy as the same as force and as a type of fuel, and had a conceptual error resulting from relating the concept of energy with force and power, and also it was seen that the reason for this error was the foreknowledge the students had due to the daily language used. Trumper and Gorsky (1993), Watts (1983), Ben Zvi (1999) and Tatar and Oktay (2007) have also determined that the students think that energy is only related with humans, it is consumed and lost, the diminishing of energy is the opposite of energy preservation, and the preservation of energy means the saving of energy. Also in the research, carried out by Kaper and Goedhart (2002a), it was found out that the students related energy with visible events and technological applications before the learning of the subject of energy. As it is seen from the researches carried out so far, the better teaching of the subject of energy, the ability of students to use the information they have learned in various events, and the capability of providing different explanations with combining this information with the daily life is expected (Coştu, Ünal & Ayas, 2007). Thus, students will be able to learn the subject of energy and its concepts. In the teaching of such an abstract concept, in order for the students to learn comprehensively and have enough knowledge on the subject of energy, great burden is on the teachers for they have to teach by relating the daily life events, which affect the students, with the concept of energy (Liarakou, Gavrilakis & Flouri, 2009; Öztürk, 2007). In this respect, it was aimed in this research that the thoughts and information the students had about energy, energy conservation, energy conversion and energy sources be evaluated according to the process. In the research, which was carried out in three different Anatolian High schools, the subject of energy which was being taught in accordance with the new physics teaching program, was considered. As the students in the research varied, comparisons have been made between the students. Moreover, in the areas where the research took place, the teaching program of physics is applied for the first time, and it is believed that the thoughts and information of the students about the energy, energy conservation, energy conversion and energy sources, all in the subject of energy, would be important as they will be evaluated within the scope of qualitative case study.

THE STUDY

In this study, the thoughts and knowledge of the secondary school, ninth class students on the energy, before the study, and on energy, energy conservation, energy conversion and energy sources after study, were aimed to be portrayed via the help of case study pattern. Case study is defined as; a kind of study among the methods of qualitative research, which is a pattern that enables a detailed analysis of an event or a case (Creswell, 2013; Glesne, 2012; Yin, 2009). Besides, existing within the pattern of case study as a type, the total multiple case pattern has also been used in the research. The total multiple case pattern is defined as a type which enables the comparison of multiple cases that are handled in itself as a total like a class (Yıldırım & Şimşek, 2013). With this set out, three different classes, in which the teaching of the subject of energy was carried out in the ninth classes of secondary schools, of three different Anatolian High schools were considered, and comparisons were made between these classes in the research.

Study Group

The study group of the research consists of 85 ninth class students who are studying the subject of energy in three different Anatolian High schools in the city of Ankara. 31 of the 85 students are studying in the first Anatolian High school (BAL), 24 of them are in the second Anatolian High school (İAL) and 30 of them are in the third Anatolian High school (ÜAL). The participants in the study were determined in accordance with the criterion sampling which is one of the methods of purposeful sampling among qualitative research methods (Yıldırım & Şimşek, 2013). The fact that the class level of the students was determined as the ninth class and that their schools were Anatolian High schools as a criterion, enabled obtaining detailed information in the research (Patton, 2002).

Data Collection Tools

In the research, documents which are in parallel with the goal of the research have been used as tools for data collection. With the data collection tools used in the research, the total and detailed description of the data was aimed. Therefore, data was collected via the form of determining the thoughts of students about energy and the form of the energy concept. Prior to the application, with the aim of determining the knowledge and thoughts of students about energy, they were given a form of determining the thoughts of students about energy which consisted of three questions. While literature was used in two of the questions in the form, one of them was developed by the researcher and the form took its final shape after taking the advices of the experts about the questions in the form (Hırça, Çalık & Seven, 2011; Yürümezoğlu, Ayaz & Çökelez, 2009). As for the reason that the questions in literature were used, they were affective in revealing the thoughts of students about energy. Following the application, in order to receive students' thoughts about energy, energy conservation and conversion, energy transfer, energy sources and associating them with the daily life, the concept of energy form, which was prepared by making use of various researches, consisting of 12 questions, were given to the students to fill (Çoban, Aktamış & Ergin, 2007; Kırtak, 2010; Pastırmacı, 2011; Tekbıyık, 2010; Ünal, 2011). While the concept of energy form was being prepared, initially the literature about energy was scanned, and then questions were determined in accordance with the acquisitions stated in the teaching program. The advice of five experts was taken for the content validity of the concept of energy form, which was prepared in accordance with the acquisitions, and the form has been finalized according to these advices. Most of the questions that are prepared by using the literature were directly taken, while some of the questions were altered in accordance with the opinions of the experts. Besides, in order to support the data collected by the forms in the research, semi-structured interviews were done with the students. Most of the question in the semi-structured interview forms were prepared by using literature in accordance with the experts' opinions (Hırça, Çalık & Seven, 2011; Köse, Bağ, Sürücü & Uçak, 2006; Tekbıyık, 2010; Kırtak, 2010; Töman & Çimer, 2012).

Performing the Application

The application Tas performed by giving the students forms in the beginning and at the end of the teaching of the subject of energy in the classes that participated in the research. In the forms, which were prepared for revealing the knowledge and thoughts of students about the concept of energy and the subject of energy, open-ended questions were used. In the form of determining students' thoughts about energy, which was given to the students in the beginning of the research process, the aim was to determine foreknowledge and thoughts of the students about energy, and at the end of the research, adequate data was collected. As a result of the concept of energy form, which was applied when the teaching of the subject of

energy was finished, the thoughts and knowledge of the students, whose learning were finalized with different teaching methods, were revealed. The application of the forms were performed in class hours, a period of 15-20 minutes were spared for each form. Besides, at the end of research, six students from different levels, who were equally chosen from the students with conceptual errors, having right and deficient knowledge, were interviewed once, and with these semi-structured interviews the data which was collected from the concept of energy form and the form of determining the thoughts of students was supported. In order to describe the situation in the classroom, the thoughts of different students were used. The semi-structured interviews that were conducted with the students were done face to face and recorded with a voice recording tool. Apart from these, before starting the application, in order to test the validity of the data collecting tools, a pilot application was carried out in the ninth class of an Anatolian High school, in which 32 students were studying, in the city of Ankara. As a result of the pilot study, it was agreed, with the opinions of the experts, that in revealing the thoughts and knowledge of the students on the energy, before the study, and on energy, energy conservation, energy conversion and energy sources after study, the tools of data collection were sufficient.

Analysis and Evaluation of Data

The data in the research has been resolved with the descriptive analysis method both in the data collection process and at the end of the data collection process. First of all, the data that was collected from the forms and interviews was transferred to electronic environment by the researcher without any change. The data that was transferred to electronic environment was analyzed by the expert and the answers that came within the framework of each question were summarized with themes by the researcher and the expert. Once the themes were made, data entry was made under the themes that were determined by the researcher and the expert, and the data entries were re-analyzed by the experts. The results were interpreted clearly, by interconnecting and giving meaning to the data by the researcher. Besides, in order to reflect the point of views of the students, direct quotations were used frequently.

FINDINGS

In accordance with the data gained from the form through which it was aimed to determine the thoughts of students about energy before the teaching of the subject of energy took place, as the first question in the form; "*What did you think when the teacher told you that the next topic would be energy? What did you think about the difficulty level of the subject for you before the starting of the subject?*" was directed to students who participated in the research. When the teacher told that the next topic will be energy, while 16 of the students (51,16%) from BAL made negative comments by stating that the subject is difficult, long, comprehensive, abstract and requires the ability of interpreting, 14 of them (45,16%) made positive comments, by stating that the subject is nice, interesting, easy, connected with the information in the primary school and entertaining. Besides, one student (3,22%) stated that he has no idea about the subject. Following are quotations taken from the statements in the form (S: Student; #: Student Number):

> ***S24:*** *I remembered potential and kinetic energy which I learned at the 7th class, I think the subject is difficult.*
>
> ***S5:*** *Energy is very difficult and challenging subject. The subject of energy will be difficult as it is quite different from other subjects, related to daily life and requires logic.*

> ***S1:*** *We studied this subject in the previous years too. I quickly checked the things I learned in the past years and I remembered the subject, and I think that it will be enjoyable. It is my favorite subject in physics.*
>
> ***S2:*** *I think energy is quite an interesting and nice subject. Because energy is related to daily life, therefore it is everywhere.*

10 (41,66%) of İAL students have stated that as all subjects of physics are difficult, this subject will also be difficult and they will experience difficulties as they don't like the subject of energy. Besides, one student has made a statement as; "I had it in the primary school, it was easy but as we are in high school now, it will be difficult." Also, another student who remembered the teaching of the subject of energy at the primary school level, has stated that he had difficulties on this subject with the phrase "When I remembered the formulas of work, energy, I thought it would absolutely be difficult", and he thought that this difficulty would continue in high school. While another 10 (41,66%) of the students stated that they think the subject will be easy as they like it, 4 students (16,66%) have stated that they do not have any opinions in the form of determining the thoughts of students about energy.

13 (43,33%) of ÜAL students, on the other hand, stated that they think that the subject of energy would be difficult as they had difficulties with it at primary school, physics issues are difficult in general, and that energy is an abstract concept. It has also been determined that 17 (56,66%) students thought that the subject of energy would be easy due to the introductory picture in the book, also that the subject would be enjoyable, interesting and entertaining because of the previous knowledge on the subject.

In relation with the answers which the students of ÜAL gave, and in order to support the information obtained, the question; *"What crosses your mind about energy at the first glance when you look at the picture below, what does it remind you"* was asked to the students about the introductory picture in the course book in the semi-structured interviews (Figure 1).

Figure 1. The introductory picture about energy in the course book (Bolat, Aydoğdu & Evgi, 2013)

When the students look at the first picture about the subject of energy in their course books, 9 of them (50%) stated that they thought that the content of the subject is about energy sources, 5 of them (27,77%) thought that the content was about the place of energy in daily life, and four of them (22,22%) thought it was about the types of energy. It was determined that, before the teaching of the subject of energy started, students linked the subject mostly with energy sources. Besides, the students stated that when they looked at the picture for the first time the picture motivated them, and they thought that the subject would start with the teaching of energy sources.

As the second question the form; *"Do you think energy can be seen with a powerful microscope? Explain"* was asked to the students. About if energy can be seen with a powerful microscope or not, the students gave answers as can be seen, cannot be seen or have no idea (don't know) (Table 1). While the students in BAL and ÜAL mostly stated that energy cannot

be seen with a powerful microscope, the students in İAL mostly stated that they thought energy can be seen with a powerful microscope.

Table 1.: Student Views about Whether Energy can be Seen with a Powerful Microscope or Not

Anatolian High Schools	*Student Answers*		
	Can be Seen	*Cannot be Seen*	*Don't Know*
BAL	10 (32,25%)	17 (54,83%)	4 (12,90%)
İAL	14 (58,33%)	9 (37,5%)	1(4,16%)
ÜAL	7 (23,33%)	22 (73,33%)	1 (3,33%)
Total	31 (36,47%)	48 (56,47%)	6 (7,05%)

As it is seen in Table 1, 10 of the students in BAL (32,25%), 14 of the students in İAL (58,33%) and seven of the students in ÜAL (23,33%), with their statements like "If we can see atoms, we can see energy too. I think of energy as the energy of movement and electrical energy and energy can be seen as electrical and heat energy. It can be seen as microscopes are used to see particles that cannot be seen with the eye. Energy can be observed as vibration and movement. Protons, neutrons and electrons can be seen, so the energy. Lightning is outlet of energy. If lightning can be seen, energy can also be seen. As energy is calculable, it can be seen." said that energy can be seen, 17 of the students in BAL (54,83%), nine of the students in İAL (37,5%) and 22 of the students in ÜAL (73,33%), with their statements like "As it is not matter, it cannot be seen. Energy cannot be seen, only its impact can be felt. As energy is not a solid being, it cannot be seen. Energy cannot be seen as it moves with the speed of light", revealed that they do not think that energy can be seen. Also at the end of the research, it was determined that some of the students thought that energy can be seen, it is a bigger matter than atom, proton, neutron and electron, and calculable.

As the last question in the form, the students were asked the question; "*How would you picture energy if you were to draw it in any way or present it with a view?"*. The fact that while BAL students mostly presented energy with the sun, running man and car, İAL students presented it with lightning, explosion and strong man, and ÜAL students with the sun and lightning, was determined from the form of determining the thoughts of students about energy (Table 2).

Table 2. Students' Thoughts Regarding the Picture or View of Energy

Student Answers	*Anatolian High Schools*		
	BAL	*İAL*	*ÜAL*
The Sun	10 (32,25%)	5 (20,83%)	6 (20%)
Lightning	1 (3,22%)	8 (33,33%)	10 (33,33%)
Running man	3 (9,67%)	-	2 (6,66%)
Car	6 (19,35%)	-	-
Galaxy	4 (12,90%)	2 (8,33%)	5 (16,66%)
Electron	2 (6,45%)	2 (8,33%)	4 (13,33%)
Lamp	4 (12,90%)	-	2 (6,66%)
Cannot be drawn	2 (6,45%)	1 (4,16%)	-
Windmill	1 (3,22%)	1 (4,16%)	-
Chocolate	3 (9,67%)	-	1 (3,33%)
Dam	1 (3,22%)	-	-
Explosion	1 (3,22%)	3 (12,5%)	1 (3,33%)
Strong man	1 (3,22%)	4 (16,66%)	2 (6,66%)
Eye	-	-	2 (6,66%)
Other	5 (16,12%)	8 (33,33%)	1 (3,33%)

As stated in Table 2, it was determined that students in general present energy mostly with the sun and lightning. Besides, the drawings of the students revealed that energy was pictured with objects which are thought to be energy sources, the forms of energy and those that are believed to have energy by the students. In order to support the result of the research question, when the same question was asked to the students after the learning process, in the semi-structured interviews, the following answers were received from the students:

> ***S14:*** *The word, energy, reminds me light and heat, that's why I can present energy with the sun or lamp.*
>
> ***S22:*** *Following the learning of the subject of energy, as only energy sources crossed my mind, I can picture energy with a dam or a windmill.*
>
> ***S12:*** *The word, energy, always reminds me energetic people. Therefore I can present it with a running man.*
>
> ***S17:*** *Power means energy. So, I think that a powerful man will have energy.*
>
> ***S2:*** *As energy can appear all of a sudden, I pictured it with an explosion.*
>
> ***S5:*** *Energy cannot be seen with naked eyes, so I cannot draw it.*

With the energy concept form that was applied to the students after the teaching of the subject of energy, the question; *"Do everything in nature have energy? Do you think you have energy, and if you have, where is it and how is it supplied?"* was directed to students as the first question. All of the students from BAL and ÜAL stated that everything in nature and themselves have energy. While students from BAL brought up explanations to the claim that everything in nature and themselves have energy with "living things have energy. Every moving thing has energy. The passing of a matter to the fourth dimension when a matter reaches infinite mass or the idea that light is made up of waves and particles as proven by Young experiment, gives clues about this subject. Therefore, every matter has energy", ÜAL students made statements like "Non-living things have potential energy, living things have biological energy. All things, living or non-living have a reaction against gravity, and for that everything must have energy". ÜAL students stated that energy is supplied from foods, ATP and movement. The answers of the BAL students to the question of from where and how they supplied energy are given in the following words:

S17: *Energy is supplied from the energy sources in nature.*

S26: *Energy is supplied from the cells through respiration.*

S22: *Energy is supplied from foods.*

S11: *Nature is provided with energy by using energy while walking, talking and thinking.*

From the views of the students, it was determined that they thought that energy is supplied from the energy sources in nature, oxygen, human activities and food.

While 22 (91,66%) of the İAL students stated that everything in nature and themselves had energy, 2 (8,33%) of them stated that only living things had energy. As for the source of the supply of energy, the students made explanations as; "Humans' energy is supplied with ATP. If force is applied to any place, that object will have energy. Energy is obtained by movement. Living things give energy ton on-living things. Energy is gained from foods and oxygen". Students stated that energy is supplied from living things, body functions, foods, oxygen and force.

In the semi-structured interview above, which was done to support the obtained findings, when the question of *"Apple, yoghurt, ice-cream, water, phosphor, oxygen, carbon dioxide. From which of these we cannot supply energy, why?"* was asked to the students, they stated, with their reasons that from apple, yoghurt and ice-cream, we can supply energy, but from water, phosphor, carbon dioxide and oxygen we cannot (Table 3). It was seen that there was not consistency between the answers the students gave to the questions in the form and the data obtained. That's because, in the form, students stated that energy can be supplied from foods, as well as from oxygen. As a result, it was determined that the students lacked adequate knowledge about whether it is possible to supply energy from oxygen or not. Besides, the fact that students mostly think that energy cannot be supplied from carbon dioxide, is another finding obtained from the results of the research.

Table 3: Students' Views Regarding the Unavailability of Supplying Energy from Water, Phosphor, Carbon dioxide and Oxygen

Student Answers		***Number of Students (%)***
Water	*Regulator*	6 (33,33%)
	Inorganic	3 (1,66%)
	Liquid	2 (11,11%)
Phosphor	*Joins Structure in the Body*	6 (33,33%)
	Mineral	3 (16,66%)
	Organic	1 (5,5%)
Carbon dioxide	*Ejected out*	12 (66,66%)
	Constituent	1 (5,55%)
Oxygen	*Constituent*	8 (44,44%)

It was determined that students stated that carbon dioxide does not supply energy because they thought that it was ejected out and it was a constituent, water a regulator, inorganic and liquid, phosphor as joining the structure in the body, mineral and organic, and oxygen as another constituent. As for the reason that students thought energy can be supplied from apple, yoghurt and ice-cream, as they stated before, it was because they are food.

As the second question; *"Use the word energy in two different sentences, and explain the meaning of sentences"* was asked to the students. When students of BAL was asked to use the word energy in two sentences, it was determined that they used energy mostly as power 27 (87,09%), movement 26 (83,87%), energy conversion 22 (70,96%), kinetic energy 21 (67,74%), potential energy 21 (67, 74%) and renewable energy 19 (61,29%). A few examples from the sentences that the students made are given below:

S15: *Stoves turn electrical energy into heat.*

S6: *This footballer has much energy.*

S1: *I feel myself very energetic today.*

İAL students, on the other hand, used energy as power 22 (91,66%), mechanical power 19 (79,16%), kinetic energy 18 (75%), energy sources (75%), movement 17 (70,83%), matter that generated in nature 15 (62,5%), food 15 (62,5%), biological effect 12 (50%), oxygen 10 (4,16%), energy conservation 10 (4,16%) and life source 10 (4,16%). Some of the sentences that the students stated are given below:

S19: *He is losing his energy day by day.*

S12: *A fast going car has kinetic energy.*

S11: *There are renewable and nonrenewable energy sources in nature.*

S4: *A person's energy is supplied from the oxygen he takes.*

ÜAL students used energy as the sun 25 (83,33%), gravity 20 (83,33%), savings 19 (63,33%), movement 19 (63,33%), undefined 19 (63,33%), energy sources 16 (53,33%), work 15 (50%), potential energy 15 (50%), kinetic energy 14 (46,66%), energy conversion 13 (43,33%), food 10 (33,33%) and power 9 (30%) in their sentences. The sentences the students made are as following:

S25: *Energy can be produced from the sun.*

S21: *There are electrical gravitation forces between molecules.*

S20: *Turn the lights off for energy conservation.*

It is seen that students of BAL, İAL and ÜAL use the word, energy, commonly as force, kinetic energy, energy sources and movement. However, it is determined that the use of the word energy generally differed among the schools and that the students in the schools commonly stated the word energy with the same meaning as "force" and therefore, they have wrong or lacking knowledge about the concept of energy. As for the reason that the students stated different energy statements, it can be said that the teaching has been done with different teaching styles and during teaching, the topics that were focused on were different from each other.

As the third question, *"Are there other concepts which have the same unit with energy? What kind of a relation is there between these concepts?"* was asked to the students. While 47 (55,29%) of the students stated that there are other physical concepts with the same unit of energy, 11 (12,94%) of them stated that there are not. Besides, 27 (31,76%) of the students stated that they have no idea about the subject. The concepts which the students stated that they have the same unit with energy are in Table 4.

Table 4: Student Thoughts Regarding the Physical Concepts Having the Same Unit with Energy

Student answers	***Anatolian High Schools***		
	BAL	***İAL***	***ÜAL***
Work	10 (32,25%)	3 (12,5%)	13 (43,33%)
Heat	5 (16,12%)	5 (20,83%)	4 (13,33%)
Power	3 (9,67%)	-	-
Temperature	-	2 (8,33%)	-
Force	1 (3,22%)	1 (4,16%)	-
Mass	1 (3,22%)	-	-

Among concepts stated in Table 4, it is seen that work is at the top, followed by heat, power, temperature, force and mass in order. As a supportive statement to the answer that BAL students gave to the above question, it was observed that "power" was the statement they made, still it was determined that İAL and ÜAL students did not use the statement, "power" this time. Thus, it was revealed that especially BAL students thought that the concepts of energy and power were identical concepts. Regarding why the students stated these concepts, below is the information they had:

S21: *Energy is the ability to do work. Therefore, both of them have the same unit.*

S5: *As energy can convert into heat, energy and heat have the same units.*

S19: *As strong people have more energy, power and energy have the same unit.*

Based on these statements of the students, it is thought that the students have lacking or wrong information about the concept of energy.

The fourth question that was directed to the students was; *"Can the energies of coal and apple with the same mass be the same? If yes, on what conditions?"* While 47 (55,29%) of the students stated that the energies of coal and apple with the same mass will be the same, 28 (32,94%) of them stated that they won't be the same, and 10 (11,76%) of them stated that they do not have any idea on this subject. The statements of the students regarding on what conditions the energies of coal and apple will be the same and why they won't be the same are given below (Table 5).

Table 5: Student Views about the Energies of Coal and Apple with the Same Mass

Student Answers		***Anatolian High Schools***		
		BAL	***İAL***	***ÜAL***
Energies are Equal	***Equal Height***	7 (22,58%)	8 (33,33%)	6 (20%)
	Equal Density	1 (3,22%)	-	-
	Same Environment	2 (6,45%)	-	1 (3,33%)
	Equal Volume	1 (3,22%)	-	-
	Same Location	1 (3,22%)	-	-
	Equal Speed	2 (6,45%)	-	1 (3,33%)
	Equal Pressure	1 (3,22%)	-	1 (3,33%)
	Same Chemical and Physical Property	6 (19,35%)	2 (8,33%)	3 (10%)
	Environment without Gravity and Pressure	-	1 (4,16%)	-
	Same Shape	-	1 (4,16%)	-
	Equal Weight	-	1 (4,16%)	-
	Same Temperature	-	1 (4,16%)	2 (6,66%)
	Equal Force	-	1 (4,16%)	-
	Same Heat	-	-	3 (10%)
Energies are not Equal	***Different Matter***	3 (9,67%)	3 (12,5%)	12 (40%)
	Coal's Energy is Higher Because of Heat	2 (6,45%)	1 (4,16%)	-
	Different Chemical Properties	-	1 (4,16%)	-

Student views supporting the data in Table 5 are given below:

> ***S24:*** *Their energies are the same if they have the same speed and height.*
>
> ***S22:*** *If the energies of coal and apple with equal masses were equal, then apple would be used for heating instead of coal.*
>
> ***S14:*** *Their energies cannot be equal as each matter has different energy.*

In accordance with the students' views, while it was mostly stated that the energies of coal and apple with equal mass could be equal when they have the same height and the same chemical and physical properties, it was also stated that their energies would not be equal mostly because they are different matters. Besides, it was

determined that students were unable to relate coal and apple with each other and thought that due to thermal energy coal had, coal would have more energy.

The question; *"Rub your hands with each other in a quick way. Stop, after a while. What would you feel in your hands meanwhile and what would be the reason?"* was directed to the students as the fifth question in the research. 29 (93,54%) of the students of BAL, 21 (87,5%) of the students of İAL and all of the students of ÜAL stated that when they rubbed their hands with each other in a quick way, they felt heating. It is also seen that the energy conversions here were stated differently from each other by the students. Besides, two (6,45%) students from BAL and three (12,5%) students from ÜAL stated that they no information regarding the question. The answers that the students of BAL, İAL and ÜAL gave to the question are given in Table 6.

Table 6: Student Views Regarding the Energy Conversions that Took Place during the Rubbing of the Hands

Student Answers	***Anatolian High Schools***		
	BAL	***İAL***	***ÜAL***
Friction Force Has Converted into Thermal Energy	12 (38,70%)	17 (70,83%)	21 (70%)
Motional Energy Has Converted into Thermal Energy	12 (38,70%)	3 (12,5%)	7 (23,33%)
Mechanical Energy Has Converted into Thermal Energy	2 (6,45%)	-	-
Potential Energy Has Converted into Kinetic Energy, and Kinetic Energy Then Has Converted into Thermal Energy	1 (3,22%)	-	-
Potential Energy Has Converted into Thermal Energy	-	1 (4,16%)	-
Friction Force Has Converted into Thermal and Sound Energy	-	-	1 (3,33%)
Friction Force Has Converted into Magnetic Energy and Then Has Converted into Thermal Energy	-	-	1 (3,33%)

Even though most of the students stated that due to friction force's converting into thermal force, their hands were heated when rubbed together, there are data in the research which showed that there were also students who thought that their hands were heated because of the motional energy's, mechanical energy's and potential energy's converting into thermal energy.

In the interviews with the students which were carried out in order to support the data of the research, "*How do you explain the fact that the dynamo that rubs the wheel and the lighting up of the bulb that is connected to the dynamo while a bicycle is moving?*" was the question that was asked to the students. While 12 (66,66%) of the students explained that the dynamo that rubs the wheel and the lighting up of the bulb that is connected to the dynamo while a bicycle is moving, by the conversion of motional energy into frictional, thermal and electrical energy, five of

them (27,77%) explained it by the conversion of frictional force into thermal energy, thermal energy into motional energy, and then motional energy into electrical energy, and one (5,55%) by conversion of frictional force into electrical energy. It was determined that regarding the conversions of energy, the students gave different answers and some of them gave deficient and wrong answers. As another question, when the students were asked; "*Is the total energy, obtained from fuel in cars running with gas or diesel, used to move the car? Explain.*", three of the students (16,66%) stated that the total energy, obtained from fuel in cars running with gas or diesel, is used to move the car, and 15 (83,33%) of them said it is not. The views of the students who stated that the total energy was not used to move the car are as follows:

S4: *Chemical energy converts into heat, light, motion and electricity. ,*

S5: *Energy is used for wheels, dynamo, battery, air-conditioner and the engine.*

S13: *There are lots of mechanisms in the car. Even the windshield wiper Works with that energy.*

With the views of the students, it can be said that most of the students are not able to state into what kind of energies does the energy obtained from fuel in cars converts, and that those students who stated that the total energy obtained from fuel is used to move the car has lacking or wrong information. In general, about the energy conversions, based on the questions asked to the students both in the form and in the interviews, it was determined that after the completion of the teaching process of the subject of energy, the students had deficient or wrong information about energy conversions.

As the sixth question for the students who participated in the research; "*How does the energy change when a moving car stops by using the breaks*?" was asked. BAL, İAL and ÜAL students stated that according to them, when a moving car stops by using the breaks, its kinetic energy will decrease the most, and its motional energy will convert into thermal energy (Table 7).

Table 7: Student Views about How Energy Changes When a Moving Car Stops by Using the Breaks

Student Answers	***Anatolian High Schools***		
	BAL	***İAL***	***ÜAL***
Kinetic Energy Decreases.	13 (41,93%)	12 (50%)	12 (40%)
Motional Energy Has Converted into Thermal Energy.	8 (25,80%)	6 (25%)	9 (30%)
Does not Change.	5 (16,12%)	2 (8,33%)	2 (6,66%)
Kinetic Energy Has Converted into Potential Energy.	3 (9,67%)	-	3 (10%)
Mechanical and Kinetic Energy Decreases and Then Energy is Set to Zero.	2 (6,45%)	-	-

As Friction Force Increases When It Stops, Its Energy Increases.	-	2 (8,33%)	1 (3,33%)
The Energy of the Car Finishes When It Stops.	-	2 (8,33%)	-
Kinetic Energy Decreases, Car Stops and Energy is Set to Zero.	-	-	3 (10%)

When Table 7 was examined, it was revealed that the students gave different answers from each other. Also, from the student answers in Table 7, regarding the finishing or diminishing of energy, it can be derived that the students have wrong or deficient information.

The seventh question that was asked to the students was; "*What do you think is the reason that those vehicles which are required to go fast has sharp front parts*?" While all of the BAL and İAL students and 23 (95,83%) of the ÜAL students that participated in the research stated that the reason that those vehicles which are required to go fast has sharp front parts was to minimize the friction force, one (3,33%) of ÜAL students stated that he has no idea about this subject. From the views of the students, it was derived that the students thought that the front parts of the vehicles were sharp so to minimize the friction force, and thus the vehicles went faster.

The eight question that was asked to the students was; *"A man who is chilled with cold sits in front of an electrical stove. After a while the man gets hot and takes off his cardigan. Based on this information, explain how the man got warmed."* While 15 (48,38%) of BAL students who participated in the research, six (25%) of İAL students and 24 (80%) of ÜAL students stated that if a man, chilled with cold, sitting in front of an electrical stove, gets warm and takes off his cardigan, that's because the air which got warmer contacted him and there was an exchange of heat between the environment and his body, 15 (48,38%) of BAL students, 17 (70,83%) of İAL students and six (20%) of ÜAL students stated that the warming of the man was due to the conversion of the electrical energy which the stove had, into thermal energy. Besides, one (3,22%) of BAL and one (4,16%) of İAL students stated that they don't have any opinion about the subject. Students' views are given below:

> ***S2:*** *The air which was heated because of the electrical stove contacted the man's body. As a result of heat transfer, the man warmed up and took his cardigan off.*
>
> ***S21:*** *The energy that gets out from the electrical stove converts into thermal energy. As the man is in the same environment where the energy conversion takes place, he warms up quickly and takes his cardigan off.*

Based on the students' answers, it can be said that some of the students think that energy cannot be transferred without conversion and they cannot certainly distinguish the difference between energy conversion and energy transfer.

As the ninth question; "*Why do our mothers use oven gloves for holding hot wares in the kitchen? Is it important whether the oven gloves are wet or dry*?" was asked to the students. It was determined that all of the students participated in the research thought that their mothers wore oven gloves in the kitchen for holding hot wares in

order not to burn their hands and harm their skin. Also, when the students were asked whether it was important that the gloves were wet or dry, 43 (50,58%) of them said it was not important whether the gloves were wet or dry. Apart from this, while 10 (32,25%) of BAL students, six (25%) of İAL students, and two (6,6%) of ÜAL students were claiming that the gloves should be dry and defending their argument by stating that "liquid molecules conduct heat faster, so when the gloves are wet the heat will be conducted faster", those of the students who claimed that the gloves should be wet, 8 (25,80%) of the BAL students, six (25%) of the İAL students and 10 (33,33%) of the ÜAL students defended their argument by stating that "As the gloves will warm slowly when wet, our hands won't burn. When they are wet heat will be conducted slowly because thermal energy will first evaporate water and then heat the gloves". Based on the student statements, it was determined that they thought as the liquid molecules conduct heat faster the gloves should be dry and as wet gloves will dry slower, and as thermal energy will first evaporate water and then heat the gloves, the gloves should be wet. Even though the students gave similar answers regarding the reason for using oven gloves for holding hot wares, there were different views about whether it is important that the gloves be wet or dry. However, by the general consent of the students, it was determined that whether the gloves were wet or dry was not important as the gloves would not conduct heat.

As the 10th question, the students were asked; "*Explaining renewable and nonrenewable energy sources, tell us which energy sources should be chosen and why*?" All of the students stated that renewable energy sources should be chosen. Besides, Table 8 displays students' explanations about renewable and nonrenewable energy sources.

Table 8: Students' Views about Energy Sources

Student Answers		***Anatolian High Schools***		
		BAL	***İAL***	***ÜAL***
Renewable Energy	*Never Ending Energy*	19 (61,29%)	4 (16,66%)	19 (63,33%)
	Environment Friendly	21 (67,74%)	24 (100%)	21 (70%)
	Inexpensive Energy	10 (32,25%)	5 (20,83%)	1 (3,33%)
Nonrenewable Energy	*Dying Energy*	20 (64,51%)	24 (100%)	19 (63,33%)
	Harmful to Environment	25 (80,64%)	5 (20,83%)	18 (60%)

As seen in Table 8, it was revealed that the students stated that renewable energy sources should be chosen mostly because they are environment friendly and never ending. As for the nonrenewable energy sources, it was determined that these sources were found dying and harmful for environment. Besides, two (6,66%) of the students of ÜAL, though they stated that renewable energy should be chosen, stated that they think nuclear energy should also be used as it provides so much energy and is durable although it is not a renewable energy.

Later, the question; "*What kind of conditions, does Turkey's location have in terms of renewable energy sources*?" was asked to the students in the semi-structured interviews. While 16 (88,88%) of the students stated that Turkey's location is very convenient in terms of wind energy, for 15 (83,33%) of them it was solar energy, for another 15 (83,33%) of them geothermal energy, for 12 (66,66%) of them hydroelectric energy, and for five (27,77%) of them it was biomass energy that was convenient in terms of the conditions of Turkey's location. It was determined that the students stated these types of energies as they thought that these were very convenient for Turkey's location. One (5,55%) of the students, on the other hand, thought that, due to financial inadequacy of the country, Turkey cannot make use of its renewable energy sources even though its location is convenient. When the answer to the question; "*What type of energies do you think will be available for use in the future? Why*?" was sought, based on the answers from the students, it was determined that 13 (72,22%) of them thought nuclear energy, six (33,33%) of them thought solar energy, two (11,11%) of them thought hydrogen energy, one (5,55%) of them thought wind energy and one (5,55%) of them thought that hydroelectric energy will be used. Students' views are given below.

> ***S14:*** *The cost of nuclear power plants that are built for obtaining nuclear energy is too much but in the long term they will be very useful. The renewed technology, also, supports nuclear power plants. When petroleum, which is among the nonrenewable energy sources, nuclear energy will be chosen as it gives more energy compared to renewable energy sources.*
>
> ***S4:*** *Thermal energy can be obtained from solar energy in wider areas.*
>
> ***S22:*** *Hydrogen energy, which is obtained by using various gases, can be widely used in cars in the future.*

Based on the answers of the students, it was determined that nuclear energy sources were thought to be the most used energy source in the future. Besides, although nuclear energy source is a nonrenewable energy source, it was revealed that it was seen as an alternative to petroleum by the students.

As the 11th question, the students were asked; "*What kind of a relationship is there between global warming and energy*?" All of the BAL students, 23 (95,83%) of İAL students, and 26 (86,66%) of ÜAL students stated that there is a relationship between global warming and energy, and that global warming was caused by sun rays, nonrenewable energy sources, and unstable and insensible use of energy sources. While one (4,16%) of the students of İAL stated that there is no relationship, seven (22,58%) students of BAL, seven (29,16%) students of İAL and four (13,33%) students of ÜAL stated that they don't have any idea about this subject. Some of the answers of the students to the question are given below:

> ***S1:*** *As the sun rays reach directly to Earth via the pierced ozone layer of the World, excessive energy accumulates on the Earth's crust and global warming occurs.*
>
> ***S9:*** *Rays coming from the Sun warms the Earth and reflect from the Earth to space. On the other hand, the gases getting out of fossil fuels block this reflection and our world warms excessively. Then the*

increased thermal energy melts the glaciers. Fossil fuels, which cause greenhouse effect, also cause global warming.

S30: *Unstable and insensible use of energy cause global warming.*

S1: *There is no relationship between global warming and energy.*

It was revealed that those students, who argued that there is no relationship between global warming and energy, have deficient knowledge, especially on the sources of energy.

As the last question, the students were asked; "*According to you, what can be done about energy saving*?" Regarding energy saving, it was determined that students mostly proposed the use of renewable energy sources, turning off the unnecessary lights, unplugging the electrical house wares when not in use and not leaving the taps open (Table 9).

Table 9: Student Views Regarding Energy Saving

Student Answers	***Anatolian High Schools***		
	BAL	***İAL***	***ÜAL***
Renewable Energy Sources Should be Used	28 (90,32%)	8 (33,33%)	17 (56,66%)
Unnecessary Lights Should be Turned Off	10 (32,25%)	8 (33,33%)	17 (56,66%)
The Taps Shouldn't be Left Open	10 (32,25%)	4 (16,66%)	9 (30%)
Electrical House Wares Should be Unplugged	10 (32,25%)	6 (25%)	13 (43,33%)
A Class Products Should be Used for Energy Saving	3 (9,67%)	6 (25%)	5 (16,66%)
Essays Should be Read About Energy Saving	1 (3,22%)	-	-
Public Transport Must be Used	1 (3,22%)	-	2 (6,66%)
Heat Insulation Must be Made	-	2 (8,33%)	6 (20%)
Biogas Should be Produced from Waste Oils	-	-	3 (10%)
Dead Batteries Should be Collected in Special Trashes	-	-	1 (3,33%)
Number of Theme Parks and Shopping Malls Should be Lowered	-	-	1 (3,33%)

Based on student answers, it can be said that the students have knowledge about the subject of energy saving.

The Result, Discussion and Suggestions

In this research, with obtaining the thoughts and knowledge of the students on the energy, before the study, and on energy, energy conservation, energy conversion and energy sources after study, it was determined that, first of all, regarding energy, most of the students in two schools, before the study, thought that energy cannot be seen with a powerful microscope, and students in one school thought it can be done. The conceptual error regarding the visibility of energy is often seen in literature (Hırça et.al., 2008; Küçük et.al, 2005; Solomon, 1982; Trumper, 1998). Apart from

students' thoughts that energy can be seen because it is similar to atom, electron, proton, neutron and lightning, it was also revealed that they thought electrical, thermal, motional energy can be seen, calculated, and as microscope is used to see the particles that cannot be seen by naked eye, it can also be used to see energy. Besides, it was also determined that some of the students thought energy cannot be seen as it is not a matter, not solid, because it travels with the speed of light, and only its effect can be felt. Based on these results, it is believed that the teaching with experiments, videos, games and animations about the concept of energy will be effective in reaching the correct information for the students (Hırça, Çalık & Seven, 2011). When the students were asked to picture energy, it was seen that they most of them pictured it with the sun, running man, car, lightning, explosion and strong man respectively. As different from the research result, in literature, it was determined that students picture energy as house, cloud, light, electrical circuit, fan and computer (Pastırmacı, 2011; Yürümezoğlu, Ayaz & Çökelez, 2009). Based on the students' pictures, it was revealed that energy was pictured as energy sources and the form of energy. When the drawings of the students were examined, it was seen that students thought that energy can be in still living things, it is visible, a kind of power, able to appear all of a sudden or during motion, obtained from foods, and that they can state it via energy sources, and picture it with its perceivable effects as they do not think it is visible. Besides, it was revealed that, the students who stated that everything in nature and themselves have energy, thought that energy is in living things, it can only be explained by kinetic and potential energy, and it is obtained from living things, energy sources in nature, human activities, body functions, oxygen, applied force and foods. Similar data can be found in the research of Çoban, Aktamış and Ergin (2007) and Gilbert and Pope (1986). It is observed that, when the students are asked to use the word energy in a sentence, they commonly use it with the same meaning as power, kinetic energy, energy sources and motion. Also in the researches so far, it is seen that energy is thought of as a kind of power, motion is needed for energy (Gilbert & Pope, 1986; Kesidou & Duit, 1993; Kruger, 1990; Küçük et.al., 2005; Özcan, 2006; Seçer, 2008; Solomon, 1982; Trumper, 1990; Trumper & Gorsky, 1993; Watts, 1983). As different from the literature, when the students looked for the first time at the entry picture about the subject of energy in their course books, it was determined that they thought that the content of the subject will be mostly about energy sources, place of energy in daily life and types of energy, and that the picture motivated them and the subject would start with the teaching of energy sources. Besides, it was determined that the students mostly related the subject of energy with energy sources before the teaching of the subject of energy started. When the students were asked about the physical concepts having the same unit as energy, it was determined that together with the fact that the students stated that the concept of energy and the concept of work had the same unit, they stated the concepts of heat, power, temperature, force and mass. On the basis of the obtained results, it can be said that the students have deficient or wrong information. The statements of the students are present in the studies in literature as conceptual errors (Aydoğmuş, 2008; Kesidou & Duit, 1993; Küçük et.al., 2005; Seçer, 2008; Shymansky, 1997; Trumper, 1990). At the same time, when the students were asked if apple and coal, with equal mass, would have equal energy or not, it was determined that most of the students of one school thought that apple and coal, with equal mass, would have equal energy, and

students of two other schools thought that they would not be equal. Based on the views of the students, it was seen that the students thought the energies of coal and apple with the same mass can be equal mostly when they have the same height and the same chemical and physical properties, and also as they are different matters they cannot have equal energies. Besides, it was determined that the students could not relate coal and apple, and thought that coal has more energy because it has thermal energy. Similar conceptual errors of students were determined in the research carried out by Çoban, Aktamış and Ergin (2007). When it is kept in mind that the students who thought that energy is only in living things also stated that coal and apple have energies, it can be recommended that the teaching of the subject of energy must be valued and deficient information must be eliminated. Moreover, the research revealed that the students thought that energy can be obtained from foods like apple, yoghurt and ice-cream, but cannot be obtained from water, phosphor, carbon dioxide and oxygen. It was determined that the reason why the students mostly thought that energy cannot be obtained from carbon dioxide, water, oxygen and phosphor was that they thought carbon dioxide was exhausted and it was a constituent, water as a regulator, inorganic and liquid, phosphor as joining the constitution in body, a mineral and organic, and oxygen as again a constituent. It was revealed that the students were correct about their thoughts which claimed that energy cannot be obtained from water, carbon dioxide, phosphor and oxygen, however, in their explanations, some of them showed that they cannot distinguish between organic and inorganic matters and had no knowledge about the inability of inorganic matters in providing energy. The findings in the research carried out by Köse, Bağ, Sürücü and Uçak (2006), are supporting the result of this research. When the views of students about energy conversion are examined, it was determined that the students said that when they rubbed their hands with each other quickly, they felt warming. It was also determined that they explained this warming by the conversion of frictional force into thermal energy, and conversion of motional energy, mechanical energy and potential energy into thermal energy. It can be said that as the students needed information about the concepts of force and work, the students who could not properly explain the energy conversion had deficient or wrong information (Çoban, Aktamış & Ergin, 2007). It was determined that they thought that when a moving car stopped by using the breaks, kinetic energy would be the most decreased energy of the car and that its motional energy would convert into thermal energy or that there would be no changes in the car. As it was determined that there were students who stated that there would be no change in the car and, besides, energy would be set to zero and died, it was revealed that the students had conceptual errors. (Driver & Warrington, 1985; Gilbert & Pope, 1986; Kesidou & Duit, 1993; Küçük, Çepni & Gökdere, 2005; Solomon, 1982; Watts, 1983; Tatar & Oktay, 2007; Trumper & Gorsky, 1993). As for the lighting up of the bulb that is connected to dynamo which rubs the wheel while the bicycle is moving, it was determined that the students explained it by the conversion of motional energy into frictional, thermal and electrical energy, frictional force into electrical energy, frictional force into thermal energy, thermal energy into motional energy and motional energy into electrical energy. It can be said that, based on the answers of the students, they, again, have deficient or wrong information (Töman & Çimer, 2012; Yürümezoğlu et.al. 2009). Besides, it was determined that the students were unable to use their theoretical knowledge about energy conversions when

commenting on a case. In the research, carried out by Tekbıyık (2010), it was determined that the students were unable to state properly into what energies does the energy obtained from fuel, in cars converts, and also that students who stated that the total energy obtained from fuel in cars was used to move the car had deficient or wrong information, and also these obtained results were seen in the research. As supporting the results, it was revealed that the majority of the students thought that the total energy obtained from fuel in cars running with gas or diesel, is not used to move the car and the chemical energy obtained was converted into thermal, light, motional and electrical energy, energy was used for the wheels, dynamo, battery, air-conditioner and engine, and a part of the energy was used for friction, producing thermal energy. When the students were asked why the vehicles which are required to go fast has sharp front parts, it was determined that the majority of the students stated that it was for minimizing the frictional force. Thus, it was determined properly, with the views of students, that in order to minimize air friction and the energy used because of the friction, the vehicles which are required to go fast has sharp front parts. When the views of the students who participated in the research, about energy transfer were examined, it was determined that most of the students of two schools stated that a man, chilled with cold, sitting in front of an electrical stove, gets warm and takes off his cardigan, that's because the air which got warmer contacted him and there was an exchange of heat between the environment and his body, students of one school stated that stated that the warming of the man was due to the conversion of the electrical energy which the stove had, into thermal energy. It can be said that the students think that energy cannot be transferred without any conversion. In this respect, it was determined that the students were not able to properly state the difference between energy conversion and energy transfer, or they did not have any information (Tekbıyık, 2010). It is thought that it is necessary to carry out a detailed teaching of the concepts of energy conversion and transference by relating them to daily life (Çoban, Aktamış & Ergin, 2007). Besides, it was determined that the students thought that the reason their mothers wore oven gloves for holding hot kitchen wares was to avoid burning their hands and prevent any harm to their skins. It is known that oven gloves block the heat transfer between our hands and hot materials, and therefore there is no transfer of energy due to this insulated system. When the students were asked if it was important whether the gloves were wet or dry, thinking that in both cases the gloves would not transfer heat, it was seen that they stated that it was not important for the gloves to be wet or dry. Moreover, it was determined that the reason that the students thought the gloves should be dry was that liquid molecules conducted heat faster, and the reason for those who stated that the gloves should be wet, was that it would take time for the gloves to dry, thermal energy would evaporate the water first and then warm the gloves, thus the gloves would warm in a longer period. When it is thought that liquid molecules conduct heat faster, it can be said that, based on the student answers saying that the gloves should be wet, they have wrong or deficient information. When the students were asked a question about the global warming related with energy, it was determined that the students thought that global warming and energy were related and global warming was caused by sun rays, nonrenewable energy sources, and unstable and insensible use of energy. It was revealed that those students who said that there is no relation between global warming and energy, or who did not answer the question after the teaching of the

subject, had deficient information especially on the energy sources. Supporting the results of the research, in literature, there is information about students who think that when the sun rays do not reflect back from the crust of the Earth, and with the piercing of the atmosphere layers, harmful sun rays reach the Earth and because of the greenhouse effect, global warming occurs, and as a result the temperature of the Earth rises, glaciers melt and animal and plant species extinguish one by one (Kırtak, 2010; Ünal, 2011). Also, in the research, it was determined that the students thought that the renewable energy sources should be chosen against the nonrenewable energy sources which are believed to cause global warming, as they are environment friendly and never ending. Besides, although some of the students stated that renewable energy sources should be chosen, it was determined that they also thought that nuclear energy which is a nonrenewable energy source should be used as it provides much energy and durable. Together with the detection in the studies so far that students showed a positive attitude towards renewable energy, it was also observed that they had deficient information about renewable energy (Çelikler & Kara, 2011; Çolak et. al, 2012; Kaldellis, Kapsali & Katsanou, 2012). Finally, in the research, it was determined that most of the students stated that Turkey's location had suitable conditions in terms of wind energy, solar energy, geothermal energy, hydro electrical energy and biomass energy. In Tekbıyık (2010)'s study, it was determined that the students mentioned solar, nuclear, wind and geothermal energy. It was revealed that some of the students thought that although Turkey's location was suitable, due to inefficient financial situations, there is not enough usage of renewable energy sources in our country. Besides, it was determined that the students thought that nuclear energy, solar energy, hydrogen energy, wind energy and hydro electrical energy would be used in the future. It can be said that the reason that the students thought that nuclear energy would be the mostly used energy in the future, is that is seen as an alternative to petroleum. Today, greater importance is given to the teaching of nuclear energy in developed and developing countries each day. In this sense, it is thought that the teaching should be done via theoretical and practical way, firstly by increasing the knowledge level of the teachers, and then by increasing the educational attainment towards the teaching of nuclear energy in teaching programs (Benzer, Bayrak, Eren & Gürdal, 2014).

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THE TEACHER OF SLOVAK LANGUAGE AND LITERATURE IN THE CONDITIONS OF SLOVAK PRE-GRADUAL PREPARATION

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Abstract: The new contexts of education for the future implicitly include new requirements for teachers. If we expect teachers to properly handle their demanding job, its problems and constantly changing rules and conditions of its realization, they must be well prepared. Compared with the past when a teacher in Slovakia used to be perceived only as a source of information for pupils, today a teacher is required to teach students how to find information, how to process it and utilize it in favour of his/her personal development, to develop pupils´ competencies crucial for their future personal as well as professional life and to positively influence behaviour and students´ conduct in society. The article deals with the issues of pre-gradual preparation of teachers in Slovakia. It introduces the models of pre-gradual preparation while specifically focusing on the teachers of Slovak language and literature.

PRE-GRADUAL EDUCATION OF TEACHERS

In legal documents of Slovak Republic a teacher is characterized in the Act No. 317/2009 on pedagogical and professional staff. Paragraph 13 of the Act states that "a teacher performs pedagogical activity with an aim to carry out the school educational program or provide continual education". Pedagogical activity is defined in paragraph 3 which states that "pedagogical activity is a set of actions performed by direct educational work as well as other closely related activities which are instituted by an employer in his operating procedures. Direct educational activity is characterized as a direct teaching that fulfills the school educational program or the program of continual education and as a direct nurturing that fulfills the nurturing program". Paragraph 6 introduces and in further paragraphs elaborates on the preconditions for performing an educational and professional activity which are qualification, integrity, health and the knowledge of the state language. A teacher is thus an erudite professional with an appropriate university degree and a moral profile, is a mature personality that through educational process influences the overall direction of the whole society. The progress of a society depends on the education and upbringing of its members.

A similar definition of a teacher can be found in the Dictionary of Pedagogy (Kolář and co., 2012, p.156) which describes teacher as a qualified pedagogical worker with a special qualification for educational work with children and the youth in the framework of a school (of any type or level). He/she directs the school activity of pupils and utilizes his/her own strategies of teaching in line with the targets of the educational process and his/her own understanding of the process. The definition, however, also stresses out that a teacher "hands down the culture of the humankind, traditions, values and socio-cultural environment to younger generations". In this definition we can already see a new understanding of a teacher´s status and role today – a teacher is not only an educator, but also a guide on the path of forming the personalities of children and young people. Z. Pinc (In. Gáliková - Tolnaiová, 2007, p. 199) states that "the institute of a teacher is historically established on the instrumental basis – a teacher as an extended and enlivened index finger of the desirable direction. Rather than a teacher like this I think of a scholar, one that is capable of learning: to be taught and to teach". The world pedagogy also diverges from perceiving teaching as a technological process, but instead considers it a complex, variable and creative process of personal encounter of a teacher and a pupil through the content of education (Kosová and co.,

2012). It implies that a teacher´s expert knowledge is not the knowledge of sciences, art, sport, technology etc. A teacher must be equipped for the diagnosis and the development of inner qualities of another being as well as his own, should be most of all an expert in making it easier for others to learn and in solving any educational situation. Based on the above it is thus necessary to continually improve pre-gradual preparation of teachers.

Pre-gradual education in Slovakia consists of pedagogical-psychological preparation and the study of a particular specialization of choice. The pedagogical-psychological preparation is an inseparable and important part of the study because it creates a theoretical as well as practical base of a teacher´s occupation. T. Šeben Zaťková (2014) confirms this view and states that the quality of education is influenced by a teacher´s work, it primarily depends on his/her pedagogical activity and methodological approach of the educational process. "In most schools specialized in preparing future teachers the pedagogical-psychological preparation consists of teaching pedagogy, psychology, professional didactics and practical pedagogical training," says O. Šimončík (2005, p. 23) while adding that current study programs do not allocate enough time to pedagogy, psychology, professional didactics and practical pedagogical training.

Pre-gradual preparation of teachers has a long history in Slovakia and in the course of this history the teachers´ education has been influenced by changing socio-economic formations. Also today it is being greatly influenced by social and political requirements. The society continually develops and the perception as well as the position of a human existence, work, family´s life is changing with it. Technological advancements yield not only positive developments, but often result in growing socio-pathological behavior of children and young people. The crisis in family, negative influence of media and social networks, absence of positive role models either in family or in a wider social environment force us to think about the teachers´ influence on their students´ behavior. To be able to educate today´s children a teacher must become a positive role model of their behavior, must understand their needs and help complexly develop their personalities. It is important to prepare a future teacher for the new tasks and methods. Pre-gradual preparation at a university must, therefore, fulfill two basic requirements – to provide a good theoretical and at the same time a good professional preparation. The theoretical part consists of the basics of scientific disciplines that the teacher draws from during his/her work, scientific basics of chosen specialization, pedagogy, psychology or other relevant subjects, particularly the theory of teaching in general, meaning general didactics. General didactics is the bridge between the theoretical and professional parts of the preparation. The professional part of the preparation consists of those elements that lead to the acquirement of competencies necessary for a high standard of job performance, mainly expert didactics, didactically and reflexively oriented subjects, various practical trainings (communication, psychosocial etc.), projects oriented toward school and teaching and mainly practical teaching. As stated above this part of the preparation is influenced by the requirements of the state, which are:
- competencies framed by the conceptual requirements of the school system development on both the state as well as the international levels. One of these requirements (besides those mentioned above) is according to school system reform the requirement to teach students to learn all through their lives. This is not only the result of the school reform, but also follows the development of the educational science.
- competencies securing the teachers´ professionalism, expert performance of professional activities in accordance with the theory of teaching profession (Kosová and co., 2012).

In Slovakia, similarly to other European Union countries, the pre-gradual education of

teachers is performed via a parallel model, often labeled as the integrated model. The essence of this model is the fusion of more types of future teachers´ preparations. The student – future teacher during his study encounters subjects with common (general) base, subjects oriented to his/her individual specialization and subjects representing the pedagogical-psychological preparation for a teacher´s profession. E. Lukáč (in Černotová and co., 2006, p. 114) states that "a student in this model is forced to fulfill several obligations from various fields at once, few hours are allocated to the pedagogical-psychological preparation, the number of hours dedicated to real practical training is gradually decreasing". In practical pre-gradual preparation the above stated drawbacks can be, however, eliminated by the use of the parallel model and the positives of this model can be found mainly in the integration of knowledge of pedagogical and psychological disciplines and the knowledge of the specialization subjects. The second model used in pre-gradual preparation of teachers is the follow-up model, also labeled as the consecutive model. A student first finishes the study of his/her specialization which is then followed by the pedagogical-psychological preparation including practical training. The consecutive model allows for a more intense work with the students interested in acquiring teaching competence, their study is not divided into pedagogical-psychological and specialization education. The consecutive model can be divided into two basic subgroups. The first one is the single phase consecutive model that enables the student (after finishing the specialization study) to acquire the pedagogical qualification and immediately get a job as a teacher. This single phase consecutive model is used in Slovakia in the process of additional pedagogical education through which students of non-pedagogical subjects can acquire pedagogical competence. This study is legislatively defined by the Decree of the Ministry of Education and unlike the university pre-gradual education it has a precisely defined content as well as the extent. Although the study programs at teaching faculties have a similar configuration of disciplines, they differ mainly in hourly allocations of individual subjects and practical pedagogical training. The second subgroup is the two phase consecutive model which includes first the theoretical preparation that usually ends with a test and then is followed by the practical part of the preparation. The practical part is conducted directly at a school where students can improve their skills in the area of the didactics of their chosen specialization and develop the necessary competencies of their future job. To determine which of these models is the best is not easy. The positives and the negatives of each model should be adapted mainly to the school educational system, the conditions of education, the economic situation in the society and the mentality and the culture of a nation. One thing, however, remains clear and that is the need for unification of study programs in a way that would result in a continuous improvement of pre-gradual teachers´ preparation which would produce professionals with developed competencies and positive personal characteristics.

The differentiation of the teaching study programs into bachelor and master levels seems to be another problem of pre-gradual preparation of teachers in Slovakia. Despite the fact that the educational systems in EU are considered specific to each member country and are not subjected to unification, the teaching study in Slovakia was (based on the Bologna process) involuntarily divided into discontinuous or just formal levels (unlike in other countries) and it makes it impossible to prepare teachers on an expert base according to successive interlinked phases that help to gradually form a teacher´s personality. The fact that the bachelor study (Bc.) concentrates on the theoretical basis and the master study (Mgr.) includes didactical preparation and practical teaching training resulted in the cessation of the gradual development of a future teacher´s personality:

- by isolating the theoretical preparation in chosen specialization from subject didactics,
- by isolating the theoretical preparation from practical training, it is impossible to create a system of practical trainings as a gradually progressing structure interconnected with an

expert reflection of the praxis,
- by limiting the types and shortening the length of practical training (mostly from 4 years to 3 semesters), i.e. insufficient time for developing a teacher´s skills and competencies (Kosová and co., 2012).

Legislative framework of the Act No. 317/2009 on the pedagogical and professional staff defining the education requirements and the scope of a teacher´s work stipulates in paragraph 7, section 2 the Qualification Requirements stating that the minimum required education of a teacher is a university education of the second degree. This means that there is practically no possibility for the graduates of the Bc. level to perform the job of a teacher as they are not sufficiently qualified and the profile of the Bc. study is set for professions that do not exist in real life (assistant teacher, pedagogical worker for after school activities, government worker in a corresponding field, school administrative-methodological worker according to subject specialization, e.g. management of school libraries, computer networks, school technological or laboratory equipment etc.). Similarly problematic seems to be for the Bc. graduate to continue his/her study at the master level. A graduate of a two subject teaching study cannot continue with any other program than the same two subject combination he has already concluded with the Bc. degree. Also a Bc. graduate of a non-teaching program would have difficulties with continuing at the master teaching program as he/she would not be properly prepared in the area of pedagogy, psychology as well as in the chosen specialization combination. We should then ask a question. Is the principle of Bologna agreement about the credit system in pre-gradual preparation of teachers effective in Slovakia? Return to the integrated master study with a space for high quality specialization, pedagogical-psychological preparation and practical training in schools could significantly improve pre-gradual preparation of teachers in Slovakia. The historical experience itself, current school system and the legislation all confirm that the integrated master education through high quality teachers and study programs is the right approach.

PRE-GRADUAL PREPARATION OF TEACHERS OF SLOVAK LANGUAGE AND LITERATURE

Universities in Slovakia offer study programs for future teachers of Slovak language and literature (in combination with other specializations). During the study students acquire professional competencies of teachers of Slovak language and literature. To gain a teacher´s qualification one must successfully finish the first as well as the second level of the teaching study. The first level is not sufficient, the graduate only acquires prerequisites for a smooth transition into the second level in which he/she obtains necessary pedagogical qualification to teach Slovak language and literature at elementary and secondary schools. A graduate of the second level is professionally and pedagogically qualified to teach Slovak language and literature as he/she fully masters the psychological interpretation of human development, upbringing and education. During the 5-year study the pre-gradual preparation of future teachers of Slovak language and literature concentrates mainly on acquiring the expert orientation in the chosen specialization in a wider context of upbringing and education, learning the principles of creating and designing a proper pedagogical and didactical environment in elementary and secondary schools. In the two level teaching study programs a graduate progressively acquires information literacy in the area of the individual levels of the language and their didactical transformation into pedagogical praxis, masters the basic structure and content of the individual subjects of their chosen specialization. During the 3-year bachelor study a student gradually acquires the knowledge of the phonetic, morphological, lexical and syntax levels of the language. During the 2-year master degree study a student learns and masters the basic content and methodology of the individual

disciplines of his/her chosen specialization. Focus on the language part is wider compared to the bachelor degree study, besides learning about the system of Slovak language, its rules and conditions, an attention is paid also to the comparison of the Slovak language with other Slavic and non-Slavic languages. The target of the pre-gradual preparation is to direct future teachers, to make them capable of utilizing and interpreting the theoretical knowledge of system-linguistic, pragma-linguistic and socio-linguistic research. This knowledge is presented in a way which makes it possible for future teachers of Slovak language to be capable of passing on the acquired knowledge with an emphasis on the communication and pragmatic functions. In the system of teaching the mother tongue in Slovakia there is a divergence of two pedagogical opinions: grammarism and pragmatism. In the theory of teaching Slovak language there are, against the pragmatically oriented teachers accepting more users of the language, the normalists who emphasize the system, structure, norms and language codification. We think that in reality it is necessary to develop both educational tendencies. In the teaching of Slovak language they occupy an equal position. If we emphasized one of these, the students would exhibit a visible disproportion of the acquired passive and active knowledge and skills. In educating the teachers of the mother tongue the intention is to point out the importance of communicative teaching whose aim is to transform passive listeners into active interpreters. Therefore, the position and the requirements placed on teachers or pupils are changing while at the same time a road to an open dialog, mutual discussion, exchange of information, opinions and feelings is opening. The didactic preparation of teachers points to the obliterating of the authoritative border between the teacher and the student and to suggesting a more equal relationship of these two subjects. Methodologically the language knowledge is presented gradually and complexly starting from the phonetic all the way to the syntactic level in the bachelor level, in the master level the attention is paid to the stylistic, i.e. acquiring the expert knowledge of functional language styles and their pragmatic use in practical communication. Students master the knowledge of language elements used in oral expression and of the overall composition of the oral expression. The target in the master level of study is to acquire stylistic, communication and rhetoric literacy applicable in a teacher´s occupation within communication-compositional and language-stylistic tasks. In the literature part of the study in the first level a student learns about the development of the nation´s literature and its characteristic expressions in individual periods starting from the Middle Ages to the first half of the 20th century against the backdrop of the development tendencies in the world literature. In the second level a student learns about the literature from 1945 till today. The target of learning about literature is, besides acquiring the knowledge of the literature theory and the interpretation of a literary text, to also learn about the methods of acquiring reading literacy among pupils with an aim of gaining not only the functional but also the informational literacy. The forms and methods of education are reassessed and incorporated into new textbooks and methodological manuals. The attempts to create textbooks with more effective impact on acquiring communication competencies are preceded by many research projects and studies.

The state educational program sets the standards of the educational content in which it defines on one hand the linguistic terminology and on the other hand a set of competencies a student should acquire in the primary and secondary education. This state educational document presents an information guide for teachers of elementary and secondary schools. The document is taken into account even during the pre-gradual preparation so that the future teachers are informed about the content, aims and procedures of their future teaching process. The attention is paid to the methods of developing learning and oral competencies, memory, classification and application skills, communication and information skills, analytic and synthetic skills and last but not least to the methods of developing the creative skills. To

improve the future teachers´ fixation and demonstrative skills there are updated textbooks corresponding to the standards of the educational content. In education the phonetic level and orthography represent the basic pillars for further understanding and bridging of the other language levels. The textbooks of Peter Gregorík (2014) are used for practicing the phonetic level of the language, the textbooks of Jana Píšová (2015) are used for the orthographic peculiarities of the language. For morphological needs there is a textbook of Eva Tibenská (2015) specially prepared for academic purposes. Other textbooks are regularly updated to keep up with current results of research in the area of linguistics and literary science and to reflect current needs of didactic transformation of knowledge into educational praxis.

Didactic disciplines include learning and mastering the organizational qualities of the school system, ways of managing schools with an aim to improve the quality of education in elementary and secondary schools. During the 2 years of master study a student adopts teacher´s skills like designing, organization and realization of the educational process in a classroom. An important part of educating future teachers is imparting the findings of methodological approaches for acquiring knowledge which are constantly developing and progressing according to the changing needs in society. A future teacher flexibly reacts also through adjusting his/her educational process by utilizing information and communication technologies. The master level is purposefully focused on practical training at schools to make future teachers adopt practical knowledge and apply it in real educational process. A special attention is paid to developing pupil´s receptive and productive skills. Students learn about the methods of applying the traditional methods of teaching while at the same time address the issues of alternative methods. The final part of the theoretical preparation of future teachers is the preparation for the transversal practical pedagogical training and its realization under the supervision of qualified teachers at various schools.

Pre-gradual preparation of teachers is purposefully focused on the application of the constructivist approach in education with the purpose of practical acquiring of knowledge which is useful and helpful to both the society and an individual. The task of a school is to transfer knowledge onto its pupils, but not through the prism of the teacher´s cognition – through the pupil´s own cognition. The traditional understanding of a school is in many ways surpassed and the new social situation requires a new approach to teaching. In the forefront stands constructivism, when a student constructs his/her own knowledge. The target of preparing future teachers for their job is to acquaint students with the new role of a teacher which has changed compared to traditionally viewed education: a teacher runs into a new position where he offers students space for self-realization when learning about a new fact, for solving problems themselves. Future teachers learn about methods leading to the fulfillment of the basics of the constructivist approach to master lasting knowledge applicable in real communication through experience, exploring and “living through” an activity. It is also a pragmatic view of educating seen as educating for life, when students deduce their own findings and plan practical steps for utilizing the acquired knowledge. Activating methods help to make this process easier, more effective, but require a maximum level of teacher´s verve. Under a pressure of constantly preparing new activities a teacher often returns to traditional methods of mediating stable information. The use of activating methods brings a number of positive ratings also from subject didactics creators. Many agree that if future teachers understand the qualities of the techniques of innovative methods, or even identify with them, they are more likely to prefer them in practical educational process. When receiving and solving tasks connected to the innovative methods of education, the students learn about the process of designing a communicatively oriented creative lessons, are able to explore the procedures of innovative methods in practical situations and learn about a new

interactive approach to mediating information in the educational process. Active teaching requires a lot of time even before a teacher steps in front of the pupils, preparation for education requires creative ideas which must lead to constructive tasks. The teacher at the same time predicts pupils´ reactions as some pupils react to certain tasks with enthusiasm while others with resistance. During activating lessons there should be a balance between the communicative (activating and interesting) approach and the theoretical (informational and conceptual) framing of activating activities. An activity must be followed by a summary of the activity´s process, its results stemming from observing the activity so that the pupils come to a pragmatic understanding and reflection of their own experience. Activating methods offer a wide spectrum of possibilities for innovating and improving the educational process with an eye to fulfill the specified target. In the environment of current schools it is possible to work with cooperative methods, problem-solving education, project style education, experience-based education (dramatization), conceptual maps, methods of active reading and creative writing, brainstorming, question-storming, snowballing (gluing a snow ball), various intellective and didactic games. The main target of pre-gradual preparation of teachers of Slovak language and literature is to encourage an interest of future teachers in some of the more innovative methods of education helping to create more communicative and creative teaching of Slovak language and literature. Innovative trends of education have permeated into university education with a primary target to: constructively and creatively enhance and subsequently evaluate knowledge of the language and literary part of education. It also resulted in an accompaniment of a didactic moment. It means that if innovative trends are targeted with a didactic intention as early as in pre-gradual preparation of teachers at universities, the final effect in linguistic and literary education in all types and levels of schools is not accidental and mediocre, but targeted and effective.

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THE THREE C'S OF TEAM-BUILDING – COMMUNICATION, COOPERATION, COORDINATION

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Abstract: As part of a larger research project investigating different skills acquisition in entirely online courses, students' perceptions of their acquisition of various team-building skills, as developed through the use of various activities and resources in an undergraduate Business Statistics course, were examined. The results indicate that attention needs to be given to the development of these skills from these activities and resources. This has implications for the design of course content delivered in a virtual or distance environment where team-building skills are not easily fostered.
Keywords: Online Learning, Distance Learning, Virtual Learning, Team-Building Skills

INTRODUCTION

In an online context, the delivery of the necessary skills to function effectively in the real-world, whether professionally or personally, can be quite challenging. Imparting the skills that foster effective team functioning is particularly challenging. Businesses continually point to deficiencies in these areas of new hires, asking academic institutions to put more emphasis on developing communication skills, team cooperation and work coordination/collaboration. In order to shed some light on the development of these skills in an online context and to provide a more prescriptive analysis for the benefit of online course design, the research presented here is focused on students' perceptions of the contribution various activities and resources in an entirely online Business Statistics course have on the acquisition of these team-building skills. This study follows on a larger research project that also examines higher-order thinking skills acquisition, as well as on previous work (Morin, et al., 2014a,b; Saade, et al., 2012), which indicate that different activities and resources can have varying impact on students' perceptions of the development of these skills.

BACKGROUND

While the business world generally acknowledges the importance of effective team skills in the workplace (Fapohunda, 2013; Su, 2007; Bobbitt et al., 2000), the field of Statistics has also recognized that the application of statistical methods to problem solutions requires a team approach, the development of which needs to start in the classroom. (Roseth et al., 2008; Songkram, 2008; Ben-Zvi, 2007; Franklin & Garfield, 2006; McKendall, 2000; Bobbitt et al., 2000; Ross, 1995;). Trying to develop these skills in an online context, however, poses additional challenges for instructors, especially given that students are sometimes resistant to working in teams (Su, 2007; Hernandez, 2002).

Not withstanding potential resistance from some students, Franklin & Garfield's, 2006, Guidelines for Assessment and Instruction in Statistics Education (GAISE), identifies team learning, even in large classes, as an important element to include in statistics instruction. More pragmatically, Fapohunda, 2013, p. 10 states, "People working for each other in teams are a more powerful force than skills, processes, and policies, annual appraisals, management-by-objectives etc."…"Without adequate team training and preparation, it is unlikely that teams will work effectively to develop and realize a shared vision." There can be no doubt as to the need for, and importance of, the development of these skills but, obviously, students' perceptions matter.

Su, 2007 found that lower ability students had the highest preference for learning in teams, while higher ability students had the least preference. The studies by Coers et al., 2009 and Rassuli and Manzer, 2005 also found that students' preferences matter. Rassuli and Manzer, 2005 suggest that longer and greater involvement with team activities eventually leads to more positive learning outcomes. Evidently, more needs to be understood about how perceptions impact the learning experience in teams. Su, 2007 recommends that both quantitative and qualitative methods be applied to its study for better understanding of the impacting factors.

To advance the understanding of team-building skills development, the research here examines the impact of the activities and resources in the course on students' perceptions of the acquisition of these skills. While the objective of a Statistics course is to teach statistics material, there are parallel objectives which are to develop important skills, such as team-building skills. Activities and resources in the course are mainly to meet the first objective, but will also contribute at different levels to the parallel objectives.

Given the importance attributed to team-building skills, both in the workplace and in life, this paper focuses on the aspects of communication skills, work coordination/collaboration, and team cooperation, elements endorsed by other authors. McKendall, 2000, p. 279, identifies collaboration, team conflict and cohesiveness and team communication, and Fapohunda, 2013, p.10, points out that teambuilding aims at, "improving communication, reducing conflict, and generating greater cohesion and commitment among work group members". In Ben-Zvi, 2007, p.6 and Roseth et al., 2008, p. 1, they point out that most graduate and undergraduate statistics programs, "prepare their students in communication skills, realizing statistical practice requires high level skills in teamwork, collaboration, and communication". The purpose of this research is to identify which components of an online Business Statistics course are perceived to contribute more to the development of the identified team-building skills than others.

THE STUDY

This study investigates what observations could be made about students' perceptions of their acquisition of team-building skills, namely communication skills, team cooperation skills and work coordination/collaboration skills, from the various activities and resources used in the course.

The definitions of the components of team-building skills, based on Thomas, 2001, and supported by Fapohunda, 2013, McKendall, 2000 and Roseth et al., 2008, are:

- ✓ Communication: conveying ideas effectively, both orally and written
- ✓ Team Cooperation: interpersonal skills, resolution of differences
- ✓ Work Coordination: bringing together work from multiple sources and team members

There were several activities and resources utilized in the course that contributed to the students' learning experience and development of these skills. They are:

Activities:

- ✓ Case Analyses
- ✓ Quizzes
- ✓ Practice Problems
- ✓ iSTAT (environment where statistical concepts are learned through animation and simulation with java applets)
- ✓ EISEL (self-help facility - interactive, random generator of numerous multiple choice and/or true or false questions as practice tools designed to help students learn the course materials and to prepare them for the quizzes and examinations)

Resources:

- ✓ Online Textbook
- ✓ Question Center (Posting and answering of questions (private and public) by students)
- ✓ Website Course Material
- ✓ Tutorial (given by tutors during the semester in a face-to-face format)
- ✓ Platform (an eConcordia proprietary content management product)

Flowing from this, the following research question is investigated:

What is the relative contribution of the learning components (activities and resources) of the course to the perceived acquisition of Team-Building skills, namely, Communication, Team Cooperation and Work Coordination/Collaboration skills?

The research instrument utilized is a questionnaire containing two parts. The first part is about students' demographics (6 questions) and the second part is about students' perceptions (10 questions for each of the three skills). Students were asked to provide a subjective assessment of the extent to which they felt various activities and resources supported their acquisition of the team-building skills.

RESULTS

As seen in Table 1, there were 139 respondents with 51.8% males and 48.2% females. The average age of those who responded was 22.71 and the majority had moderate computer experience (71.2%). Only 7.9% answered that they had minimum experience.

Table 1: Demographics

Gender			
72 Males (51.8%)		67 Females (48.2%)	
Age		***Computer experience***	
N	139	Extensive	29 (20.9%)
Mean	22.71	Moderate	99 (71.2%)
Standar	4.12	Minimum	11 (7.9%)

Results in Table 2 indicate that certain activities and resources can help to foster the perceived development of certain team-building skills in students.

Table 2: Student Perception Distributions Of Team-Building Skills

		*Mean	SD	N	A lot[1]	Somewhat[2]	Not at	**Positive
	Communication							
Activities	Case Analyses	1.86	0.75	138	35.5	42.8	21.7	78.3
	Quizzes	2.45	0.73	139	13.7	27.3	59.0	41.0
	Practice	2.27	0.78	139	20.1	33.1	46.8	53.2
	iSTAT	2.57	0.62	138	6.5	29.7	63.8	36.2
	EISEL	2.30	0.74	138	16.7	37.0	46.4	53.7
Resource	Textbook	2.50	0.69	139	10.8	28.8	60.4	39.6
	Question Center	2.15	0.74	139	20.9	43.2	36.0	64.1
	Website Material	2.20	0.71	139	17.3	45.3	37.4	62.6
	Tutorial	2.09	0.80	138	27.5	36.2	36.2	63.7
	Platform	2.08	0.75	139	24.5	43.2	32.4	67.7
	Coordination							
Activities	Case Analyses	1.71	0.78	137	48.9	31.4	19.7	80.3
	Quizzes	2.31	0.74	138	16.7	35.5	47.8	52.2
	Practice Problems	2.09	0.79	139	27.3	36.7	36.0	64.0
	iSTAT	2.64	0.59	137	5.8	24.1	71.1	29.9
	EISEL	2.24	0.75	138	18.8	38.4	42.8	57.2
Resources	Textbook	2.43	0.65	137	8.8	39.4	51.8	48.2
	Question Center	2.14	0.72	139	20.1	46.0	33.8	66.1
	Website Material	2.09	0.73	139	22.3	46.0	31.7	68.3
	Tutorial	2.12	0.78	138	24.3	38.4	37.0	62.7
	Platform	1.94	0.75	139	30.9	43.9	25.2	74.8
	Cooperation							
Activities	Case Analyses	1.83	0.84	138	44.9	27.5	27.5	72.4
	Quizzes	2.51	0.73	138	13.8	21.7	64.5	35.5
	Practice Problems	2.38	0.75	139	15.8	30.2	54.0	46.0
	iSTAT	2.66	0.56	137	4.4	24.8	70.8	29.2
	EISEL	2.46	0.71	138	12.3	29.0	58.7	41.3
Resources	Textbook	2.54	0.63	137	7.3	31.4	61.3	38.7
	Question Center	2.17	0.76	138	21.7	39.9	38.4	61.6
	Website Material	2.25	0.70	138	15.2	44.9	39.9	60.1
	Tutorial	2.30	0.77	138	18.8	32.6	48.6	51.4
	Platform	2.16	0.72	139	18.7	46.8	34.5	65.5

Legend:
*The mean is calculated by assigning 1 to "a lot", 2 to "Somewhat" and 3 to "Not at All".
** The Positive Impact corresponds to the combined percentage of "a lot" and "somewhat"

Case Analyses were perceived to assist in the students' development of communication skills, work coordination skills and team cooperation skills. Only 21.7%, 19.7% and 27.5%, respectively, felt there was no contribution.

On the other hand, iSTAT and the Textbook were perceived as fostering neither of these team-building skills. iSTAT was perceived as providing no support at all to communication skills by 63.8%, work coordination skills by 70.1% and team cooperation by 70.8%. The Textbook is also perceived by 60.4% as not contributing to communication skills, by 51.8% to work coordination, and by 61.3% to team cooperation. Not surprisingly, the Quizzes, which are designed to be done individually, likewise were not perceived to contribute to communication skills by 59.0% nor to team cooperation by 64.5%. Team cooperation was

also not perceived to be supported by EISEL by 58.7% and by Practice problems by 54%. Other activities and resources were perceived to contribute moderately to the skills.

CONCLUSION

From the results, it seems that attention needs to be given to the types of activities and resources included in an online course. For instance, in designing the content for an online or virtual course in Statistics, it would seem that incorporating more opportunities for case analyses is essential for fostering the development of the team-building skills being called for by the business community. Case analyses were also perceived by students to be important in the development of other higher-order thinking skills (Morin, et al. 2015).

It is additionally clear that iSTAT and the Textbook are not being perceived as useful in developing the team-building skills of communication, team cooperation and work coordination/collaboration. The low perception of the contribution of the textbook to team-building is not surprising as this generally involves a solitary activity, at least initially. For iSTAT, the poor results may be due to the fact that although iSTAT is a very good learning tool, its use by students contributed to only 1% of the total grade in the course. In an online course, more weight should be awarded to the student's effort and better guidance given on how student should use applets. This requires some effort on the instructor's part in order to facilitate more effective use of applets. In order to use applets for the team-building purpose, instructors need to develop a case/task that requires considerable effort for the students to solve and address a number of statistical issues collectively – again this requires much more development time and effort by the instructor to ensure that the parallel objectives of content mastery and team-building skills are achieved.

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WHEN THE GOING GETS TOUGH: THE ROLE OF TASK ENJOYMENT AND ACHIEVEMENT MOTIVATION IN STIMULATING LEVELS OF PERSEVERANCE

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ABSTRACT
The purpose of this study is to determine and explain the role of achievement motivation and task enjoyment on stimulating an individual's level of perseverance in spite of unfavorable circumstances. The participants of the study are Psychology Majors at Philippine Normal University enrolled on First Semester of Academic Year 2013-2014; the study included both Sophomores and Juniors only. Across the four treatment conditions, results indicated a high significant difference on task enjoyment while achievement motivation does not appear to be a significant factor in stimulating levels of perseverance. Statistical Analysis also revealed that because of its consistency, the most effective treatment condition for stimulating levels of perseverance is Non-Enjoyable I Can/ I Will. Implications for guidance and counseling and future research are discussed.
Keywords*:* Task, Enjoyment, Achievement Motivation, Perseverance

INTRODUCTION

There are various studies made associating perseverance with several variables such as intelligence (Al-makahleh & Ziadat, 2012; Blackwell & Trzesniewski, 2007; Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Mueller & Dweck, 1998; Turney, 1930a), self-efficacy (Markman, Baron, & Balkin, 2005), and self-determination (Lee, Lundberg, & Young, 2008; Vallerand et al., 1997). Among all of these, achievement motivation (Jr et al., 2008; Klehe & Anderson, 2007; Miceli & Castelfranchi, 2000; Mueller & Dweck, 1998; Vallerand et al., 1997; Deci & Ryan, 2000; Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Turney, 1930) appears to be the most correlated variable in relation to perseverance involving females as the subjects in an experimental research design using questionnaires as their primary data gathering tool for measuring it. On the other hand, only few researches were conducted examining task enjoyment in relation with perseverance (Leonard & Weitz, 1971). Ceballo (2006) revealed in her study that significant differences were found on the task persistence and performance attainment of the two groups of respondents as revealed by the posttest scores in terms of sex and academic performance. This leads to the proposition that because persistence is a measure of effort, it is directly relevant to motivation to achieve on a task (Elliot, McGregor, & Gable, 1999).

The concept of perseverance is anchored on different constructs which include task persistence and grit. On the study of Duckworth et al. (2007), grit is defined as perseverance and passion for long-term goals. Task persistence relates also to perseverance as it was described by Andersson & Bergman (2011)as the ability to persist and to sustain attention at a task, even in the presence of internal and external distractions. As a result, it leads to confusion on whether it appears to have the same idea as to what our study seeks to explore as well as to come up with the most appropriate term that should be used.

Another concern that was also found was regarding on task persistence as a second fundamental factor besides general mental ability, influencing attainment within the area of working life and education (Andersson & Bergman, 2011). This was supported by the study conducted by Duckworth, et al. (2007) stating that grit demonstrated incremental predictive validity of success measures over and beyond IQ. More so, the study of Leonard, S., & Weitz, J. (1971) proved that task success is significantly related to task enjoyment. These findings are also consistent with results reported by Locke (1966) indicating a positive relationship between task success and task liking (Leonard & Weitz 1971).

In this regard, distinct attention has been given in studying the role of task enjoyment and achievement motivation on stimulating levels of perseverance. We would like to know how an individual would persevere in spite of unfavorable conditions including how task enjoyment sustains motivation of an individual to achieve and how both influence perseverance on doing a specific task.

Therefore, the study aims to know how achievement motivation could influence an individual to persevere when things seem to be unfavorable or when an individual is facing difficulty and how task enjoyment could help them to persevere.

CONCEPTUAL LITERATURE

Perseverance

The notion that there are various variables that can be associated to perseverance had interested researchers from various fields and areas in psychology. These fields and areas include Personality and Social Psychology (Wyer, 1968; Ross, Lepper & Hubbard, 1975; Anderson, Lepper & Ross, 1980; Lepper, Ross & Lau, 1986; Sherman & Kim, 2002; Shah & Kruglanski, 2003; Duckworth, Peterson, Matthews & Kelly, 2007; Williams & DeSteno, 2008; Roskes, De Dreu & Nijstad, 2012), Military Psychology (Maddi, Matthews, Kelly, Villarreal & White, 2012), Social Psychology (Nestler, 2010), Applied Psychology (Leonard & Weitz, 1971), Educational Psychology (Clark, 1935 & 1946; 2012), Rehabilitation Psychology (Kang, Zhu, Ragan & Frogley, 2007) and Organizational Psychology (Markman, Baron & Balkin, 2005).

One classic example of these researches had found out that outside of intelligence, perseverance was the most valuable trait making for success (Clark, 1935). This has been supported by the study of Andersson and Bergman (2011), stating that task persistence or perseverance is a second fundamental factor besides general mental ability, influencing attainment within the area of working life and education. Hence, these researches denote that perseverance is an indicator of success. As it has been pointed out, there are several variables that can be connected with perseverance and achievement motivation turned out to be the most correlated one. More so, the concept of perseverance has been anchored with the term grit (Duckworth, Peterson, Matthews & Kelly, 2007). Their study emphasized that gritty individual approaches achievement as a marathon. Whereas gritty individual not only finishes tasks at hand but pursues a given aim. Furthermore, levels of perseverance may vary among individuals. In the study of Wyer (1968), he asserted that perseverance may be high both among subjects who are attracted to a task because success on it would have high reward value, and among subjects for whom the task is aversive because of the high cost associated with failure.

Achievement Motivation

Achievement motivation has been understood by focusing on whether people are sufficiently competent or motivated to achieve excellence (Hart & Albarracı, 2009). In the study of Castella, Byrne and Covington (2013), they emphasized that a separate limitation of much of the work in the field of achievement and motivation is the comparative lack of research in cross-cultural settings (Elliott & Bempechat, 2002; Jose & Kilburg, 2007; Midgley, Kaplan, & Middleton, 2001). A small number of theories have been tested and validated in more than one culture but these findings often lack generalizability because it is gender specific (Kudo & Numazaki, 2003; Tanaka & Yamauchi, 2001) and is sometimes restricted to Asian Americans and small student samples (Pualengco, Chiu, & Kim, 2009; Zusho et al., 2005). This notion means that achievement motivation have at times been criticized as being culturally entrenched in an ideology of individualism (Martin & Hau, 2010; Otsuka & Smith, 2005). That is why it is very evident that cross cultural research in this area is clearly needed (Mobley, Slaney & Rice, 2005).

Achievement motivation has been correlated to variables such as attributions (Powers, Douglas, Cool, & Gose, 1985), learning goals and performance goals (Dweck & Elliott, 1983; Nicholls, 1984; Nicholls & Dweck, 1979), persistence, enjoyment and good performance (Dweck & Leggett, 1988; Elliott & Dweck, 1988), fear of failure and competence expectancies (Elliot, & Church, 1997) task attractiveness (Wyer, 1968) and perseverance (Jr et al., 2008; Klehe & Anderson, 2007; Miceli & Castelfranchi, 2000; Mueller & Dweck, 1998; Vallerand et al., 1997; Deci & Ryan, 2000; Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Turney, 1930). Furthermore, achievement motivation studies have distinguished two classical individual motivational tendencies: need for achievement and fear of failure (Miceli & Castelfranchi, 2000). The latter appears likely to favor loss of motivation and goal disengagement, through such implications as lack of persistence, negative emotions, actual failure or poor performance, and attributional biases (Birney, Burdick, & Teevan, 1969; Heckhausen, 1975). Consequently, this concept stresses the mediating role of achievement motivation to perseverance in which achievement motivation is likely to determine high level of perseverance.

Task Enjoyment

Task enjoyment plays an important role in performance which has been predicted by Tauer & Harackiewicz (2004) stating that intergroup competition would lead to higher levels of task enjoyment and performance. This proves that individuals who enjoy what they are doing spend more time developing their skills in an activity, leading to increased performance (Deci & Ryan, 1985; Harack- iewicz & Sansone, 1991; White, 1959).

Apparently, there is a paucity of researches linking task enjoyment to perseverance. In the study of Garland (1982), he pointed out that there is a significant effect of goals on ratings of task enjoyment, that task satisfaction is therefore, directly related to task success. This has been supported by the study of Leonard & Weitz (1971), revealing that task success is significantly related to task enjoyment and it has been consistent with results reported by Locke (1966) indicating that there is a positive relationship between task success and task liking. However, they also revealed that task perseverance cannot be taken as a measure of task enjoyment or liking as indicated by a rating. This finding appears to be irrelevant since the focus of the study is not on the role of task perseverance on measuring task enjoyment but rather, the role of task

enjoyment to an individual's level of perseverance in spite of unfavorable conditions including how task enjoyment sustains motivation of an individual to accomplish a certain task.

PURPOSE AND OBJECTIVES

The study aims to determine and explain the role of achievement motivation and task enjoyment on stimulating an individual's level of perseverance in spite of unfavorable circumstances.
Specifically, it will seek to answer the following questions:
1. What are the levels of perseverance in the grit scale among the respondents classified per treatment condition?
2. What is the difference across the four groups in terms of task enjoyment, achievement motivation, and the interaction between the two?
3. Which of the four conditions had more effect on grit (perseverance)?
4. What are the implications of the results on guidance and counseling?

Null Hypotheses

H_o: There is no significant difference between task enjoyment and the participants' level of perseverance across the four different treatment conditions.
H_o: There is no significant difference between achievement motivation and the participants' level of perseverance across the four different treatment conditions.
H_o: There is no significant difference between the interaction of task enjoyment and achievement motivation and the participants' level of perseverance across the four different treatment conditions.

METHODOLOGY

Participants

The participants of the study consist of sixty (60) Psychology Majors at Philippine Normal University enrolled on First Semester of Academic Year 2013-2014 (See Table 1). The study included both Juniors (n= 31, 51.7 %) and Sophomores (n=29, 48.3 %) whose age ranges from 16-21. Majority of the respondents were 18 years of age (n=26, 43.3%), followed by 17 years old (n=16, 26.7%), 19 years old (n=13, 21.7%), 21 years old (n=3, 5%) and lastly 16 years old (n=1, 1.7%) and 20 years old (n=1, 1.7%). There were more females (n=44, 73.3%) than males (n=16, 26.7%) who participated in the study. Participants came from four different sections, namely II-9 BSP (n=14, 23.3%), II-10 BSP (n=15, 25%), III-26 BSP (n=16, 26.7%) and III-27 BSP (n=15, 25%).

Table 1 ***Demographic Characteristics of Psychology Majors (n=60)***

Characteristic	f	%	Mean	SD	Range
Gender			1.27	.446	
Female	44	73.3 %			
Male	16	26.7 %			
Age			18.10	1.037	16-21
16	1	1.7 %			
17	16	26.7 %			
18	26	43.3 %			
19	13	21.7 %			
20	1	1.7 %			
21	3	5.0 %			
Year and Section			2.53	1.112	
II-9	14	23.3 %			
II-10	15	25.0 %			
III-26	16	26.7 %			
III-27	15	25.0 %			

DESIGN

The experimental study used a 2x2 factorial design which examines the two independent variables namely task enjoyment and achievement motivation. The variations for achievement motivation include I can/I will and Can I/Will I. On the other hand, task enjoyment is divided into two: enjoyable and non-enjoyable. All in all, there were four treatment conditions for this study: (a) Enjoyable, I Can/I Will, (b) Enjoyable, Can I/Will I, (c)Non-Enjoyable, I can/I will and (d) Non-enjoyable, Can I/Will I.

PROCEDURE

The participants were given a Grit Scale, a test that will measure their level of perseverance. Those who got low scores qualified as the participants of the study. The researchers only extracted sixty (60) students from the population whose scores ranged from moderately gritty to not gritty at all. They were randomly assigned to the four different treatment conditions. Hence, each treatment condition was composed of fifteen (15) participants. A cover story was used in which the respondents were informed that the study is all about intelligence and the following exercises that will be given to them will measure their IQ level. The participants were primed by asking them to do a mental listing of the assigned achievement motivation. The first and third group was asked to do a mental listing of "I Can/I Will" while the second and fourth group was asked to do a mental listing of "Can I/Will I". Then, they were instructed to accomplish a task depending on the nature of their treatment condition. All participants were given a Math Exercise and a Reading material. Upon completion of the task, they were given a posttest on perseverance (Grit Scale) and were also asked to answer the questions for manipulation check.

Afterwards, the mean scores on each of the different treatment conditions were computed and compared to be able to look at the main effect of each independent variable as well as to determine the interaction that occurred between the two independent variables.

MANIPULATIONS AND MEASURES

Perseverance. The researchers used a 12-item Grit Scale developed by Duckworth, Peterson, Matthews and Kelly (2007) to assess participants' level of perseverance. The grit scale contains multiple items assessing two empirically related factors of grit that include consistency of interests, e.g., "I have overcome setbacks to conquer an important challenge" and perseverance of effort, e.g. "I finish whatever I begin" (Kelly, Maddi, Matthews, Villareal & White, 2012). The items in the Grit Scale were stated in declarative format. The choices for these statements were presented in a 5-point response scale. Grit scores were computed by adding up all the points and dividing it to twelve (12). Five (5) is the maximum score for this scale which denotes that the individual is extremely gritty and One (1) is the lowest which indicates that the individual is not at all gritty.

Achievement Motivation. The researchers asked the participants to do a mental listing of either "I Can/I Will" or "Can I/Will I". For first and third group, the participants were asked to list 20 things that they can do, their statements starting with the phrase "I can…" (e.g. I can sing). Afterwards, the participants were asked to write "I will" twenty (20) times. On the other hand, the second and fourth groups were asked to list 20 things that they are doubtful if they can do, their statements starting with the phrase "Can I…" (e.g. Can I solve Math problems). Then, the participants were asked to write "Will I" for twenty (20) times. This serves as the priming of the experiment which was used to indicate the role of achievement motivation on perseverance.

Task Enjoyment. As it was mentioned earlier, the experiment has four treatment conditions. Two (2) of these conditions were given Enjoyable tasks and the other two (2) conditions were given Non-Enjoyable tasks. All participants were given a Math Exercise and a Reading Material. The researchers come up with this sets of tasks, based on the results of pre-survey conducted to know what particular tasks where considered by students as enjoyable and not enjoyable. This survey revealed that reading tasks is enjoyable (f=30) while solving math problems (f=23) is not enjoyable. For the first two groups, they were given an enjoyable task. They were asked to accomplish three (3) sets of Math Exercise for the first part. Soon after they had finished answering the Math Exercises, they were asked to choose one story which they find attention-grabbing among the three stories that were presented. This was presumed by the researchers based on the study of Worthy and McKool (1996) found that allowing students to make choices about their reading material increased the likelihood that they would engage more in reading. In addition, Guthrie and Wigfield (2000) suggest that providing genuine student choices increases effort and commitment to reading. For the second part of the experiment, the participants were asked to underline the words/phrases that appeals to their interests.

On the other hand, the last two conditions were given Non-Enjoyable tasks. Like the other participants, they were also given a Math Exercise and a Reading Material. For the last two groups, the participants were asked to accomplish one (1) set of Math Exercise only. Since, they were under the Non-Enjoyable condition they were given a difficult Math Exercise which was all about fractions. Next, after answering the Math Exercise, they were given a Reading Material. Unlike other group, they were not asked to choose what to read, instead they were given a researcher choice selection entitled, Odyssey was handed over to them. The researchers asked the participants to read the selection and after that they were only instructed to encircle and count the vowels in the selection. The researchers assumed that by encircling and counting the vowels in the selection, the participants will not enjoy the task.

Manipulation Check. There were four sets of manipulation check for this study because there were four different treatment conditions. Each consists of six (6) items. The participants were asked to check "Yes" or "No" as a response for each item.
The participants reported whether: (a) they were asked to think of things that they can do/doubtful if they can do, (b) they were asked to write the statement "I Can/ I Will"/ "Can I/Will I", (c) they were asked to accomplish a Math Exercise, (d) they enjoyed/did not enjoyed the Math Exercise, (e) they were asked to read a selection of their choice/were given a selection to read and (f) they enjoyed/did not enjoyed reading.

RESULTS

The first research question focused on the levels of perseverance of the respondents on the Grit Scale (See Table 2).
The pretest scores of the participants under Enjoyable - I Can/I Will (n=15, M=2.97), Enjoyable - Can I/Will I (n=15, M=3.03), Non-Enjoyable - I Can/ I Will (n=15, M=2.82) and Non-Enjoyable - Can I/ Will I (n=15, M=3.09) indicates that all the participants under these groups are Moderately Gritty.

More so, the participants under Enjoyable - I Can/I Will (M=3.42) and Non-Enjoyable - Can I/ Will I (M=3.48) had an increase on their perseverance level as indicated by their posttest scores (Very Gritty) while the posttest scores of the participants under Enjoyable - Can I/Will I (M=3.37) and Non-Enjoyable - I Can/I will (M=2.80) tells that the group remained Moderately Gritty. In this result it can be seen that across four conditions there is a significant leap on the levels of perseverance in the Enjoyable, I Can / Will I condition.

Table 2 ***Participants' Levels of Perseverance* (n=60)***

	I Can/I Will				Can I/Will I			
	Pretest		Posttest		Pretest		Posttest	
Enjoyable	2.97	Moderately Gritty	3.42	Very Gritty	3.03	Moderately Gritty	3.37	Moderately Gritty
Non-Enjoyable	2.82	Moderately Gritty	2.80	Moderately Gritty	3.09	Moderately Gritty	3.48	Very Gritty

Note: *Scoring for 1, 4, 6, 9, 10 and 12 is 5 = Very much like me, 4 = Mostly like me, 3 = Somewhat like me, 2 = Not much like me and 1 = Not like me at all. Scoring for 2, 3, 5, 7, 8 and 11is 1 = Very much like me, 2 = Mostly like me, 3 = Somewhat like me, 4 = Not much like me and 5 = Not like me at all.*
** 1- 1.7= Not at all gritty, 1.8-2.5= Slightly Gritty, 2.6- 3.3= Moderately Gritty, 3.4- 4.1= Very Gritty and 4.2- 4.9= Extremely Gritty.*

The second research question sought to determine the difference of Task Enjoyment and Achievement Motivation across the four groups (See Table 3). Only task enjoyment was found to have a significant difference of .009 which also indicates that there was no interaction that took place between achievement motivation and task enjoyment.

Table 3 ***Task Enjoyment and Achievement Motivation Across Four Groups***

Variable	df	Mean Square	F	Sig.*
Task Enjoyment	2.000	.422	5.151	.009
Achievement Motivation	1.000	.016	.170	.682
Spherecity	56	.082	.	.

Note: ******The difference is significant at the .05 level.*

The third research question sought to find out the most effective treatment condition (See Table 4). Among the four treatment conditions, Non-Enjoyable - I Can/I Will consistently showed significant difference in comparison with Non-Enjoyable - Can I/Will I (MD=.4746), Enjoyable - Can I/Will I (MD=.3882), and Enjoyable - I Can/I Will (MD=.3858). Therefore, it appears be the most effective treatment condition.

Table 4 Most Effective Treatment Condition

Treatment Condition		Mean Difference	Std. Error	Sig.
Non Enjoyable Can I Will I	Enjoyable/Can I Will I	.0863	.11139	1.000
	Non Enjoyable/I Can I Will	.4746*	.11139	.000
	Enjoyable/I Can I Will	.0888	.11139	1.000
Enjoyable Can I Will I	Non Enjoyable Can I Will I	-.0863	.11139	1.000
	Non Enjoyable I Can I Will	.3882*	.11139	.006
	Enjoyable I Can I Will	.0025	.11139	1.000
Non Enjoyable I Can I Will	Non Enjoyable Can I Will I	-.4746*	.11139	.000
	Enjoyable Can I Will I	-.3882*	.11139	.006
	Enjoyable I Can I Will	-.3858*	.11139	.006
Enjoyable I Can I Will	Non Enjoyable Can I Will I	-.0888	.11139	1.000
	Enjoyable Can I Will I	-.0025	.11139	1.000
	Non Enjoyable I Can I Will	.3858*	.11139	.006

Note: *Based on observed means.*
The error term is Mean Square (Error) = .093.
**. The mean difference is significant at the .05 level.*

DISCUSSION

The first null hypothesis suggested that there was no significant difference between task enjoyment and the participants' level of perseverance across the four different treatment conditions. Based on the results, a very high and significant difference was found between task enjoyment and the participants' level of perseverance which indicates that task enjoyment is highly related to perseverance. Hence, the null hypothesis was rejected. Since task enjoyment appeared to be a significant factor in stimulating levels of perseverance, it does not support the study of Leonard & Weitz (1971) revealing that task perseverance cannot be taken as a measure of task enjoyment.

Turner (1995) noted that when teachers allow students to make decisions about their own work, students are more likely to be interested in the work. Similarly, students who are given choices tend to exhibit more persistence, goal-setting, and other self-regulated learning behaviors.

The second null hypothesis stated that there is no significant difference between achievement motivation and the participants' level of perseverance across the four different treatment conditions. As what the results revealed, the differences were not statistically significant. These findings may be attributed due to the following reasons. First, cognitive aspects of motivation, such as achievement affect, interests, and goals, are not directly observable. Extensive research on the predictive validity of the implicit need for achievement indicates that implicit motives foresay long-term spontaneous behavioral trends over time. Second, self-report measures of motivation tend to produce generalized responses rather than responses relating to specific instructional events or tasks. For example, children may be asked to respond to a statement such as I like work that is hard. People often have difficulty providing the type of generalized response that is commonly sought in self-report instruments. They tend to instead interpret just-experienced events rather than summarize across a range of situations and content areas. Third, students appear to enter school with high levels of intrinsic motivation in general but motivation tends to decline as they progress through school. Furthermore, McClelland et al. (1989) states that people sometimes strive for goals that are congruent with their implicit motives, whereas at other times they are committed to goals that are incongruent with respect to their implicit motive disposition (for example, a person with a low implicit power motive working on a career for a leadership position and thus striving for a power goal). Logically we will never manage to predict the correlation in a group of randomly gathered people. Therefore, the null hypothesis was accepted.

The third and last null hypothesis argues that there is no significant difference between the interaction of task enjoyment and achievement motivation and the participants' level of perseverance across the four different treatment conditions. Since only one of the two dependent variables showed a statistically significant difference, therefore interaction cannot take place. Thus, the null hypothesis was accepted.

CONCLUSION

The results of the pretest and posttest scores of the participants revealed that after an intervention was given there is an increase in their perseverance level as indicated by their posttest scores. However, based on the levels of perseverance of Grit Scale only two groups had changed from Moderately Gritty to Very Gritty while the other two groups remained as Moderately Gritty. Therefore, it can be assumed that the treatment conditions are effective.

One important point of the study is to determine which of the four conditions had more effect on grit (perseverance). Across the four treatment conditions, results indicated a high significant difference in task enjoyment while achievement motivation does not appear to be a significant factor in stimulating levels of perseverance. Statistical Analysis also revealed that the most effective treatment condition is Non-Enjoyable I Can/ I Will.

As defined by Constantin, Holman & Hojbotă (2012), Perseverance is the tendency to remain engaged in specific goal-related activities, despite difficulties, obstacles, fatigue, prolonged frustration or low perceived feasibility.

Task enjoyment and perseverance have a great potential to work together, such that individuals who enjoy what they are doing spend more time developing their skills in an activity, leading to persistence and increased performance. Thus, task enjoyment is an important outcome in its own right and is beneficial for increasing the level of perseverance.

RECOMMENDATIONS

Achievement prime may cause individuals with low-achievement motivation to perform at their peak on tasks that are framed as entertaining rather than as achievement oriented. Correspondingly, an achievement prime may cause individuals with high achievement motivation to perform at their peak on tasks that are framed as achievement oriented rather than as entertaining. To further prove this point, a replication of the study using time series design is highly recommended.

One of the topics that future researchers may wish to explore in relation to perseverance is self-mage. Murphy (1996, p. 69) states that our self – image determines how or if we do certain things. “Individuals with strong self – efficacy are less likely to give up than those who are paralyzed with doubt about their capabilities” (Alderman, 1999, p. 60). Thus, it would be interesting to know the role of self-image in stimulating levels of perseverance.

IMPLICATIONS

People are normally motivated to act in ways that help them achieve goal accomplishment. The strength of the motivation to act depends on the perceived achievability of the task as well as the importance of the task. One theory of Achievement Motivation was proposed by Atkinson and Feather (1966). They stated that a person’s achievement oriented behavior is based on three parts: the first part being the individual’s predisposition to achievement, the second part being the probability of success, and third, the individual’s perception of value of the task. Atkinson and Feather (1966) state, “The strength of motivation to perform some act is assumed to be a multiplicative function of the strength of the motive, the expectancy (subjective probability) that the act will have as a consequence the attainment of an incentive, and the value of the incentive: Motivation = f(Motive X Expectancy X Incentive)” (p. 13).

As being defined by different authors, (Baker & Wigfield, 1999; Klehe & Anderson, 2007; Maurer et al., n.d.; Mueller & Dweck, 1998; Teo, 2000; Turney, 1930; Vallerand, Social, Fortier, Elliott, & Blais, 1997; Vansteenkiste, Simons, Sheldon, & Deci, 2004; Wolters, 2004) motivation is critical to academic success, however academic gains that students make can be lost if they are not resilient to setback, study pressure, and stress in the school setting. It is therefore important that students are motivated and resilient to academic pressures (Martin, 2002). However, a problem with motivation theory and research is that it has not been formulated in a way that provides educators and students with a common language with which to develop motivation and academic resilience in the classroom (Martin, 2002). Therefore with the use of the results of this study it can now provide a new model to hold a direct implication in the classroom and counseling contexts.

Achievement values are "the incentives or purposes that individuals have for succeeding on a given task" (Wigfield, 1994, p. 102. Children's achievement values affect their self-regulation and motivation (Wigfield, 1994) because goals influence how children approach, engage in, and respond to academic tasks (Hidi & Harackiewicz, 2000). "When students value a task, they will be more likely to engage in it, expend more effort on it, and do better on it" (Wigfield, 1994, p. 102).

Research indicates that children's subjective task values are strong predictors of children's intentions and decisions to continue taking coursework in both Math and English (Wigfield, 1994; Wigfield & Eccles, 2000). When students enjoy scholastic tasks, they are intrinsically

motivated to do well. Both interests and personal relevance produce intrinsic value for a student. Generally, students are intrinsically motivated to pursue activities that are moderately novel, interesting, enjoyable, exciting, and optimally challenging. When schoolwork is too easy, students become bored and when tasks are too difficult, students become frustrated and anxious (Deci & Ryan, 1985). Teachers should try to create classroom environments that foster intrinsic motivation by providing students with opportunities to engage in interesting, personally relevant, challenging activities.

Understanding motivation in educational contexts holds the potential to explain the forces behind student values, engagement, persistence, and resilience. Student achievement can ultimately be increased by strategies borne out of an understanding of motivation. One of the strategies for stimulating student's motivation is the use of collaborative or cooperative learning methods (Guthrie, 2000; Hidi & Harackiewicz, 2000; Pintrich, 2003; Stipek, 1996; Turner, 1995). In fact, Bossert (1988) argues that motivation is one of the potential mediating processes whereby cooperative learning affects achievement. According to Bossert, peer encouragement may improve task. Hidi and Harackiewicz (2000) frame the issue in terms of situational interest. According to this perspective, working with others is a way of enhancing situational interest that can ultimately trigger personal or individual interest. As Turner (1995) notes, collaboration provides opportunities for students to experience disequilibrium, which can spur curiosity and interest. Second, collaboration provides opportunities for peer modeling, and models of successful student performance can be more motivating to students than models of teacher performance. Finally, working with others promotes academic engagement through the added responsibility of group performance, which causes individuals to persist at difficult tasks longer than they normally would.

Previous research has suggested that because persistence is a measure of effort, it is directly relevant to motivation to achieve on a task (Elliot, McGregor, & Gable, 1999). Task persistence is a fundamental competence factor, because this emerging competency enables the young adolescent to successfully handle the increasing demands from the society and to prepare him or her for future roles and developmental tasks later in life (Andersson, H., & Bergman, L. R., 2011). As such, finding a persistence-performance link should help demonstrate that optimal distinctiveness motives are primarily responsible for task performance.

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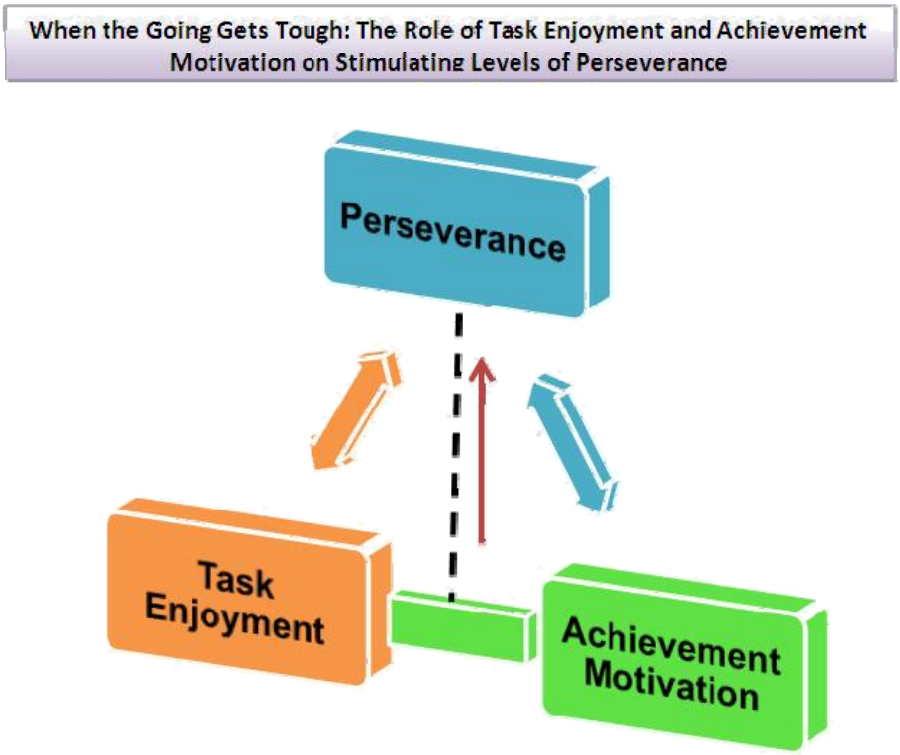
APPENDIX

Conceptual Framework



12- Item Grit Scale

Directions for taking the Grit Scale: Here are a number of statements that may or may not apply to you. For the most accurate score, when responding, think of how you compare to most people -- not just the people you know well, but most people in the world. There are no right or wrong answers, so just answer honestly!

1. I have overcome setbacks to conquer an important challenge.
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
2. New ideas and projects sometimes distract me from previous ones.*
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
3. My interests change from year to year.*
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
4. Setbacks don't discourage me.
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
5. I have been obsessed with a certain idea or project for a short time but later lost interest.*
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
6. I am a hard worker.
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me

- ☐ Not much like me
- ☐ Not like me at all

7. I often set a goal but later choose to pursue a different one.*
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
8. I have difficulty maintaining my focus on projects that take more than a few months to complete.*
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
9. I finish whatever I begin.
   - ☐ Very much like me
   - ☐ Mostly like me
   - ☐ Somewhat like me
   - ☐ Not much like me
   - ☐ Not like me at all
10. I have achieved a goal that took years of work.
    - ☐ Very much like me
    - ☐ Mostly like me
    - ☐ Somewhat like me
    - ☐ Not much like me
    - ☐ Not like me at all
11. I become interested in new pursuits every few months.*
    - ☐ Very much like me
    - ☐ Mostly like me
    - ☐ Somewhat like me
    - ☐ Not much like me
    - ☐ Not like me at all
12. I am diligent.
    - ☐ Very much like me
    - ☐ Mostly like me
    - ☐ Somewhat like me
    - ☐ Not much like me
    - ☐ Not like me at all

Scoring:
For questions 1, 4, 6, 9, 10 and 12 assign the following points:
5 = Very much like me
4 = Mostly like me
3 = Somewhat like me
2 = Not much like me
1 = Not like me at all

For questions 2, 3, 5, 7, 8 and 11 assign the following points:
1 = Very much like me
2 = Mostly like me
3 = Somewhat like me
4 = Not much like me
5 = Not like me at all

Add up all the points and divide by 12. The maximum score on this scale is 5 (extremely gritty), and the lowest scale on this scale is 1 (not at all gritty).

Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 9*, 1087-1101. © 2013 Angela Duckworth

