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Message from the Editor-in-Chief

I am very pleased to publish first issue in 2012. As an editor of International Online Journal of Primary Education (IOJPE), this issue is the success of the reviewers, editorial board and the researchers. In this respect, I would like to thank to all reviewers, researchers and the editorial board. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to International Online Journal of Primary Education (IOJPE), For any suggestions and comments on IOJPE, please do not hesitate to send mail.

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THE EFFECT OF MUSIC ON THE TEST SCORES OF THE STUDENTS IN LIMITS AND DERIVATIVES SUBJECT IN THE MATHEMATICS EXAMS DONE WITH MUSIC

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ABSTRACT

In the exams based on limits and derivatives, in this study, it was tried to determine that if there was any difference in students' test scores according to the type of music listened to and environment without music. For this purpose, the achievement test including limits and derivatives and whose reliability coefficient of Cronbach Alfa is .83 was applied with the environments in which different types of music were listened, to 98 students studying at Primary Mathematics Teaching Department in Buca Faculty of Education in Dokuz Eylül University. As a result, it was observed that both male and female students' test scores from the exam based on limits and derivatives compared to the environment without music; besides, the increase in average number of correct answers of female students was higher than the male students'.

Keywords: mathematics education, music and mathematics, mathematics success

INTRODUCTION

Mathematics and music are related to each other for many perspectives. Since the ancient times, this relationship has been realized and has attracted many mathematicians and philosophers. The effective use of the relationship between these two branches thought as the representatives of science and art may create positive results for many aspects.

A lot of studies have been done about the development of music cognitive activities. However, the study found as the most popular by media was announced as Mozart Effect in 1993 and this attracted many people. The study was carried out by Frances Rauscher. Re Maj. Piano Sonatas that Mozart wrote for two pianos was applied to 38 students studying at psychology department in the USA for 10 minutes. Then the three dimensional thinking test was applied to the students. As a Result, 8-9 higher points were obtained from the group listening to Mozart compared with the control group. The relationship between music and three dimensional thinking was realized at that time. After the announcement of the results, theoretical physicist Gordon Shaw one of the researchers claimed that Mozart's music provided brain gym and said: "we believe that complex music facilitates the communication among the particular complex neural organizations related to high level brain activities



such as mathematics and chess. (Campbell, 2002). In contrast, we think that music simple and based on repetitive may create an opposite effect" (Campbell, 2002).

In a study conducted in Australia in 1966, music education was given to the pre-school grade children 1 hour a week for 10 months. The effect of education given on mathematics skill was examined. The children's mathematics skills were evaluated by the help of Test of Mathematics Ability. As a result, from the group taking music education, higher scores were obtained (Geoghegan & Mitchelmore, 1996).

Aşkar (1996) stated that mathematics teachers and educators believed that the students' liking the mathematics or their showing interest to mathematics topics affected their success. It is known that negative motions such as anxiety influence success as well as positive emotional experiences such as motivation. It was brought out with many studies that especially mathematics anxiety had relationship with mathematics success. It has been claimed that the cognitive level of anxiety same as a mental process slows down the mental activities by keeping space in memory (Tobias and Everson, 1996).

The students, in the process beginning with the primary first class, experience mathematics anxiety originated from the teacher's negative approach, the student's personal anxiety and the personal barriers. This situation has been already observed with the answering rates' being less than the other courses.

It is seen that half of the students cannot do, think practically while solving problem or they have difficulties in doing. The trouble of problem solving is much more with female students. In terms of considering mathematics questions in university and institutions exams as difficult over the curriculum, female students remain more concerned than male students. Male students are more concerned about teacher's shouting or similar behaviors.

It is known that, in mathematics class, mathematics games with music positively influence class achievement and the students' attitudes towards the class (Dinçer, 2008). The exams have an important role in evaluating the students' success. Preparing for the exams, on the other hand, needs studying regularly, repeating the topics learned (Tan, 1992). Hedl (1972), Sarason (1980), Spielberger, Trent and Maxwell (1980) and Hancock (2001) determined that test anxiety causes the emergence of physically and psychologically negative behaviors in their studies. The students can put down their anxiety in order to avoid disturbing physical effects of test concern during the exam (Rubenzer, 1988). In the studies made about music and treatment/exercise; it was observed that music therapy may be effective in the treatment of anger and psychological symptoms (Sezer, 2009); exercises done with music is effective positively in trait anxiety (Önsü, 2005).

The Aim of the Study

The purpose of this study is to analyze the effect of music in the exams done with the music in derivatives and limits subjects on the students' test score. In addition, determining if the gender has a role on the students' test scores from the exams with music in derivatives and limits topics as well as the role of the type of music creates the other aim of the study.

METHOD

In the first stage of study run within the main aim given above, generally the situations influencing the students' achievements in mathematics classes were investigated. Furthermore, this study was made in

derivatives and limits subjects that think they are more difficult to understand than the other disciplines. The information-gathering tools used in this study are the four examinations, two of them with music and the other two without music, measuring operational performance in limits and derivatives, and generated with the questions including limits and derivatives in the level of university first grade students. Topics the exam covers were selected from the subjects the students encountered in secondary education. 5 types of music were told to the students in the groups divided homogeneously and they were asked to rank these types of music according to their preference. Then the students took the exams in limits and derivatives with this music and without, and it is tried to investigate that if there was any relationship between the type of music chosen and the points taken. In the exams, each correct answer was evaluated in points. For the analysis in these exams done with music, SPSS computer program was used. In this study, in order to examine the difference in using the knowledge they have about limits and derivatives with music, the percentage distribution was made according to the correct answers the students gave. In this study, it was also emphasized if there was any difference in the points taken from the exams in limits and derivatives according to gender as well as the types of the music.

The Population and the Sample of the Study

The research was made with 98 of the freshmen in Izmir Dokuz Eylul University, Buca Faculty of Education, and the department of Elementary Mathematics Teaching in 2010-2011 in fall semester.

Data Gathering and Analysis

The students participating the research were divided in to 10 homogeneous groups before the application. These homogeneous groups took the exams applied at a particular time period with test-parallel-test method. The validity and the reliability of the test has calculated with SPSS statistical program and the reliability coefficient was .83.

FINDINGS

Table 1: The Students' Exam Results with and without Music According to the Order of Music Preferred in Limits Topic

Groups	The Order of Music	The Type of Music in the Exam	The Score taken with Music	The Score taken without Music
GROUP 1 (11 people)	1.Classical Music 27.27%	Classical Music	63.90	65.09
GROUP 2 (9 people)	1.Softrock 44.44%	Softrock	73.88	61.33
GROUP 3 (10 people)	5. Classical Music 30%	Classical Music	50.20	35.30
GROUP 4 (10 people)	4.Pop Music 50%	Pop Music	52.80	44.00

It was observed that when taken the exam with classical music preferred as first by 27.27 % of the first group, the group's average score was 1.1 less compared to the exam without music. Its reason was determined as the students' being negatively affected from the first preference of music. It was observed that when taken the exam with Softrock music preferred as first by 44.44% of the second

group, the group's average score was 12.5 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the first preference of music. It was observed that when taken the exam with classical music preferred as fifth by 30% of the third group, the group's average score was 14.9 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the last preference of music. It was observed that when taken the exam with pop music preferred as fourth by 50% of the fourth group, the group's average score was 8.8 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the fourth preference of music.

Table 2: The Students' Exam Results with and without Music According to the Order of Music Preferred in Derivatives Topic

Groups	The Order of Music	The Type of Music in the Exam	The Score taken with Music	The Score taken without Music
GROUP 1 (10 people)	4. Nature Music 60%	Nature Music	62.00	52.00
GROUP 2 (10 people)	1. Softrock 40%	Softrock	52.00	42.00
GROUP 3 (10 people)	4. Nature Music 50%	Nature Music	52.00	48.00
GROUP 4 (10 people)	1. Pop Music 50%	Pop Music	32.00	38.00
GROUP 5 (9 people)	4. Classical Music 44.44%	Classical Music	51,11	37.77
GROUP 6 (9 people)	1. Nature Music 44.44%	Nature Music	35.55	57.77

It was observed that when taken the exam with nature music preferred as fourth by 60% of the first group, the group's average score was 10 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the fourth preference of music. It was observed that when taken the exam with Softrock music preferred as first by 40% of the second group, the group's average score was 10 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the first preference of music. It was observed that when taken the exam with nature music preferred as fourth by 50% of the third group, the group's average score was 10 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the fourth preference of music. It was observed that when taken the exam with nature music preferred as fourth by 50% of the third group, the group's average score was 4 higher compared to the exam without music. Its reason was determined as the students' being positively affected from the fourth preference of music. It was observed that when taken the exam with pop music preferred as first by 60% of the fourth group, the group's average score was 6 less compared to the exam without music. Its reason was determined as the students' being negatively affected from the first preference of music. It was observed that when taken the exam with classical music preferred as fourth by 44.44% of the fifth group, the group's average score was 13.4 more compared to the exam without music. Its reason was determined as the students' being positively affected from the fourth preference of music. It was observed that when taken the exam with nature music preferred as first by 33.3% of the sixth group, the group's average score was 22.2 less compared to the exam without music. Its reason was determined as the students' being negatively affected from the first preference of music.

Table 3: Male and Female Students' Exam Results in Limits Topic

	N	Minimum	Maximum	Mean	Std. Deviation
Female's score without music	34	13.00	88.00	48.82	22.14
Female's score with music	34	25.00	100.00	58.73	17.85
Male's score without music	6	50.00	88.00	66.83	15.25
Male's score with music	6	50.00	88.00	71.00	12.97

Female students' average score from the exam made with music in Limits Topic were 9.9 points higher than the exam without music. Male students' scores from the exam made with music in Limits Topic were 4.2 points higher than the exam without music. According to the Table 3 above, it was observed that female students' scores from the exam with music were 5.7 higher than male students' from the same exam. Although there are 18 points between male and female students in favor of male students in the environment without music, in the environment with music, it is 12.3 in favor of male students.

Table 4: Male and Female Students' Exam Results in Derivatives Topic

	N	Minimum	Maximum	Mean	Std. Deviation
Female's score without music	44	.00	80.00	48.18	21.70
Female's score with music	44	20.00	100.00	50.00	21.78
Male's score without music	14	.00	60.00	38.57	19.94
Male's score with music	14	.00	80.00	40.00	27.17

Female students' average score from the exam made with music in Derivatives Topic were 1.9 points higher than the exam without music. Male students' average score from the exam made with music in Derivatives Topic were 1.4 points higher than the exam without music. According to the Table 4 above, it was observed that female students' scores from the exam with music were 0.5 higher than male students' from the same exam. Although there are 10.4 points between male and female students in favor of female students in the environment without music, in the environment with music, it is 10 in favor of female students.

RESULTS AND SUGGESTIONS

In Limits Topic, in general, music increased the exam scores of male and female students. However, in this subject, music reduced the test scores of the students taking the exam with classical music which was their first preference. In Derivatives Topic, in general, music increased the exam scores of male



and female students. However, in this subject, music reduced the test scores of the students taking the exam in two groups with pop and nature music which was their first preference.

- In Limits subject, the students' solving problem with Softrock and Pop music can help answering the questions correctly.
- We think that, in Limits subject, the students' solving problem with their first preference Classic music can help answering the questions correctly. However, the students' solving problem with their fifth preference Classic music can help answering the questions correctly.
- In Limits subject, male and female students' solving problem with Softrock and Pop music can help answering the questions correctly.
- We think that, in Derivatives subject, the students' solving problem with their first preference Softrock music can help answering the questions correctly.
- In Derivatives subject, we think that problem solving with nature music does not help answering the questions correctly if it was preferred first, but it helps if it was preferred at the end.
- We think that, in Derivatives subject, the students' solving problem with Pop music can help answering the questions correctly. However, in this subject, the students' solving problem with Classical music can help answering the questions correctly.
- In Derivatives subject, male and female students' solving problem with music can help answering the questions correctly.

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THE EFFECT OF USING ACTIVITIES IMPROVING SCIENTIFIC LITERACY ON STUDENTS' ACHIEVEMENT IN SCIENCE AND TECHNOLOGY LESSON

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ABSTRACT

The aim of this study is examining the effect of the using scientific literacy development activities on students' achievement. The study was carried out in a primary school in Buca İzmir for 2010-2011 academic years. System of our body was chosen as a study topic in our search which took 6 weeks. Pre-post test semi experimental control model was used as an experimental pattern. While activities improving scientific literacy were being applied for experiment group; science and technology curriculum was applied for control group. As a result of the study, the experimental group achievement was measured higher than the control group. Consequently it was seen that using scientific literacy development activities in science and technology lessons increases the student achievement.

Keywords: science education, scientific literacy, the unit of "system of our body" student achievement

INTRODUCTION

In our age, individuals are supposed to get the information they need, have the ability of scientific thinking by producing new information and make the technology usable in daily life (MEB, 2000). They should improve the information, understanding, attitude and value about the science, they should progress their ability of searching, solving problem, making decision. And in order to get them some basic skills in this field, individuals must start their science education in primary schools (Tatar, 2006).

The researches in this field show that scientific literacy is one of the most important facts of the science education (Laughksch, 1999 Nelson 1999, Tsabari & Yarden, 2005 and Knai, 2006). Rather than transferring the existing information, literacy of science gains to students the ability of attaining the knowledge. Citizens must have the ability to read, write and have critical thinking about science and technology subjects in order to increase the economic productivity of a society Anagün (2008).

According to the studies, scientific literacy is one of the most important elements in science education. Scientific literacy brings in skills for achieving the knowledge rather than teaching the existing knowledge to the students. The skills acquired will be important in some occasions such as problem solving and making important decisions for their life in which students would encounter in their future life. Therefore, all elementary school students must be grown as scientific literate. According to these data, basic vision of the science and technology lesson is specified as that, *each student graduated from elementary school is a science literate* (Talim Terbiye Kurumu, 2005).

What Is Scientific Literacy?

Understanding the nature of science have been started to be defined as one of the aims of education having priority as studies on science literacy have increase in last century (AAAS, 1989). These studies in education area emphasize the importance of science literacy and indicate that, science literacy is necessary for all pupils. Who is qualified as science literate? Abd -El-Khalcik ve Boujaoude (1997) recognized the scientific literate person who knows concepts, principles theories about science,



understands scientific process and realizes connection between science and technology, society and environment. In this definition three important points are focused.

These are:

- 1 - What the science is (concepts, principles and theories)
- 2 - Scientific process skills
- 3- Applications of science (science and technology, society and environment Relations)

First of all, a science literate person should have knowledge about what science is, and relevant concepts, principles and theories. Hazen and Trefil (1991) emphasized that, keeping key concepts and principles in Physics, chemistry and biology in mind is not necessary for students. These concepts, principles and words should be employed as a tool in achieving scientific information by the students.

Some of the most important problems faced by researchers on education are that, students' scientific vocabulary is limited, students do not have sufficient skills for reading papers and they cannot understand scientific papers, which are read by them at school. These problems are caused by insufficiently developed scientific literacy (Thelien, 1991). Because students' science literacy level is low, they are limited in making arrangements relevant to the texts existing in their science books (Roe et al, 1995). One of the most important problems, which elementary and high school science teachers complain about, is that, most of the students cannot properly understand the texts, which are read by them (Lloyd & Mitchell, 1989). However, according to Roe et al (1995), the reason is that, science books are not written suitable for that, students learn the words facilitating understanding science books.

Importance of the Study

The basic vision of Science and Technology curriculum implemented by the Ministry of Education is to make students literate in science and therefore students' books have been prepared for this purpose. But it can be seen that neither the student's book nor the workbook was complete to improve the science literacy during the implementation phase. The study carries weight with the inclusion of students' science literacy learning environments, activities and also carries weight with teachers can easily prepare materials for the enrichment of the teaching environment.

Purpose of the Research

The purpose of this research is to examine the effects of using the activities for the development of science literacy in the Science and Technology course in the unit of "systems of our body" on the students' achievements in science and technology lesson.

Sentence of the Problem

What is the effect of the use of science literacy developer activities on students' achievement in the unit of "Systems of our body" in Science and Technology course of Primary School?

METHOD

Research Model

A pre-tested model of the actual trial, post-test, control group half-experimental model was used in the research. "Trial Models" are the models in which the data is produced directly under the control of the researcher for the purpose of determining cause - effect relationship. Also this data requires to be observed (Karasar, 2000).

With this survey, the effectiveness of the students' success in Science and technology lesson of the implementation of the activities to improve science literacy skills in teaching students unit named "Systems of Our Body" in the field of science and technology course in primary school will be examined. Therefore, the research is a trial model study.

In this experimental study, achievement test was administered to both experimental and control groups as a pre-test and a post-test before the start of practice. Selected as the experimental group classroom activities will be taught by scientific literacy developing skills whereas the selected class as the control group will be taught by using the content and activities implemented in 2005 introduced the subject of Science and Technology Curriculum. Science and technology achievement test which will be applied at the end of the teaching subject will determine the effect of students' success of the scientific literacy developing activities.

Table 1: The Symbolic Presentation of Research Design. T1= "Systems of our body " Unit Achievement Test

GROUPS	PRE- TEST	PROCESS	POST- TEST
EXPERIMENTAL GROUP	<i>T1</i>	Scientific literacy developing activities.	<i>T1</i>
CONTROL GROUP	<i>T1</i>	Science and Technology Curriculum	<i>T1</i>

Study Group

The dependent variable of the research is the students' academic achievements. It was found that the independent variable of the research is the science developer literacy skills. According to Sönmez (2005)', in experimental researches universe and sample selection must not be selected. For this reason global generalization of these research and study groups have been ignored and a study group has been selected. As a study group, the seventh grade students of Hüseyin Avni Ateşoğlu primary school in the Buca district of Izmir have been selected.

"Systems of Our Body" Unit Achievement Test Preparation

In this research the academic achievement test of the unit "Systems of Our Body" has been developed to determine the level of understanding of the seventh grade student's knowledge about the following units: Digestive System, Urinary System, Supervisory and Regulatory Systems. The reliability of the questions in the test process in the last grant, and the KR-20 value was calculated in this process. We observe that the KR-20 reliability of the scale was found to be 0.82. For this reason, the academic achievement test which was developed to measure the students' success is a reliable measuring tool.

Reliability from 0.70 to 0.80 from the high number of sources state that, it is a sufficient measuring tool which can be used in research studies (Özgüven, 1998). For this reason, the academic achievement test developed to measure the students' success of the unit of "systems of our body" can be said to be a reliable measuring tool.

Table 2: The Unit of "Systems of Our Body" Achievement Test Reliability Results

Test	Number of items	KR-20
"Systems of our body " Unit Achievement Test	30	0.82

**Process**

This study was conducted in Hüseyin Avni Ateşoğlu Primary School in the city of Izmir during the second semester of 2010-2011 education years. Before the application, the pre-test was applied to both classes and it was shown that there is no significant difference between control and experiment groups.

“Teaching of the unit of “Systems of our body” started in both of the groups at the same time. The duration of the teaching time was determined as 30 hours and it has been finished in both groups at the same time. Systems of our body” unit has been taught to the students of experiment group by using scientific literacy improving activities (worksheets, homework, illustrated dictionary prepared by the researcher) on the other hand; the students of control groups have been taught the way which has been suggested by the textbooks advised by Minister of Education.

DATA ANALYSIS AND RESULTS

The data analysis was made by using independent t-test and the statistical results were obtained by using SPSS packet program. At the beginning of the study a pre-test was applied to determine if there is a difference between control and experiment groups student's knowledge level about the unit of “Systems of Our Body”. The t-test analysis results which obtained by using the pre-test scores were given the Table 3.1 below.

Table 3.1: The T-Test Results of Experiment and Control Group Student’s Pre-Test Scores

Group	N	X	SS	t	p
Control	35	5,74	1,09	1,23	.22
Experiment	35	5,4	1,21		

Table 3.1 shows there is no meaningful difference between control and experiment groups’ student’s pre-test results before application. It is shown that the knowledge level of control and experiment group student’s about subject are similar before the experimental study.

The results of t-test score which was taken by post-test to determine if there is meaningful difference between control group students who were taught the subject by traditional methods and experiment students who were taught the subject by scientific literacy development activities are shown at table 3.2

Table 3.2: The t-Test Results of Experiment and Control Group Student’s Post-Test Scores

Group	N	X	SS	t	p
Control	35	21,82	4,68	7,50	.00
Experiment	35	13,68	4,36		

Table 3.2 shows that there is a meaningful difference between control and experiment group student’s post-test results. In addition there is an 8.14 score difference between control and experiment groups post-test scores. According to this result the experiment groups’ student’s achievement increased at meaningful level than the control group students’ achievement.

RESULTS AND CONCLUSIONS

It was found that at the end of the study, a meaningful variation occurred between post-test scores of the students of the test group in which the activities developing students' scientific literacy were employed in teaching "digestion system" and the students of the test group were taught according to Science and Technology. This variation was in favor of the test group in which the activities developing students' scientific literacy were employed.

According to this result, using activities developing students' scientific literacy in scientific teaching is a more effective method in increasing lesson successes of students compared with the activities recommended by science and technology program. Armstrong, (2000) investigated the integration of reading vocabulary techniques effects on achievement in 6th grade students and he determined students' achievement whose scientific literacy skills has been development are higher than the other students' achievement Mongollio (2006) studied the effect of developing scientific literacy by games on students achievement. The result of his search shows that the achievement of the students whose scientific literacy level developed by games were more successful than the others. Kristina (1992) studied on the effects of using scientific reading texts in science teaching on students' understanding scientific concepts and concluded that, such texts are useful for students' understanding scientific concepts more effectively. These results also may prove the result of this study.

According to the results, which were obtained in the study applied on 7th grade test group students by using activities developing students' scientific vocabulary in science teaching, the followings may be recommended:

The essential objective of the existing science and technology program is to make the students scientific literate. Science and technology teachers should have been trained on their job about what scientific literacy is and how it can be developed:

- Teachers practicing education program should be informed about studies on developing scientific literacy levels of students.
- It should be observed during education process whether students learn reading, writing and using scientific terms properly or not which are taught according to the existing science and technology program.

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INVESTIGATION OF PROFESSIONAL SELF SUFFICIENCY LEVELS OF PHYSICAL EDUCATION AND SPORTS TEACHERS

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ABSTRACT

The present research aimed at detecting professional self sufficiency levels of physical education and sports teachers who worked in Izmir Province and at investigating them in terms of some variables. For data collection, Teacher's Sense of Efficacy Scale-developed by Moran and Woolfolk-Hoy (2001) and Turkish validity and reliability studies conducted by Çapa, Çakıroğlu and Sarıkaya (2005) was used. 100 volunteer Physical Education and Sports Teachers who worked at state schools and private schools participated in the study. For the data analysis; percentages, arithmetic means, Mann-Whitney Test, Kruskal-Wallis, Pearson Correlation Test and non-parametric correlations were used. Consequently, when self sufficiency scores of the PE teachers in terms of working at state schools and private schools were compared, it was found out that all of the subscale-scores of the teachers who worked at private schools were higher and there was a statistically significant difference between the teachers ($p < .05$). In terms of sex variable, scores of the female PE teachers were higher but there was not a statistically significant difference ($p > .05$). There was also a statistically significant correlation between Efficacy in Student Engagement and Efficacy in Instructional strategies, Efficacy in Classroom Management ($p < .01$). It was determined that sufficiency scores of the participant PE teacher increased with professional experience.

Keywords: efficacy, self efficacy, physical education and sport.

INTRODUCTION

Today, technology and science develop fast and tasks and teachers' responsibilities charged change as the society and world change. Teaching profession—with individual, social, cultural, scientific and technological dimensions and occupying a professional status (Başkan, 2001), not only aims at lecturing, testing and grading but also educating qualified children and young people who can reach the information easily, can use and contribute to production of information, have synthesizing and analyzing skills, have critical thinking skills, can research, question and have internalized universal values (Saracaloğlu and Kaşlı, 2001). At the same time, teaching profession involves tasks and responsibilities to grow a generation that always develops itself, can independently think and is productive and positive (Saracaloğlu, 2006). Teacher, student and educational programs are the basic elements of the educational systems and a healthy and compatible relation between these elements plays a key role in growing a qualified human power (Saracaloğlu, 1992; 2000). Teacher who produces larger effects on students and educational programs is one of the most significant elements of the educational systems. It is a crucial factor that teacher should have a higher level of self sufficiency so that education can be attained in line with the desired objectives.

Self sufficiency is described as one's judgments about how well he / she can perform the necessary actions in order cope with possible situations (Bandura, 1982) and as one's beliefs that he / she possesses the necessary skills in order to perform successfully (Kurbanoğlu, 2004). In other words, self sufficiency is personal confidence and productivity (Knaus, 1998).



One's beliefs in his / her self sufficiency affect his / her thinking styles and emotional reactions, too. Individuals with higher level of self sufficiency can be more comfortable and productive when they are challenged by a difficult situation. Individuals with higher level of self sufficiency are expected to act more comfortably and in a more confident and powerful way when they encounter difficult situations and events (Kesgin, 2006). Individuals with lower level of self sufficiency believe as if the tasks were more difficult than they really are. This type of thinking increases anxiety and stress and limits the point of view needed to solve the problem in the best way, as well. Therefore, belief in self sufficiency affects deeply individuals' success levels (Pajares, 2011).

Teacher's sense of self-efficacy is described as their attitudes to show the necessary efforts and behaviors so that they can successfully perform teaching function (Köseoğlu et al., 2005) and as their belief in students' involvement and students' capability to act in conformity with the desired objectives –even with the most difficult students or least motivated students- (Tschannen-Moran and Woolfolk-Hoy, 2001). Ashton emphasizes (1984) that teachers' self sufficiency is the teachers' beliefs in their capacity to affect students' performances and no other teacher characteristics affects students' performances as much as teachers' beliefs in their capacity. Considering all of above mentioned definitions, teacher's self sufficiency is defined as their beliefs in that they can perform the necessary behaviors in order to teach in a successful way and as their beliefs in their capacity to affect the students' performances (Saracaloğlu, Aslantürk and Çengel, 2006).

Many researches conducted (Gibson and Dembo, 1984; Schunk, 1985; Woolfolk and Hoy, 1990) reported that teacher's sense of self sufficiency affects their teaching activities in the classroom and those who have higher level of self sufficiency are more eager and enthusiastic in terms of teaching; which results in a positive effect in teachers' motivation. However, other studies conducted in relation with teachers' self sufficiency reported that a sense of self sufficiency and self confidence associated with their skills to influence students' learning affects both their performances and students' success and opinions about their own self sufficiency (Ashton and Webb 1986).

In similar studies, it has been found out that there is a positive correlation between teachers' self confidence or having positive opinions about their self sufficiency and students' success levels (Armor, 1976; Ashton and Webb, 1986; Moore and Esselman, 1992; Ross, 1992); between students' motivation (Midgley et al., 1989) and teachers' and students' self sufficiency (cited by Tschannen-Moran and Woolfolk-Hoy, 2001).

Physical Education and Sports involves the whole activities that are carried out regularly and methodically in order to provide mentally and psychologically healthy grown individuals, to prepare them professional environments and to strengthen national consciousness and citizenship (Yalçın, 1995). PE teacher is the one who transfers the above mentioned objectives to the students in a systematic way. In this sense, sense of self sufficiency is the key among PE teachers because; the stronger belief in self sufficiency a teacher has the more successful and productive he / she is (Türk, 2009). In light of these opinions, the aim of the current research is to assess professional self sufficiency beliefs of physical education in terms of some variables.

METHOD AND TOOL

100 volunteer Physical Education and Sports Teachers (46 female and 54 male) who were selected using random-sampling and worked at both state schools and private schools in Izmir Province participated in the study. A questionnaire form was distributed to those who were willing to participate and there was no time-limit for filling in the forms. Official permissions from the Provincial Directorate of National Education and school managements were obtained. For the data analysis; percentages, arithmetic means, Mann-Whitney Test, Kruskal-Wallis, Pearson Correlation Test and non-parametric correlations were used. Results were considered significant at $p < .05$.

Instruments

As the data collection tool, a questionnaire form used in survey method was selected in order to generalize the population. Socio-demographic Data Collection Form and Teacher's Sense of Efficacy Scale developed by Moran and Woolfolk-Hoy (2001) to measure PE teachers' expectations about their competence (self sufficiency) and Turkish validity and reliability studies conducted by Çapa, Çakıroğlu and Sarıkaya (2005) were used.

Socio-Demographic Data Collection Form

The form filled by the participants themselves contains questions about seven different variables [sex, marital status, age, working place (state school v.s. private school), professional rank, weekly working time, sportive facilities of the school]. Some of the demographic variables were previously used in other researches conducted with other professional groups and teachers. We wanted to know the effect of these variables on physical education teachers. Other variables were determined among the problematic issues and behaviors after the teachers had mentioned them during the face to face interviews.

Teacher's Sense of Efficacy Scale

As the data collection tool, a questionnaire form of 5 questions and "Teacher's Sense of Efficacy Scale" were used. Turkish validity and reliability studies of the scale developed by Moran and Woolfolk-Hoy (2001) were performed by Çapa, Çakıroğlu and Sarıkaya (2005). The trial form of the scale that contained 24 items was administered to 628 candidate teachers and factor analysis was made. It is a nine-point scale. It is assessed as 1-Nothing, 3-Very little, 5- Some influence, 7- Quite a bit and 9- A great deal. The scale has 3 subscales, each of which is consisted of 8 items: Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management. Alpha reliability coefficients of the scale for the Turkish candidate teachers was .82 for Efficacy in Student Engagement, .86 for Efficacy in Instructional Strategies and .84 for Efficacy in Classroom Management. Alpha reliability coefficient of the whole scale was .93 and all of them were considered significant at .01. The factor analysis of the Teacher's Sense of Efficacy Scale was made and it was found out that the scale was a valid and reliable tool. These values of the present research was .83, .66, .84 and .94 respectively.

FINDINGS

Table 1: Mann-Whitney U Test For State-Private Schools – Self Sufficiency

Burnout Subscales		n	Mean Rank	Sum of Ranks	U	P	
Öğrenci katılımı Sağlama	State	39	41,28	1610,00	830,000	,011	P<0.05
	Private	61	56,39	3440,00			
Öğretim Stratejileri	State	39	40,90	1595,00	815,000	,008	P<0.05
	Private	61	56,64	3455,00			
Sınıf Yönetimi	State	39	42,12	1642,50	862,500	,020	P<0.05
	Private	61	55,86	3407,50			

5 % of the PE teachers told that they belonged to low income group, 91 % to medium income group and 2 % to high income group.

When analyzed in terms of self sufficiency subscales, there were differences in all of the subscales ($p<.05$) and PE teachers who worked at private schools had higher scores in Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management compared to PE teachers who worked at state schools (Table 1).

Table 2: Mann-Whitney U Test For Sex- Self Sufficiency

Self Sufficiency		n	Mean Rank	Sum of Ranks	U	P	
Öğrenci katılımı Sağlama	Females	46	50,92	2342,50	1222,500	,892	p>0.05
	Males	54	50,14	2707,50			
Öğretim Stratejileri	Females	46	48,16	2215,50	1134,500	,455	p>0.05
	Males	54	52,49	2834,50			
Sınıf Yönetimi	Females	46	50,97	2344,50	1220,500	,881	p>0.05
	Males	54	50,10	2705,50			

Table 2 demonstrated that female PE teachers had higher scores in Efficacy in Student Engagement and Efficacy in Classroom Management whereas male PE teachers had higher scores in Efficacy in Instructional Strategies. However, there was not any significant difference between the groups ($p>.05$).

Table 3: Mann-Whitney U Test For Marital Status-Self Sufficiency

Self Sufficiency		n	Mean Rank	Sum of Ranks	U	P	
Öğrenci katılımı Sağlama	Married	70	48,84	3418,50	933,500	,379	p>0.05
	Single	30	54,38	1631,50			
Öğretim Stratejileri	Married	70	48,24	3376,50	891,500	,231	p>0.05
	Single	30	55,78	1673,50			
Sınıf Yönetimi	Married	70	50,74	3552,00	1033,000	,898	p>0.05
	Single	30	49,93	1498,00			

When marital status and subscales of self sufficiency were analyzed, married teachers were better at Efficacy in Classroom Management than single teachers while single teachers were better at Efficacy in Student Engagement and Efficacy in Instructional Strategies. However, there was not any significant difference between the groups ($p>.05$) (Table 3).

Table 4: Mann-Whitney U Test for On-Job-Training-Self Sufficiency

Self Sufficiency		n	Mean Rank	Sum of Ranks	U	P	
Öğrenci katılımı Sağlama	Yes	84	53,74	4514,00	400,000	,010	P<0.05
	No	16	33.50	536.00			
Öğretim Stratejileri	Yes	84	53.88	4525.50	388,500	,007	P<0.05
	No	16	32.78	524.50			
Sınıf Yönetimi	Yes	84	54.29	4560.00	354,000	,003	P<0.05
	No	16	30.63	490.00			

The analysis results whether or not self sufficiency scores of the teachers differed in terms of getting on-job-training were presented in Table 4 with subscales. It was noted that PE teachers who got on-job-training had higher self sufficiency than those who did not get on-job-training. There was significant difference between teachers with on-job-training and those without on-job-training in all groups ($p<.05$).

Table 5: Mann-Whitney U Test For Following Professional Publications-Self Sufficiency

Self Sufficiency		n	Mean Rank	Sum of Ranks	U	P	
Öğrenci katılımı Sağlama	Yes	49	58.72	2877.50	846,500	,005	P<0.05
	No	51	42.60	2172.50			
Öğretim Stratejileri	Yes	49	57.69	2827.00	897,000	,015	P<0.05
	No	51	43.59	2223.00			
Sınıf Yönetimi	Yes	49	57.41	2813.00	911,000	,019	P<0.05
	No	51	43.86	2237.00			

Self sufficiency of the PE teachers who followed professional publications was higher in all subscales and there was a significant difference in all of the subscales between the teachers who followed professional publications and those who did not ($p<.05$).

Table 6: Kruskal Wallis Test For Age Groups-Self Sufficiency

Öz Yeterlilik		n	Mean Rank	X ²	p	
Öğrencinin katılımını sağlama	<30Years	20	50.23	2,070	,558	P>0.05
	31-40	46	48.97			
	41-50	21	56.20			
Öğretim Stratejileri	>51	11	41.50	1,400	,705	P>0.05
	<30Years	20	53.78			
	31-40	46	47.73			
Sınıf Yönetimi	41-50	21	53.89	1,870	,600	P>0.05
	>51	11	44.86			
	<30Years	20	48.93			
	31-40	46	52.17			
	Years 41-50	21	51.70			
	>51	11	39.45			

As seen in Table 6, no significant difference in the subscales occurred in terms of age ($p>0.05$).

Table 7. The Results of the Correlation between Self Sufficiency Levels of the Physical Education Teachers and Variables

Burnout – Variables	1	2	3	4	5	6
1.Age	1,000	,911**	,283**	,017	,023	,033
	-	,000	,005	,868	,823	,747
2. Professional Rank	,911**	1,000	,297**	,034	,046	,030
	,000	-	,003	,742	,768	,654
3. Weekly Working Time	,283**	,297**	1,000	,128	,074	,182
	,005	,003	-	,208	,466	,073
4. Öğrencinin katılımını sağlama	,017	,034	,128	1,000	,693**	,785**
	,868	,742	,208	-	,000	,000
5. Öğretim Stratejileri	,023	,030	,074	,693**	1,000	,715**
	,823	,768	,466	,000	-	,000
6. Sınıf Yönetimi	-,033	-,046	,182	,785**	,715**	1,000
	,747	,654	,073	,000	,000	-



In Table 7, there was a significant correlation between weekly working hours and age and professional rank ($p < .05$). Also, there was a significant correlation between Efficacy in Student Engagement and Efficacy in Instructional Strategies and Efficacy in Classroom Management ($p < .05$).

DISCUSSION

The present research aimed at investigating professional self sufficiency levels of physical education and sports teachers who worked in Izmir in terms of some variables. According to the research findings, 5 % of the PE teachers belonged to low income group, 91 % to medium income group and 2 % to high income group. 11 % of the students had administrative tasks at the schools where they worked. It was observed that there was a significant difference between the teachers who worked at state schools and those who worked at private schools in self sufficiency ($p < .05$) and that teachers who worked at private schools had higher level of self sufficiency. The study of Türk (2009) reported that there was not any kind of significant difference between self sufficiency levels of PE teachers in terms of school type.

Teachers who work at private schools have a wide range of material equipment with which they can combine suitable teaching strategies compared to the teachers who worked at state schools. School managements hold on-job-trainings in order to support teacher development and to encourage participation in these trainings. It may be concluded that PE teachers who work at private schools feel more competent and thus give a more qualified education.

In the current research, there was not any significant difference between the groups in subscales in terms of sex variable ($p > .05$). Yet, it was noted that female physical education teachers had higher scores in Efficacy in Student Engagement and Efficacy in Classroom Management whereas male teachers were better at Efficacy in Instructional Strategies. The study of Yılmaz et al. (2010) reported that female teachers had higher self sufficiency compared to male teachers and there was a significant difference in terms of sex variable on behalf of females.

In the study of Ekici on “Beliefs in Self Sufficiency of Vocational High School Teachers”, it was detected that teachers’ beliefs in self sufficiency differed according to sex and branches and the difference was on behalf of female teachers and teachers of Education of Religion and Ethics Course (Türk, 2008).

It was noted in the study of Akdağ and Walter (2005) that sufficiency feeling differed according to sex and females considered themselves more sufficient and competent than males. In another similar study conducted by Şeker, Deniz and Görden (2005), it was reported that female candidate teachers identified themselves as more sufficient and confident than male teachers. In the study of Cheung (2008), too, female teachers had higher scores of sufficiency. However, some researches (Aslan and Sağır, 2008; Başer, Günhan and Yavuz, 2005; Saracaloğlu and Kumral, 2007) did not reveal any significant difference in terms of sex variable. In this sense, we may say that our findings were similar to above mentioned findings.

According to the research findings, PH teachers’ self sufficiency levels did not differ in terms of marital status. It was found out that self sufficiency scores of the married teachers in “Efficacy in Classroom Management” were higher than single teachers while self sufficiency scores of single teachers in “Efficacy in Student Engagement” and “Efficacy in Instructional Strategies” were better than married teachers. The study of Yılmaz et al. (2010) reported that there was a significant difference in terms of marital status and self sufficiency scores of the married teachers were found to be higher than those of the single teachers.

There was a significant difference between PE teachers who got on-job-training and those who did not. This difference was on behalf of those who got on-job-training in terms of all subscales. It was understood in the literature screening that there was a limited number of studies that investigated the self sufficiency perception and on-job-training. In the study of Saracoğlu, Aslantürk and Çengel

(2006), it was reported that self sufficiency levels of the teachers differed in terms of getting on-job-trainings. Ortaçtepe (2006) concluded that there was not any correlation between on-job-training and teachers' self sufficiency perceptions; which may –we think- be associated with the quality of on-job-trainings.

In terms of following professional publications, it was found out that self sufficiency of the PE teachers was higher in all subscales on behalf of those who followed professional publications and there was a significant difference between the groups in all subscales ($p < 0.05$). Our study did not reveal a significant difference in terms of age ($p > 0.05$). In the study of Celep (2002), it was observed that teachers' beliefs in sufficiency differed only in terms of age and personal teaching sufficiency increased with age but general teaching sufficiency decreased. Our findings and the above mentioned findings differed from each other. It may be suggested that KPSS exam taken recently (Public Personnel Selection Exam) may have had negative effects on age.

There was a significant correlation between age and professional rank and weekly working hours ($p < 0.05$). As for the subscales, a significant correlation between Efficacy in Student Engagement and Efficacy in Instructional Strategies and Efficacy in Classroom Management occurred, too ($p < 0.05$). In the studies of Woolfolk-Hoy (2000) and Karahan (2006) it was noted that self sufficiency of the teachers with higher ranks was higher than those with lower ranks. Similarly, the studies of Önen and Öztuna (2005) and Cheung (2008) pointed out that there was a significant correlation between teachers' rank and their self sufficiency. On the other hand, there are also various studies that demonstrated that there was not a significant correlation between teachers' rank and their self sufficiency (Ekici, 2006; Kesgin, 2006; Saracaloğlu, Aslantürk and Çengel, 2006; Steele-Dadzie, 2004). Our results supported the literature.

CONCLUSION AND RECOMMENDATIONS

Generally speaking about the results of the research; it was determined that PE teachers' perceptions about their socio economic levels were at moderate level; teachers who worked at private schools, who followed professional publications and who got on-job-training had higher level of self sufficiency. In light of these results, it may be recommended that on-job-training courses should be provided in order to improve teacher' sufficiency in Efficacy in Student Engagement and Efficacy in Instructional Strategies and Efficacy in Classroom Management and joint researches about classroom management and teaching strategies should be conducted in collaboration with universities.

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THE EFFECTS OF CONCEPT MAPS ON THE ACADEMIC SUCCESS AND ATTITUDES OF 11th GRADERS WHILE TEACHING URINARY SYSTEM

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ABSTRACT

The aim of the present study is to support, enrich, and broaden the process of education using concept maps and to determine the effects of concept maps in biology classes on school success, attitude and retention of the knowledge taught. The present study was conducted as an experimental study with pre-test and post-test control groups. The participants of the study were impartially chosen 11th grade high school students from an Anatolian High School and a Teacher Training Anatolian High School. 45 students, 21 in the control and 24 in the experimental group, participated in the study. In the present study, 'urinary system' unit was taught. Whereas the control group was taught traditionally, the experimental group was taught using concept map based teaching technique. Data was collected using concept map attitude scale and biology achievement test, a 45 item scale with a reliability coefficient of ($\alpha = .78$). In order to identify the differences among the groups, biology achievement test was used as pre and post test. Data obtained to determine the achievement of both groups were analyzed using t-test analysis model of the SPSS 11.0 package program. At the end of the study, a statistically significant difference ($p < .05$) between emerged traditional teaching method and using concept map while teaching. The data also indicated that the cognitive support of the concept maps had a positive impact on students' achievement and retention of knowledge. The data furthermore indicated that students have a positive attitude for concept maps.

Keywords: concept map, traditional teaching method, academic achievement, urinary system.

INTRODUCTION

Throughout their lives, people acquire information, skills, attitudes and values as a result of the interaction with their environment. These experiences are the fundamentals of learning. In general, learning can be described as bringing about changes for individual (Ertürk 1993). The main aim of science education and teaching is to teach the essence of science with concepts as its fundamental stones. At the same time, in our heavily teacher centered traditional educational system, the passiveness of students while acquiring information, heavy load of the curriculum to be covered in a short time, and providing only verbal definitions of concepts creates a learning environment which based on rote learning. Science education literature has countless studies showing that students have conceptual errors even after a formal education (Wandersee et al, 1994). Cognitive and behavioral theories tried to explain the phenomenon of learning. Behavioral learning theories sustained their impact until the end of 1960s; however as they focused only on observable behavior, lost their supremacy and gave in to cognitive theories of learning from 1970'ies of as they remained insufficient in identifying important and complicated scientific processes such as perception, problem solving, attention, personality, and

memory. According to cognitive scientist, learning is a cognitive procedure and occurs only if a learner makes sense of the information cognized. This cognition changes in line with learner experiences, culture, the nature of the interaction, and the role of the student in this process (Nakiboğlu 1999). Concept maps, since visual and two dimensional, present different concepts and their interactions within a subject, increase retention and learning as they address to individual differences and learning differences, easy to use and learn from, enable active student participation, and facilitate thus the process of the learning (Demirel, 2004; Kaptan, 1998). Concept mapping method was developed for learner to show what they already know and become aware of the cognitive structure (Novak ve Gowin, 1984). Concept maps help students understand propositions and concepts more clearly, make connection between old and new knowledge, and develop a cognitive structure in their minds (Arnaudin et al, 1984).

MATERIAL and METHOD

The aim of the present study is to examine the effects of concept maps on students' achievement and attitudes while teaching the 'urinary system', considered as difficult to learn, in the curriculum of the 11th grade. Hence the lessons were conducted both using traditional methods and employing concept maps in biology classes.

Study Group

Equivalent classes, one from each school, were chosen from Anatolian High School and Teacher Training High School in Isparta/Şakirkaraağaç. Biology Achievement Test (BAT) was applied to these classes and the results of the tests were evaluated statistically. The outcomes of the analysis (t-test) verified the results of these two classes to be close with each and hence they were enrolled into the study. Two tests were employed in the study. These were Biology Achievement Test and concept map attitude scale (CMAS). The features of the measurement tools used for data collection are indicated in the table below (Table1).

Table1: Research Design of the Study

Groups	Pre-test	Application	Pro-test
Experimental group-EG	T1,T2	CMT	T1,T2
Control group- CG	T1	TBT	T1

EG: Shows the group in which the concept maps are applied for teaching

CG: Shows the group in which the traditional method is applied for teaching

T1: Biology achievement test (BAT: pre-test, pro-test)

T2: Shows the concept map attitude scale

Data Collection Tool

In the study, Biology Achievement Test and Concept Map Attitude Scale were used. The features of the measuring tools used for collecting data are as following.

Biology Achievement Test (BAT)

The test was developed by the researcher. Biology achievement test consists of 45 multiple-choice questions. While preparing the questions the, university entrance exam preparation books, 11th grade biology course books, and Communiqués Journal of the Turkish Ministry of Education were taken into account. The biology achievement test was firstly applied to the 150 students. The questions which were not reliable were changed or removed from the test. So, the

reliability of the biology achievement test was tested and alpha reliability coefficient was found as .78. This test was applied to the control and experiment groups as pre-test before the study was implementation and as post-test after.

Concept Map Attitude Scale (CMAS)

The origin of the concept map attitude scale was developed by Arnaudin and Mintzes (1985) and used for measuring the attitudes of the students about concept maps. It was translated to Turkish by Uzuntiryaki and Geban (1999). It consists of ten questions and is a Likert type scale. Its reliability was found as .92.

Implementation

This study continued for two weeks in the second term of the 2008-2008 academic year. Before the implementation of the study, concept map technique was explained to the participants and some examples were given. The classes consisting of two 40 minutes periods were conducted regularly. For the implementation, two classes consisting each of 21 and 24 students with close achievement levels, were chosen. One of the classes, chosen as the control group, was taught using traditional biology teaching (TBT) method. The other group, experimental group, was taught using concept maps. Besides BAT as pre and post test, this group also answered CMAS. Before the unit of urinary systems, in the previous class hours, concept maps were introduced to the students by giving examples. The researcher joined the classes personally. Throughout the unit concept maps were drawn together with the students and at the end of the previous unit, in order to structure the concept maps more efficiently in their minds, students had to write some concepts into the blank spots of some concept maps. Students were to fill out these gaps and have also to draw new maps to provide feedback.

When the time came for 'urinary system' unit, concept maps were used for teaching the experimental group. Some tasks about concept maps were assigned to the students as homework. Inappropriate concept maps were edited in the classroom after the student had handed in their homework. Furthermore, throughout the course, students were asked to fill in the blanks of concept maps. After the implementation BAT was applied to both groups but CMAS only to the experimental group.

Data Analysis

In the analysis of the pre-tests and post-tests of the groups "matched t-test and for the analysis of pre-tests and post-tests between groups "independent t-test" has been used. SPSS 11.0 package program was employed for the statistical analysis. Biology achievement test (BAT), used for data collection, was prepared as a test multiple-choice consisting of 50 items. After the application of BAT to 150 students and statistical analysis, 45 questions with an item correlation result higher than .30 were incorporated into the test and the remaining 5 questions were removed. Hence the items on BAT were limited to 45 questions. In order to calculate the reliability of the test, Kuder- Richardson (KR-21) Cronbach Alpha formula was used. The reliability co-efficiency was determined as .78.

FINDINGS

45 students were involved in the present study about the effectiveness of using concept maps while teaching the urinary system in biology classes. Out of these 45 students, 21 were in the control group (taught using traditional method) and 24 in the experimental group (concept maps based teaching).

No statistically significant difference was found in the BAT pre-test and CMAS results of the students taught traditionally or concept maps based related to the ‘urinary system’ unit. Whereas the arithmetic average, resulting from statistical analyses, of the control group was 19,6842, the arithmetic mean of experimental group was 18,5500. T value calculated between the achievement scores of the two groups was - .950 (Table 2).

According to these outcomes, in the pre-tests of the control and experimental group, no statistically meaningful difference was found between the achievement scores considering $p > .05$. Hence, it can be assumed that both groups are equal in terms of their pre-test results.

Table 2: BAT-Pre-test Score Comparison of the Control and Experimental Group

Groups	N	\bar{x}	SS	SD	t	p
Control group	21	19.6842	3.49687			
Experimental group	24	18.5500	3.95335	39	-0.950	,348

$p > .05$

Regarding the ‘urinary system’ unit in the biology curriculum, as a result of statistical analyses the arithmetic mean of the control group was 34,0435 and of the experimental group 37.9500 calculated when the post tests of the two groups lectured traditionally and concept maps based were compared. T values calculated between the two groups’ achievement scores is 3,083 (Table 3).

According to this outcome, considering $p < 0.05$, there was a statistically meaningful difference between the achievement scores obtained in the post-tests of the control and experimental group showing that concept maps based teaching is more effective than traditional teaching methods. This is also an indicator for the positive effect of using concept maps on students’ performances during teaching.

Table 3: BAT-Post-test Score Comparison of the Control and Experimental Group

Groups	N	\bar{x}	SS	SD	t	p
Control group	21	34.0435	4.59722			
Experimental group	24	37.9500	3.70597	39	3.083	,004*

* $p < .05$

Whereas the experimental groups’ arithmetic mean of the pre test is 18,5500, it is for the post-test 37,9500, as a result of the statistical analysis conducted regarding the ‘urinary system’ unit in the 11th grade biology curriculum. T value, calculated between experimental group’s pre and post tests achievement scores, is - 14,756 (Table 4).

According to this result, considering $p < 0.01$, a statistically meaningful difference was found between the experimental group’s pre and post test, achievement scores. Hence, this shows that using concept maps throughout the courses increases learners’ achievement levels.

Table 4: BAT-Pre and Post-test Comparisons of the Experimental Group

Groups	N	\bar{x}	SS	SD	t	p
Control group	21	18.5500	3.95335			
Experimental group	21	37.9500	3.70597	21	-14,756	,000**

**p<.01

Considering the ‘urinary system’ unit in the 11th grade biology curriculum, statistical analysis of the pre and post test achievement scores of the traditional biology teaching (TBT) group, the control group, revealed that the pre test arithmetic mean value was 19,6842 and of the post test 34,0435.

T value calculated for the pre and post test scores of the control group is - 9,8921. This is an indication that TBT also increases the success levels of the students since the topic was taught during the traditional teaching of biology. However, this success level of is less than the success level of the concept maps based biology teaching group (CMT). These shows there are still missing parts of urinary system unit in the TBT group (Table 5).

According to this result, considering p<.01, there is a significant difference between the control group’s pre- test and post- test scores. However, the average mean is less than the difference of the (CMT).

Table 5: BAT- Pre and Post-test Comparisons of the Control Group

Groups	N	\bar{x}	SS	SD	t	p
Control group	24	19.6842	3.49687			
Experimental group	24	34.0435	4.59722	24	-9,891	,000**

**p<.01

Considering the ‘urinary system’ unit in the 11th grade biology curriculum, statistical analysis of the pre and post test achievement scores of the CMT group, the experimental group, revealed that the pre test arithmetic mean value was 18,6500 and after the implementation of the CMT program 23,4500.

A statistically significant difference, considering p <0.01, was found between CMT group’s pre and post-test achievement scores. This results show a positive development in the attitude of the CMT students towards concept maps (Table 6).

Table 6: Comparison of the Experimental Groups Pre and Post Test Data

Groups	N	\bar{x}	SS	SD	t	p
Total pre-test	21	18,6500	2,79614			,000*
Total post-test	21	23,4500	2,25890	21	-5,173	*

**p<.01

RESULTS AND DISCUSSION

One of the most important goals of biology education is enabling the learners to acquire concepts of biology in a meaningful way and using them.

The results of the present study have shown that the use of concept maps while teaching the urinary system has positive influence on the students’ achievements. It is common fact that the changes in the behavior of the individuals resulting form personal practices are far more effective than changes resulting from observation and hearing (Yalın, 2003). Hence, concept maps which have been drawn during the lesson by the students gain further importance.

A 45 item biology achievement test (BAT) has been applied to both study groups (CMT and TBT) as a pre-test. In relation to BAT, pre-test statistical analysis of the CMT group revealed an outcome in 18, 55 average scores and of the TBT an average of 19,68, and $p = .348$ between groups without a statistically significant difference (Table 1). In terms of the objectivity of the study, it is important that both research groups have equal achievement levels. It can be seen that after implementation, the CMT group has an average score of 37, 95 and the TBT group of 34,03. In terms of post-test scores, CMT group has more average scores than the TBT group; however this difference is not statistically significant ($p < .05$). At the same time, the post-test scores of both groups are higher than their pre-test scores and of statistical significance $p < .01$.

These results are in line with the findings of the below mentioned studies: Okebukola and Jegede (1988), Pankratius (1990), Franklin (1991), Willerman and Mac Harg (1991), Esiolu and Soyibo (1995), Jegede et al. (1990).

The study also investigated the effect of using concept maps in biology class on the attitudes of students. Therefore, as stated in earlier sections, CMAS was applied to only to the CMT group, the experimental group, during the pre and post-tests. There is a statistically significant difference in the pre-and post-tests scores of the attitude scale. At the end of the implementation, a positive attitude towards the concept maps has been detected in the participants. It can be stated that the implementation had a positive impact on the students' attitudes towards the use of concept maps in biology education. Furthermore, the change in the students' attitudes after the implementation of the study might be attributed to their active concept maps drawings.

In the study of Şan (2008) conducted with second grade high school students, on the effects of using concept maps while teaching the "transportation system in plants," in his biology classes with an experimental group of 70 students (CMT), the pre-test average scores of the experimental group was 12,88; whereas of the control group (TBT) it was 14,34. Although there wasn't significant difference in the preliminary tests, in the final test the experimental group's average raised to 27,05 while the control group's average remained at 22,14.

No statistically significant difference was found between the pre-tests average scores of the CMT group, 8,97, and of the TBT group, 7,64, in the study of Kılıç (2005) investigating the effects of conceptual learning of the basic components of living things unit on students success. However, the post-test analyses showed that CMT group's average rose to 20,38 and TBT group's average to 15,20. CMT group's higher post-test scores show that concept maps are more effective than TBT.

In the study of Thompson and Mintzes (2002), the effects of concept maps to students success was studied with 238 participants from the 5th, 8th, 11th grades, freshman and undergraduates. They concluded that concept maps had a positive impact on students' achievements.

Güçlüer (2006), in order to determine the contribution of concept maps as a support to cognition to students' success, retention, and attitude toward science classes in primary school science education formed an experimental and control group consisting each of 48 pupils. Whereas the average pre-test score of the control group is 2,72, of the experimental group it is 2,22. The

average post- test scores of the control group is 11,91 and of the experimental group 22,14. The information obtained from the analysis of the information put forward that teaching with concept maps is more effective than plain narrative teaching method.

In line with the findings of the present study and discussions considering the following proposals for science but particularly biology education is important:

1. Teachers should be given information about new teaching methods and shown examples of how to apply these methods in their classes.
2. Teachers should make use of different techniques and methods in order to facilitate learning and teaching in biology courses and make them love the topics.
3. A more student centered teaching should be adapted in teaching biology and teacher dominated classes are to be avoided as much as possible.
4. Teachers should be able to use concept maps not only teach them but also to follow and assess the students' cognitive development.

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DETERMINATION OF THE PROBLEM SOLVING LEVEL OF GIFTED/TALENTED STUDENTS

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ABSTRACT

It is important to determine and develop problem solving skills of gifted and talented children, who have different emotional characteristics compared to peers, in terms of using their potentials at the highest level. In this research, which was done with the aim of determining self sensations of gifted and talented children in problem solving skills, it was examined if gender and grade level variables create differences on sensations for problem solving skills of gifted and talented children. The study group of research that was done by using Survey method is made up of 100 students who attended Sivas Science and Art Center in spring term of 2010- 2011 Education year. As a data collecting tool in study, "Problem Solving Inventory for Children" that was developed for primary school students by Serin, Bulut Serin & Saygılı (2010) was used. Inventory (ÇPÇE), its Cronbach alpha reliability coefficient is 0.80, is made up of three factors, "Confidence", "Self-control" and "Avoidance" and 24 items in total. Collected data was analyzed by using SPSS 12.00 programme. In this context, "t", "F", "scheffee" tests and "correlation analysis" were applied. As a result of study, according to the findings, it wasn't found any significant differences between total point of gender, grade levels, problem solving skill sensation and point averages of subscales.

Keywords: problem solving, gifted/talented students

INTRODUCTION

The thing that makes individuals unique is their distinctive characteristics. Being gifted is a product of general abilities, personal thought and motivation (Feldhussen, 1986). However, it is called gifted person who shows high performance or has potentiality in most of mental abilities or intelligences compared to peers, has a strong creativity and never gives up when he/ she starts a task (Ataman, 2003). Gifted students show different emotional characteristics in addition to mental and social characteristics compared to other students (Clark, 1997). If these students' educations are left up to chance, it can be caused them to develop disadvantageously (Cutts ve Moseley, 2001). Not to lose gifted individuals who are in a limited number, it is necessary that environment and opportunities which are need for their education life should be provided (Çapan, 2010: 141). Firstly, improving individual's abilities systematically and in a programmed way is necessary for using individual's ability more effectively (Renzulli, 1999).

One of the distinctive characteristics that distinguish gifted or talented children who compose %2 of society from their peers is their problem solving skills (Enç, 2005). Problem solving skill is cognitive, affective and social abilities which individual use them in the process of overcoming difficulties they encounter in achieving a goal. (Bingham, 2004). These skills are acquired in development periods and have effects on social adaptation of an individual and success for daily life. (Arenofsky, 2001). These provide for a child to overcome his/her own difficulties. In other words, these teach a child to know what should be done in cases he/she doesn't know what to do, to choose equipments for reaching a goal he/she plans, to make plans, to follow progress of a plan (Altun, 2000). Problem solving process includes a range of efforts from realizing the problem to solving it. Problem solving skill of an individual is significantly affected by personal experiences, personality traits, attitudes and morals. (Güçlü, 2003: 273-276). Core knowledge, skills and habits the child will acquire in early ages by means of problem solving experiences shape social and emotional life in addition to later education life (Arı, 2003). So, the main goal is to get overcoming skill to students so that they solve when they encounter other problems out of school life (Kalaycı, 2001:41).



As understood from these explanations, problem solving skills, which help students to overcome difficulties well they encounter, are seen an effective way for improving individual abilities. Determining in which level gifted children have these abilities that can be learned or improved and especially are seen as a necessary to be acquired in early ages has a key importance in terms of enhancing education quality given them in addition to improving these skills in children. In this study, which was done to determine self- sensations of gifted and talented children in the matter of problem solving skills, it was examined the effect of several variables on gifted and talented children's sensations for problem solving skill.

The Study

The aim of this study is to examine if gender and grade level variables create differences on sensations for problem solving skills of gifted and talented children. Dependent variable of study is "problem solving skill" and independent variables are "gender" and "grade level". The study group of research that was done by using Survey method is made up of 100 students who attended Sivas Science and Art Center in spring term of 2010- 2011 Education year. As a data collecting tool in study, "Problem Solving Inventory for Children (PSIC)" was used to determine self- sensations of gifted and talented children in the matter of problem solving. Inventory, which was developed by Serin, Bulut Serin ve Saygılı (2010) for testing self-sensation level related to problem solving skill of primary school students, to test problem solving approaches and behaviours, consists of three factors "Confidence to Problem Solving Skill" (12 items), "Self-control" (7 items) ve "Avoidance" (5 items) and 24 items totally. Cronbach alpha reliability coefficient of scale is .85. ÇPÇE, 5 point likert scale which is marked between 1-5, is a self-evaluation scale that test self-sensation of an individual about the problem solving skills. Point range is 24-120. When the points are calculated, points that belong to items which take place completely in second (18, 19, 20, 21, 28, 49, 58) and third (41, 43, 59, 62, 64) factors and reflect self- control and avoidance were reverse coded. Total points' level that was received from scale shows that individuals have an enough self-sensations for problem solving matter.

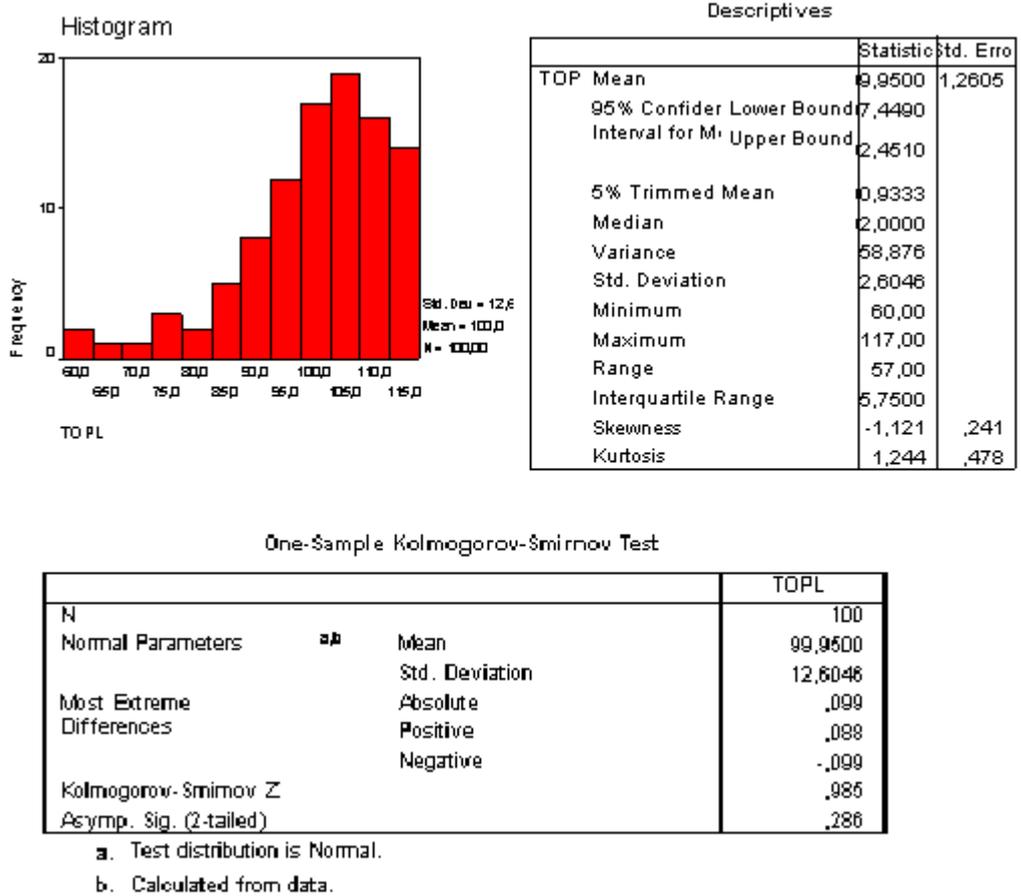
Table 1: Sample Introductory Findings

Independent variables	n	%
Gender		
Female	53	53.0
Male	47	47.0
Class		
3	31	31.0
4	24	24.0
5	28	28.0
6	17	17.0

As seen in Table 5, sample consists of 53.0% (53) female and 47.0% (47) male. 31% of sample is at 3th grade, 24% is at 4th grade, 28% is at 5th grade and 17% is at 6th grade.



Table 2: The sample is suitable for normal distribution or not



SPSS 12.00 programme was used for statistical analysis of collected data from testing tools that was used in study. Significance level was accepted as .05 in interpretation of collected data. (Büyüköztürk, 2004). In study, it was examined if there is a relation between independent and dependent variables. To determine if there is a difference between groups, for dichotomous variables “t” test, for more than two variables “F” test and to determine from which variables the difference arise “scheffe” test were applied. Correlation analysis was applied to examining the relation between subscales. Collected data was shown in Tables below.

Table 3: Problem Solving Scale According to Age of Sample and Point Averages and Standart Deviation from Subscales

		n	X	ss	t	p
CONFIDENCE	GENDER					
	Male	53	50,6604	6,7023	.622	.535
	Female	47	49,8085	6,9802		
SELF-CONTROL	Male	53	27,4340	5,5833	.257	.798
	Female	47	27,7234	5,6711		
AVOIDANCE	Male	53	22,3774	3,0898	.937	.351
	Female	47	21,8298	2,7052		
TOTAL PS	Male	53	100,4717	12,7470	.438	.663
	Female	47	99,3617	12,5532		



As seen in the table, there is not a significant difference between gender and confidence in problem solving, self- control, avoidance, total problem solving points ($p > .05$).

Table 4: Problem Solving Scale According to Categories of Sample and Point Averages and Standard Deviation from Subscales

Grade		CONFIDENCE	SELF-CONTROL	AVOIDANCE	TOTAL
3	X	50,3871	28,1613	21,6129	100,1613
	N	31	31	31	31
	SS	6,8297	6,6888	3,6668	14,3157
4	X	51,1250	28,1250	22,7917	102,0417
	N	24	24	24	24
	SS	7,3266	4,1631	2,5191	12,4219
5	X	49,6071	26,1429	21,8214	97,5714
	N	28	28	28	28
	SS	6,8710	5,6484	2,7224	12,2639
6	X	49,8824	28,0588	22,5882	100,5294
	N	17	17	17	17
	SS	6,3922	5,1292	2,0328	10,3085

Table 5: Problem Solving Scale According to Categories of Sample and ANOVA Results Related to Points from Subscales

		Sum of squares	sd	Average of squares	f	P
CONFIDENCE	Intergroups	32,817	3	10,939	,230	,875
	In-groups	4562,423	96	47,525		
	Total	4595,240	99			
SELF-CONTROL	Intergroups	79,322	3	26,441	,840	,475
	In -groups	3023,188	96	31,492		
	Total	3102,510	99			
AVOIDANCE	Intergroups	25,022	3	8,341	,982	,405
	In -groups	815,538	96	8,495		
	Total	840,560	99			
TOTAL	Intergroups	270,506	3	90,169	,560	,643
	In-groups	15458,244	96	161,023		
	Total	15728,750	99			

As seen in table, it wasn't seen a significant difference between grade level and confidence in problem solving, self- control, avoidance, total problem solving points($p > .05$).

Table 6: Correlation Rates between Problem Solving Skills and Subscales

SUBSCALES	x	Ss	n
CONFIDENCE	50,2600	6,8130	100
SELF-CONTROL	27,5700	5,5981	100
AVOIDANCE	22,1200	2,9138	100
TOTAL	99,9500	12,6046	100

		Confidence	Self-control	Avoidance
CONFIDENCE	r			
SELF-CONTROL	r	,411		
AVOIDANCE	r	,503	,653	
TOTAL	r	,839	,817	,793



When the relation between subscales of problem solving skills scale was analyzed, it was found a positive relation between self-control($r=411$) and avoidance($r=503$) points, also a positive relation between self-control and avoidance ($r=653$).

CONCLUSIONS

As a result of study, it wasn't found a significant difference between gifted students' grade level, gender and confidence, self-control, avoidance and total problem solving points. Finding of this study shows a similarity to results of Heppner ve Peterson (1982); Taylan (1990); Çam (1997) Güven and Akyüz (2001); Serin (2001); Saracaloğlu, Serin and Bozkurt (2002) who examine the problem solving skill sensations in terms of gender variable. When the studies are generally assessed that were applied on several sample groups about problem solving skills inside and outside Turkey, it is seen that these skills are discussed for analysing most of issues. However, in applied studies, it stands out that the number of quantitative researches, university students take place, are more than the number of researches by which primary school students' problem solving skills are examined. If we analyze the results of study in terms of problem solving skill that is the dependent variable of research, generally it is seen that these skills attribute to social and emotional improvement of an individual. In this context, in improving of Senemoğlu (2001), creativity skill; Saygılı (2000), pluckiness skills; Albayrak (2002), responsibility emotion; Yazıcı (2001), confidence emotion indicate the significance of problem solving skills. However, applied researches show that most of the gifted students may have emotional problems, change into students who have problems, especially in terms of learning in school environment, their extraordinary abilities may die out if it isn't defined in early ages and provided suitable education opportunities (Philip, 1977). So, it should be concentrated on education applications that will serve improving problem solving skills. In different issues or study groups, effect of several variables on problem solving skills may be determined experimental studies. In this context, there are studies (Dinçer, 1995; Güner, 2007; Korkmaz, 2002) which determine a positive increasing in problem solving skills of students who included application after experimental procedure. However, it may be emphasized determining lower and higher groups in terms of problem solving skills, qualitative and quantitative researches with students who compose these groups, giving necessary importance and time to improve these skills in education programmes.

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INVESTIGATION OF BEREAVEMENT PERIOD EFFECTS AFTER LOSS OF PARENTS ON CHILDREN AND ADOLESCENTS LOSING THEIR PARENTS

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ABSTRACT

Important loss (death) in individuals' life may cause various kinds of bereavement reactions. Most of the individuals cope with bereavement effects in various ways and they adapt themselves to the new situation. On the other hand, some individuals may have problems in coping with and analyzing bereavement period effects caused by loss. Parent loss in this period, may bring serious developmental and academic problems in terms of children and adolescents. In this study, the fact that how the bereavement period affects education process and sanity of children and adolescents living in Northern Cyprus experiencing parent loss, how they cope with the bereavement period, by whom and how the loss is explained them and what schoolboards and guidance services do after the bereavement period caused by a loss, are investigated. In this sense, the effects of bereavement on children and adolescents' education process and sanity and bereavement reactions are included in general. In the framework of the study done by the researcher, how parent loss bereavement period reflect their behaviours is investigated. In this way, it is found out that children and adolescents think of their death parents much more and longer than adults, their psychology, besides academic success and social relationship are affected negatively, as well. In the literature search done, it is determined that children and adolescents experiencing parent loss tend to have psychological problems in their future life and this risk can be harder in the case the death is so sudden and having no person to replace for the death one. Besides, the importance of the fact that these people' life conditions should be improved and supported by specialist and expert people, is emphasized too.

Keywords: bereavement period, loss of parents, children, adolescents

INTRODUCTION

Parallel to the fact that number of people suffering from cancer gets much more and increase in traffic accidents in recent years a lot of children lose their parents in Turkish Republic of Northern Cyprus (Kibris, 2009).

Nadeau (1998) and Dyregrov (2000), state that every child may have emotional, behavioural, physical and cognitive reactions to death of their parents. As these reactions are regarded as normal and can depend on age, personality and effect of the environment of the child, they can become stronger and heavier depending on relationship between the child and parent who dies.

Dyregrov (2000), states that a child who loses one or both of his/her parents not only feels sad but also experiences a serious confusion in his/her life and may tend to face psychological problems in their future life. Especially, the child may lose self-esteem and confidence at a high level and there may be increase in considerations of depression and suicide. This risk can be experienced more heavily in the case death is sudden and there is no one for the child to place to the death parent. Searches done on child and death recently show that some psychological disorders in adolescence years, especially suicide, are caused by divorce occurring in the first childhood years.

Papalia and Wendkos (1987), inform that researchers state a death can also affect children markedly in terms of academic success rather than only psychologically. In a search done on children who lost one or both of their parents, it was observed that almost all of the children had a sudden decrease in their success at school, they participated their lessons less and withdrawing and dealing with social life less were extensive.



The aim of the search is to investigate effects of the bereavement period after loss on education process and psychological status of children and adolescents who lost their parents. In this sense, the following questions were included.

1. By whom and how the children and adolescents experiencing the loss are informed and explained about the loss?

2. How does the loss affect psychological situation of children and adolescents experiencing a parental loss?
 - 2.1. How does the bereavement period after loss reflect on behavioral features of that children and adolescents?

 - 2.2. Which coping techniques have that children and adolescents used in the bereavement period after loss?

3. What are the effects of bereavement period on education process of the individuals?
 - 3.1. What were the effects of the bereavement period on children and adolescent's success at school?

 - 3.2. How did bereavement period affect the individuals' relationship with their friends at school?

 - 3.3. How did the school administration and guidance service help the individuals in the bereavement period occurring after loss?

Dyregrov (2000), states that it was determined that children and adolescents think of their dead relatives for a longer period of time more frequently comparing to adults, are more affected psychologically, besides, their academic success and social interactions are affected negatively, as well. In addition, children and adolescents experiencing parental loss may tend to have psychological problems in their future life. This risk can be experienced more heavily in the case death is sudden and there is no one for the child to place to the death parent.

After this search, it is aimed and hoped that parents, guides, psychological counsellors working at schools and school administration are to be instructed about bereavement after loss of a relative and its effects.

Although it is seen that a lot of studies have been done in the world and Turkey on children and death, there aren't sufficient number of studies done on how the bereavement process after loss affect children's education and psychological situation. This search is so important in terms of being an added one to a few scientific studies done before on this issue.

It is thought that this search is to light parents and psychological counsellors who deal with problems children may experience who lose their parents and problems that may occur after the loss telling what these problems may be, reinforcing for new searches to be carried out in our country.

METHOD

In this section, method, nature and sample, data gathering tools of the search, gathering data and solution of data are included.

Model of the Search

This study is carried out as a “multiple totalitarian study”. Yildirim and Simsek (2005), inform that a multiple totalitarian study aims to investigate each event one by one and then compare them. In this type of search, the researcher starts with a problem to be solved and can collect each kind of comparable data on each event.

Nature and Sample

The nature of the search includes participants who are at the age of 18 or over, studied at one of the primary and secondary education foundations in Turkish Republic of Northern Cyprus, experiencing a parental loss in the recent 10 years. 5 of the participants are girls and 5 of them are boys who were determined through easily reachable sampling method. Sample of the search is made of participants who are at the age of 18 or over, studied at one of the primary and secondary education foundations in Turkish Republic of Northern Cyprus, experiencing a parental loss in the recent 10 years. Also, it was determined that 4 of the participants experienced father loss, 5 of them lost their mother and 1 of them lost both parents. The period passed from the loss of participants who participated in the interview ranges from 3 to 10 years. Demographical features of the participants are shown in table 4.1 below.

Table 4.1: Features of the Participants

Participants	Sex	At what age experienced the loss	Parent Lost	How long passed from the loss? (year)
İbrahim	M	13	Father	10
Simge	F	16	Mother	3
Salih	M	13	Father	10
Tanem	F	14	Father	10
Süleyman	M	7	Both	10
Ayşe	F	13	Mother	7
Burcu	F	14	Mother	7
Osman	M	13	Mother	3
Sinem	F	16	Mother	10
Umut	M	16	Mother	10

M: Male F:Female

Names shown in the table aren't real names of the participants.

Data Gathering

A half structured interview form prepared by the researcher was used first in order to perform the interview. In the process of preparing the form, the half structured form was created by forming 20 interview items consulting an expert in the light of data in the literature after screening the literature. The interview form was used on May, 2009 as a pilot study with 3 participants. Interview questions were arranged again after the interview. Items on the form were made of 2 sections, introduction questions and main questions. Introduction questions were the ones related to demographical features of the participants while the main questions are the ones devoted to find out effects of the bereavement process on the individuals' psychological situation and education process. Interviews were carried out in quiet atmospheres where the participants preferred, using type recorder with awareness of the participants face to face and took 30 minutes on the average. Questions asked to the participants are stated below.

A. Introduction Questions

1. Could you tell me about yourself, please?

Name Age Educational Level
 Surname Sex Occupation

2. Which schools did you study at?



3. How were your school years like? How were your relationships with your teachers and friends? What were your upsetting and pleasing moments?
4. What was the reason of your relative's death?
5. When did you lose your parent?
6. How old you were when you lost your parent?

B. Main Questions

7. How did you learn that your parent had died? Were you with him/her while dying or someone informed you about it? If someone told, how did the person explain it to you?
8. Could you please describe the moment you saw/ learned your parent died? what did you experience?
9. Did you experience any physical problem when you lost your parent? What kind (for example: sleep, nutrition, headache, feeling dizzy, hypotension, hypertension.....)?
10. What type of emotions did you have when you lost your parent? (for example: shock, anger, anxiety, feeling guilty).
11. What were your cognitive reactions when you lost your parent? (thinking of moments continuously you had with the death parent, not believing in it, confusing, visual and audible hallucinations).
12. After how long from the loss did you start going to school?
13. Why did you go to school after ?
14. What did you do in the period of time of when you didn't go to school?
15. How did your teachers and friends welcome you when you went to school? (how did they behave towards you, did you have difficulty in communicating with them? How did you expect to be welcomed?
16. How did the loss affect your future career life? (did your success decrease)?
17. What did you do to cope with and handle with the fact? (did you get guidance service? If yes, what kind was it? If no, why didn't you get?

Data Analysis and Interpretation

The method of context analysis was used in analyzing data. Information gathered in the interview was first decoded by the researcher and then was converted into written essay type. Texts were read several times and decodings were formed. Then, codes were combined together and common points were determined. So, the main categories findings of the study were created. The codes under the stated categories were labelled in a way they are related to each other. While the findings were divided into categories interviews with individuals were dealt with one by one and were divided into categories according to their aims and contents. In the process of interpreting findings, information given by the individuals was benefitted. In addition, nick names were given to individuals in order to keep their privacy secret.

Validity and Reliability Studies

Kirk and Miller (1986), define validity in qualitative researches as; the researcher's observing the fact that is being investigated as it is and being objective as much as possible. On the other hand, reliability in qualitative researches can be defined as; sharing the main findings and results of the research with the participants and asking for their opinions. In the current search done, the researcher explained data collection and analysis methods in details and main results of the search were shared and discussed with Sinem, Osman and Ibrahim, who participated in the search. By means of the fact that findings and results of the search had the same process and they were same with what the participants gave as their opinion, provided reliability and that the questions asked in the interview form represented the desired area was determined in presence of an expert's approval and they reflect their situation in real life, validity was provided.



FINDINGS, INTERPRETATION, AND DISCUSSION

In this section, findings received as a result of data analysis that was gathered from participants, comments on these findings and result and suggestions in light of the findings are included.

Informing about the loss

It was stated in the study that the loss was informed to individuals who experienced parent loss by their primary relatives (father, mother, sibling), secondary relatives (uncle, aunt) and other individuals who aren't their relatives such as (school manager and nurses). Sinem, who participated in the study and experienced a parental loss said that the loss had been informed to her by her parents as it follows; *"my father called me on mobile and said that my mother was feeling worse and we needed to go to the hospital. When we went to the hospital we saw a crowd in front of the room in which my mother was in. My granmothers, aunts were all crying. To be honest, I was tring to understand what was happening. Then, my father approached and said we had lost my mother"*.

On the other hand, another participant, Tanem, stated that the loss of her father was informed to her by her mother as it follows;

"my father used to come home from work around 5:00 in evenings. That day, it was 6:30 and policemen came home while we were waiting form y father. I was eating with my older brother and sister. My mother started crying while she was talking to the policemen. Then, she came near us and said that we had lost our father in a traffic accident, went on crying".

Another participant, Osman, said that the loss of her mother was informed to him by his sisters with the following words;

"I arrived at home from school. There was a great crowd in our house. All my sisters, aunts, father and relatives were crying. When I walked in my sisters came near me, hugged me and said that we had lost our mother".

Although all these three participants (Sinem, Osman, Tanem), were informed about the loss by their primary relatives, it was determined that there was difference in they way of informing. People who are primary relatives (mother, father, sibling) informed about the loss to Osman and Tanem emotionally and crying while Sinem was informed about the fact and a cool and calm way. On the other hand, Ibrahim, who was informed about his father's death, said that his aunt who was a secondar relative told him about the loss as;

"on that day, I came home from school. There was a crowd at home. I understood that something bad happened. They took my sibilings away from the house as they are young and little. My mother and granmother were already crying. My aunt came near me when I walked in. She said that my father had had a traffic accident and was in the hospital. However, after I said that I wanted to g oto hospital and see my father and persisted she said 'no need to go to the hospital because your father had already died".

On the other hand, Salih, who participated in the interview said that the loss of his parent was explained to him by his uncle.

"my mother and father had gone to Turkey for my father's treatment and we got the news that he died. I was staying at my uncle's house with my older sister. My uncle was talking with someone on mobile on the day my father died. Then, he came near us with tears in her eyes and said that he was informed that our father had died."



Burcu stated that she was informed about her parent loss by her aunt with the following words;

“the day on which my mother died I was at school and we were having break. the school manager came near me and he said that he wanted to talk to me. We went to his room. When we went inside his room I saw my aunt was waiting for us there. I understood that something bad happened. My aunt turned towards me and said ‘we had lost your mother’ crying”.

Although the participants (Ibrahim, Salih, Burcu) were all informed about the loss by their secondary relatives, Ibrahim was informed about the loss by breaking the news while Burcu and Salih were informed in an emotional way.

Hence, it may be a difficult duty to inform a child that he or she lost his/her mother or father. De Spilder (1987), it is good that the loss is informed to the child by calm people within the family who has good relationship and interaction with the child or the alive parent tells about the loss without delay, keeping calm and in a way the the child can understand.

On the other hand, Ayse and Suleyman were informed about the loss by people who aren't their relatives. Ayse, stated that the loss was informed to her by hospital staff as;

“I came home from school. That day my mother was at our neighbor's house. She was strange as a drunk when she came back to home. She was sweating. I asked what happened but she couldn't even answer me. I started calling neighbors. They called for an ambulance. We waited near my mother until the ambulance came. By the way, my father left working and came home urgently. The ambulance came, they put my mother in and I was at the back of the ambulance with my father to go to the hospital. When we were on road I noticed that the hoot of the ambulance was off but I couldn't understand anything. When we arrived at the hospital the nurse within the ambulance came, looked at my father and me and said that my mother was dead”.

Another participant, Suleyman, said that the loss was informed to him by his school manager as follows;

“on the day when my parents had an accident, they left met o school and were to go to do something. At lucnh time they didn't come to take me. The school manager took me with him while I was waiting for my parents. As there was no one else expect than my father and mother in our family I stayed at the school manager's house until night. He told met hat my father and mother had died after an accident despite all intervention done and as I didnWt have any other relatives I would be taken into S.O.S children village. They took me there in the evening”.

It is seen that Suleyman and Ayse were informed about the loss by people who aren't their relatives and the way how they were informed was the same for both as it was directly and coolly informed and there wasn't any difference in the way of informing about the loss of the participating individuals.

It was determined that two of the participants (Umut and Simge) were with their relatives while they were dying and they witnessed that fact. It was found that this caused a psychological collapse (can be defined as; experiences that may affect individuals' emotions, thoughts or attitudes negatively for a long time causing bad results) for Umut and Simge.

Effects of parental loss on psychological state

When effects of loss on participants' psychological health and state who experienced parental loss were investigated in the study, it was determined that Ibrahim, Osman, Ayse, Tanem and Umut had psychological collapse (being hopeless, refusal, being sad, feeling guilty, thinking of the death person frequently and having it in mind always) while Simge, Burcu, Suleyman, Salih and Salih had normal



bereavement process reactions (insurrection, missing, anxiety and fear). How these elements affected their psychological state of the participants is explained below by means of quotations taken from interviews.

1. Psychological Collapse

After investigation on psychological state of the participants it was found that Ibrahim, Osman, Ayse, Umut and Tanem experienced psychological collapse (being hopeless, refusal, being sad, feeling guilty, thinking of the death person frequently and having it in mind always) and it is explained below how all these affected their psychological state.

Ibrahim, who participated in the interview stated that parental loss caused psychological collapse on him and he thought it was the end of the world. He describes his psychological state after his father's death as follows;

"I felt so sad when I knew that my father died, my body was shaking, I lost control of my power and I didn't want to accept it sure. I experienced a huge psychological collapse".

On the other hand, Osman, who participated in interviews stated that losing his parent affected him negatively and he still thinks of moments he had spent with her mother who died 3 years ago, when he is alone. He described his psychological state after the loss as; *"I was so sad when I lost my parent, I cried lots. I remember getting up crying and screaming as 'my mother left me and went'"*.

Another participant Ayse, informed that parental loss had a great effect on her psychology, formed anxieties about the future and she misses her mother much. She describes how the loss affected her psychological state as follows;

"I was so sad when I lost my parent, I was shocked, worries about the future appeared and I missed my mother much".

Umut said that the loss caused a great psychological collapse as he was with his mother while she was dying. He describes his psychological state after losing his parent as follows;

"I was shocked on the moment when my mother died, I got sad and cried. I was thinking of the moments I had spent with my mother".

Another participant who experienced a parental loss Tanem, said that she had worries for her future life after the loss and she feels so guilty for the fact that her father works for them and earn a lot of money. She describes effects of the loss on her psychological state as follows;

"I started crying when I learned that my father died. I was worried for the future. Besides, I felt guilty because my father used to go to work to earn money for us and that made me felt guilty".

2. Normal Bereavement Process Reactions

It was determined that 5 of the participants Simge, Burcu, Suleyman, Salih and Sinem had normal bereavement process reactions (insurrection, feeling of missing, worries and fear). How these affected the participants' psychological state is stated below by means of quotations taken from the interviews.

Simge, who participated in the interview stated that she was so sad after losing her father and became so hopeless for her future life and explained her psychological state after the loss as follows;

"when I lost my parent I got so sad and became very hopeless for the future life".



Another participant Burcu, stated that parental loss affected her negatively, started having huge anxiety for the future and had great difficulty in accepting the fact that her mother died in spite of the fact that she had prepared herself for that. She gave the following expressions;

“when I lost my mother I had worries about the future life such as how to study and how my life will be like”.

Sinem who lost her mother said that this fact caused a negative effect on her psychological state. She describes her psychological state after the loss in the following words;

“when I lost my mother I had experienced a shock first. I didn’t want to believe that my mother really died.”.

Another participant who experienced parental loss, Suleyman, said that he had great deal of fear after losing both parents as he was at a very early age and he describes how that loss affected his psychological state as follows;

“I was afraid as my age was so young. I was sad. As I remember I was shouting as ‘I want my mother and father’! But what to do!”.

On the other hand, Salih indicated that loss of his father didn’t affect his psychological state so badly because he prepared himself for his father’s death in the period when his father was so ill. He describes his psychological state as;

“I was shocked first when I lost my father. Then, I remember shouting angrily as ‘my father left us and passed away’!”

It was determined that participants who had psychological collapse surpassed the bereavement period in a longer period of time while participants having normal bereavement process reactions were able to surpass all in a short period of time and more healthily. Therefore, it was found that there are differences between participants who had psychological collapse and the ones who had normal bereavement process reactions.

3. Effects on Behavioral Features

When behavioral features of the participants are considered, it is seen that they either had physical (getting weak, power loss) and cognitive (being unable to accept, being unable to believe, always thinking of the death person), behavioral (irregular sleep, losing appetite, crying and lack of motivation) and emotional reactions (fear, being amazed, shock, feeling sad, refusing, anxiety, insurrection and introversion). How the loss affected behavioral features of the participants experiencing a parental loss is explained below.

Ibrahim, who experienced a parental loss stated that he became introvert person after the loss, had a big depression, faced sleeping and nutrition problems for a long time, felt so sad and had great deal of worries for the future life. He explained all as follows;

“when I lost my father I had sleep disorders for a long time. I lost my appetite and didn’t feel to it in such a situation. These were my behavioral reactions. My physical problems were that I felt tired exhausted, my emotions, I had difficulty in accepting the fact immediately. In time, I accepted the fact. I started having worries related to my future life. For sure, a 13-year old child can consider all these. I thought how my family would survive, how my siblings would study. My cognitive reactions were not willing to think of moments I had spent with my father in the first several years. I was sad and strange



when I thought of it. This was because I didn't want to accept it. However, after several years passed I thought of moments I had spent with my father".

Simge who participated in the interview said that she had sleep disorders for a long time after the loss, lost her appetite and these behaviors lasted for 1 month and then she turned to her previous physical regularity. Besides, Simge said that she thought of moments she had spent with her father frequently when she was alone, she thought that it was her father who was at the door when the bell was on if it happened almost the time when his father used to come back home from work and she described her behavioral features as follows;

"I had sleeping problems for a long time when I lost my father. I lost my appetite and this went on almost 1 month. Then, I turned back to my normal physical regularity. My emotional reactions were that, I felt so sad and anxious for the future life. As my cognitive reactions, I always dream moments I had spent with my father from my childhood to the date he died when I am alone. When the door bell rings I sometimes think that it is my father if it rings in the period of day which was the time my father used to come home from work before he died".

Another participant who experienced parental loss stated that he didn't have a physical problem after the loss but he was shocked first when he learned that his father had died in spite of the fact that he had prepared himself for this before and this was his psychological problem as he couldn't believe in the loss and felt that his father left him and went which made him angry. He explains this as follows;

"I didn't experience any physical problem after losing my father. In terms of emotional aspect, I had a shock first. Then, I remember shouting angrily as 'my father left us and went!' the fact that I didn't want to believe that my father died and I was confused, was my cognitive reactions".

Tanem stated that she always remembered moments she spent with her father, her sleep was interrupted, she felt to eat nothing and she summarizes all as follows;

"I remember that I got up in the middle of sleeping. I lost appetite. I was anxious about the future when I lost my father. Besides, I felt guilty because my father used to work to look after us and I felt guilty because of this. I always remembered moments we spent with my father frequently".

Another participant, Suleyman, said that he couldn't sleep regularly for a month after losing his parents, he got up, supposed he was home and called his mother and father and he didn't want to eat and describes all as follows;

"I couldn't sleep regularly for a month and didn't feel to eat anything. I had a great fear. I was worried with what would happen in the future. I didn't believe that my mother and father died. I got up at night, thought I was home and called my mother and father".

Ayse stated that she was very sad after the loss, first refused the reality that she had the loss, had sleep and nutrition problems for months and this caused her to lose a great deal of kilos and describes this as follows;

"I had sleep and nutrition problems for days, months. I lost lots of kilos. I felt so sad, I was shocked and had worries about the future. I missed my mother much. I always recalled moments I had spent with my mother and I felt as if she was in the house and I was talking to her".

Burcu said that she was shocked first when she learned her mother died despite preparing herself for this, she couldn't sleep regularly for days, she lost her appetite and she had hypotension frequently. She explained these as follows;



“I couldn’t sleep and eat regularly for days. I remember always having hypotention. I had worries with the future such as how to study in the future and what my life would be like. I always remembered moments I spent with my mother and I had difficulty in accepting that my mother died though I had prepared myself for that when my mother was sick”.

Osman informed that he had sleeping and nutrition problems after the loss, he got up crying sometimes and he rebelled thinking that his mother left him and passed away. He summarizes his behaviors as follows;

“I couldn’t sleep and eat for days. I got so sad, cried lot and I remember getting up shouting ‘my mother left me and went’ and I always remembered times I spent with my mother. I stil remember it even now when I am alone”.

Sinem defined that she had sleep problems for 1-2 months after loss, she lost her appetite and had frequent heacache because of migraine. She also rebelled as ‘why my mother?’ always recalling times she spent with her mother in the past and explained all as follow;

“I didn’t sleep regularly for 1-2 mohtns and I lost appetite. I had had migraine since early ages and it became worse after the loss. I experienced a shock. I didn’t want to believe that my mother really died. I rebelled ‘why my mother?’ I dreamed moments we spent with her always”.

Umut explained that he had sleeping and eating disorders after the loss and he thought of the moments he spent with his mother before she died also he didn’t want to believe that his mother died. Besides, he got so sad and cried, as well. He described all these as follows;

“I had sleep disorders, I coulnd’t eat anything as I lost my appetite. I was so sad. I always dreamed of moments I spent with my mother. I didn’t want to believe at first that she died. Then, I had to believe it already because life goes on”.

When behavioral features of the participants are considered it is seen that there are common points between behaviors they performed in the period of normal bereavement process (sleep and eating disorders, getting sos ad and becoming introverted) and when they had depression but it is expected that these behaviors that occur after the loss to get less in time and disappear. Therefore, it was observed that these behaviors increased in time and disappear in some participants while some of them continued for a longer perdioid of time.

4. Methods for Coping With Loss

When methods that participants used in order to cope with their loss were investigated, it was seen that some of the participants got help from experts and some of them tried to cope with the loss on their own without getting any help. It was determined that there was difference between the ones who tried to cope with the loss getting help and the ones who tried to handle the situation on their own without any help. The difference is that; participants who got help in the bereavement process surpassed the period more easily and healthy rather than the participants who tired to cope with the situation without getting help. Methods that the participants used to handle the loss are explained below.

Ibrahim states that he didn’t get any help from an expert or psychological counsellor of the school after the loss, he received no support from his school or family, he stayed at home and became loyal to his family much more because of the situation they were having and he approached to the fact as a matured and adult person trying to complete the role of his father as he describes all with the following words;



“I didn’t get any help from a psychologist or psychiatrist. Neither, I had no demand as ‘I am in a bad situation, help me’. What I did only was to be loyal to our home as an older and matured person because of the situation we were experiencing”.

Simge, who participated in the interview informs that she got help from the psychological counsellor of the school for 1 year after the loss in order to cope with the situation and loss. She explains this as follows;

“I attended sessions of the psychological counsellor of the school for 1 year and I managed to cope with the loss”.

On the other hand, Salih indicates that he got help from a psychologist for 6 months regularly after experiencing the loss and explains this as follows;

“I attended sessions of a psychologist with my sister who is a friend of my aunt in order to cope with the situation I was in after the loss”.

Tanem informs that she didn’t get any psychological help to handle the loss because she couldn’t afford it and no one offered her such a support and help. She started working to contribute to her family’s budget leaving her school and she eliminated negative feelings and emotions getting away from the negative atmosphere within the house and describes this as follows;

“I didn’t get any help to handle the situation. Already, I didn’t have a good economical condition to be able to get help. I started working at a hairdresser’s in order to handle. I focused on my work and family”.

Another participant who attended interview, Suleyman, states that he got help from a psychologist at the S.O.S children village where he was taken after the loss and explains this with the following words;

“I got help from the psychologist in S.O.S children village in order to cope with the loss and this is still going on”.

Ayse says that he got help from a psychologist, had regular walks in the nature and was loyal to her father much more in order to cope with the loss. She summarizes all these as follows;

“I attended sessions of the psychologist regularly. Apart from this, I walked in the nature regularly and became more loyal to my father”.

Another participant Burcu, informed that she didn’t get any help from a psychologist, the psychological counsellor of the school didn’t help her as he was busy with the university exams of the students (OSS) and in order to handle the situation she accepted that losing a parents is a part of the life, it is a condition and everyone can experience it, everyone may get sad and need a period of time to recover this, as she talks about all these with the following words;

“I didn’t get any help from anyone to handle the situation. To be honest, no one offered me such an advice as our psychological counsellor of the school was dealing with students’s university exams and placements to schools and already I didn’t have such a demand, as well. So, I didn’t go to him and ask for help for myself after the loss. I thought that everyone can experience a loss or die as it is the rule of our life and tried to surpass all on my own”.



On the other hand, Osman says that he didn't get any help from an expert in order to cope with the loss and he tried to take on a new lease of life with support and advices of his friends and teachers and he explains this as;

"I got no help from anyone. I tried to take a new lease of life by means of support and advices from my friends and teachers".

Another participant, Sinem, says that she didn't get help from any expert to recover the situation as a method, she thought that everyone has this problem and she is not the only one to experience such a bad thing and gives the following expressions;

"I didn't get any help from anyone to cope with this situation. I tried to handle it saying myself 'this is the reality of the life and everyone dies as they are born and I managed at last. However, if I hadn't had the loss I could have graduated from university and had a job".

Another participant Umut, states that he didn't get help from anyone to cope with the situation and handled the situation by accepting it and explains this as follows;

"I didn't get help from anyone, I just accepted the fact".

Effects of bereavement period on education processes

When effects of the loss and bereavement process on education processes of the participants are considered, it is seen that education processes of Umut, Burcu, Sinem, Tanem and Ibrahim were affected negatively while the education processes of Osman, Simge, Suleyman, Ayse and Salih weren't affected. It was observed that the participants whose education processes were affected negatively, had lower rates of success at school, less participation in courses, being absent and not going to school and acted in the role of the death parent which were all behaviors after the loss while the participants of whose education processes weren't affected didn't have lower levels of success at school and they went on going to school. What participants of whose education processes were affected negatively and the ones of whose weren't affected explained, is stated below.

Ibrahim says that the bereavement process and loss affected his education negatively, he couldn't motivate on his courses, his education was interrupted and explains all with the following words;

"I couldn't go on my education after the loss. As I am the oldest among my siblings I had some responsibilities to do after my father. I had to do those as my father passed away. So, I couldn't complete my education".

Another participant who attended the interview, Sanem, states that the loss affected her education process negatively and she had to quit school after his father's death and explains all as follows;

"I abandoned school and decided to work at a hairdresser's in order to learn the occupation".

Sinem states that she couldn't go on studying as she had to do things at home left by her mother so she left school at lycee. She explains how the loss affected her education and school life as follows;

"I could study only until lycee after the loss because my father and younger brother needed someone to look after them obliged me to do housework. I couldn't study after lycee and left school to look after them".

On the other hand, another participant, Burcu, says that it affected her education process negatively and she couldn't study after lycee. She gives the following comments to explain all;



“The loss affected my future career negatively because I didn’t feel to study my courses and do my homework. As a result, my success at school reduced. However, as my teachers knew about my situation they helped and tolerated me to pass”.

Another participant whose education process was affected negatively, Umut, states that he couldn’t study after lycee and wasn’t able to go to the university and he explains this as follows;

“The loss and bereavement period affected my education negatively, my grades became worse. Already, I had to join the army. I preferred joining the army to studying”.

On the other hand, Simge says that her father’s death didn’t affect her future life career and explains this in the with the following words;

“I don’t believe that my father’s death affected my course grades negatively because I already focused on them and devoted myself to my courses in order to eliminate and recover depression. Besides, our neighbor who is a psychologist, my teachers and my guide teacher helped me in recovering the bereavement period fast and soon. So, my school and career life weren’t affected negatively”.

Another participant Osman, indicates that it didn’t affect his future career life as he is still studying being a successful student and explains this as follows;

“My success at school and grades decreased in the first year after my mother’s death. However, I took on a new lease of life by means of caring and support of my teachers and I have good grades now”.

Suleyman says that it didn’t affect his education life and explains this as follows;

“The loss didn’t influence my education negatively because I went on studying”.

Likely, Ayse states that her education wasn’t affected negatively as she says the following;

“The loss didn’t affect my future career life that much because I went on attending sessions of a psychologist continuously. The psychologist helped me in motivating on school and going on studying”.

Salih says the same, as well that the loss didn’t affect his education life and gives the following speech;

“I don’t believe that the loss affected my future career life”.

1. Effects on Success at School

When effects of the bereavement period after the loss on participants’ success at their school are considered it was seen that Umut, Sinem, Burcu, Tanem and Ibrahim’s success at school were affected negatively after the loss and bereavement process, they had lower grades and they stopped studying and what they said on this issue is stated below.

One of the participants, Tanem, states that the loss and bereavement period influenced her success at school negatively and her success came down as she didn’t go to school.

On the other hand, Umut also states that it affected his success at school negatively, he didn’t feel to study and had a sudden decrease in his success and mostly got low grades.



Another participant, Ibrahim, indicates that it affected his success at school negatively, he couldn't focus and motivate himself for his lessons after his father died having little attention on his courses which caused decrease in his success at school.

Also, Sinem states that she had lower grades and was less successful after the loss. Likely, Burcu expresses the same too.

On the other hand, it is stated that Salih, Ayse, Simge and Suleyman's success at school didn't change and there wasn't any decrease in their success while Osman had decrease in his success at school for 1 year after his parental loss but then he did well again by means of support from his friends and teachers. He could adapt and motivate himself for school and became successful again.

It was found that individuals whose success at school was influenced negatively had lower grades and decrease in their success and left studying while individuals whose success wasn't affected didn't decrease their success and went on studying. Therefore, it was seen that there was difference between individuals whose success was affected and the ones whose success at school wasn't influenced.

2. Effects on Relationship with Friends

When participants' relationships with their friends and pers are considered when they went back to school after the loss and bereavement period, it was seen that relationships of Salih, Ayse, Sinem, Simge, Burcu, Suleyman, Umut and Osman's weren't influenced while other participants, Ibrahim and Tanem's relationships with their friends were affected negatively. It was determined that the participants of whom relationships weren't influenced negatively, were the ones who got social support from their pers usually. Participants of whom success was influenced negatively, were the ones who weren't supported by their friends and got away from their friends after the loss as they became introverted. Owen (2007), states that individuals may need people who can help and support them when they are back to school after the loss and bereavement period and the presence of such people is important for them. It was determined that relationships of individuals who couldn't find such people were influenced negatively while the others' relationships who found such people to help and support them weren't influenced.

Inbrahim states that the bereavement period after the loss affected his relationships with his friends negatively and he became far from his friends getting introvert and explains all as follows;

"I had difficulty in getting closer with my friends as our relationship ended. I preferred to stay alone while they were talking to each other and playing".

Another participant Simge, states that her relationship with her friends continued and remained the same after the loss when she was back to school and she had no difficulty or any problem in communicating with her friends and explains this with the following expressions;

"When I was back to school my friends condoled me and I didn't have any difficulty in communicating and getting on well with them".

Another participant, Salih states that the bereavement period after the loss didn't influence his relationship with his friends and he became more loyal to his friends because of their great support.

"When I went to school I was welcomed by my friends in a comforting and sincere way. I had no difficulty in clicking with them".

Tanem informs that the bereavement period affected her relationship with her friends and she was estranged from her friends comparing to the past and explains this as follows;



“When I went to school my friends condoled. I had difficulty in clicking with my friends. I got estranged comparing to the past”.

Another participant, Suleyman didn't say that his relationship with his friends was affected negatively or wasn't affected because as he was taken to S.O.S children village from his school after losing his parents there was already no friend of him and gives the following comments;

“I didn't go to my previous school after the bereavement period because my old school was in the village. My school changed after I started staying at S.O.S children village”.

Ayse, who participated in the interview, informs that her relationship with her friends wasn't influenced when she was back to school after the loss, she didn't have any difficulty in clicking with her friends, her friends supported her socially and they were more loyal to each other. She explains all these with the following expressions;

“When I went to school, all my friends came near me, they supported me and condoled. We got more loyal to each other. I had no difficulty in clicking with them”.

On the other hand, Burcu states that there was no difference in her relationship with her friends when she was back to school after the loss and she had no difficulty in clicking with her friends as she explains all as follows;

“When I went to school, my best friends and teachers came near me and condoled. I didn't have any difficulty in clicking with them”.

Likely, Osman says that his relationship with his friends wasn't affected by the bereavement period after the loss and his relationship got even better after the fact. He describes this as follows;

“My friends came to my house when they heard my mother died. They supported me. Their caring and support continued when I went to school”.

Sinem states that her friends condoled and told her that they are sorry for her loss supporting her as she explains this by the following words;

“When I went to school my friends and teachers came near me and condoled as they heard my mother had died. They said they were sorry. I didn't have any problem in clicking with them”.

Umut says that his relationship with his friends didn't change when he was back to school after the bereavement period and loss and his friends supported him psychologically and explains these as follows;

“My teachers and friends came to our home after my mother's death and their support went on when I went to school, as well”.

3. Interventions of School Administration/ Guidance Services

It was determined that guide teachers and psychological counsellors of the schools had intensive care on Osman, Ayse, Suleyman, Simge and Salih as they helped these students and motivated them for their courses when they were back to school after the loss and bereavement period. Umut and Sinem were supported by comforting words and supportive behaviors of their school manager and teachers. Another participant, Burcu, wasn't supported by school manager, guide teacher and psychological counsellor or other teachers except their wishes to condole. On the other hand, Tanem stated that the school manager invited her to his room and warned her not to miss her courses and to go on coming to



school without condoling and she wasn't supported by other teachers, psychological counsellor or guide teacher. Another participant, Ibrahim, stated that only his class teacher and guide teacher condoled and assistant director gave him some advices in order to help him take on a new lease of the life, motivate him by giving examples of what he experienced in the past.

It was seen that interventions of guide teachers or psychological counsellors of the school were to motivate the students who experienced parental loss on their school and courses while school managers and teachers intervened by comforting words and supporting the students. Therefore, it was determined that there was difference between interventions of school managers and teachers and guide teachers or psychological counsellors within the school. Interventions applied to participants are stated below.

Ibrahim states that only his class teacher and guide teacher condoled and assistant of the school manager gave him some advices in order to help him take on a new lease of the life, motivate him by giving examples of what he experienced in the past. He explains all as follows;

“My class teacher and the guide teacher condoled only. The assistant director contributed to me in getting better and going on coming to school by means of his advices and support”.

On the other hand, another participant, Simge says that the school administration and psychological counsellor welcomed her in a very sincere way when she was back to school after the loss and bereavement period as they dealt with her intensively and explains all by the following words;

“When I went to school my teachers condoled. Especially my teachers tried to comfort me one by one. Also, my guide teacher had sessions with me for 1 year in particular days of the week and helped me take on a new lease of the life. I didn't face any problem in clicking with them”.

Another participant, Salih, says that he was welcomed in a sincere way by his teachers and especially the guide teacher by comforting words and they were so caring for him to surpass the period quickly in a healthy way. He gives the following comments to explain all;

“When I went to school I was welcome in a sincere way and with comforting words especially by the guide teacher. I didn't have any difficulty in clicking with them”.

On the other hand, Tanem states that the school manager called her into his room and warned her not to give up school when she was back to school after a long period of time from the loss without condoling and she got no support from the school administration and guidance services, psychological counsellor. She explains all by the following words;

“When I was back to school the school manager called me to his room and warned me not to hinder and give up school”.

Another participant, Suleyman, informs that he couldn't get any help from school administration or guidance services as he was in S.O.S but not at school and explains all as follows;

“I didn't go to my old school again after the bereavement period because my old school was in the village. I changed my school after I started living in S.O.S caring house”.

Ayse informs that all of her teachers, the guide and psychological counsellor teacher of the school condoled and the guide teacher helped her in motivating herself on her courses and school with a great deal of interest and she gives the following comments;



“When I went to school all my teachers came near me supported and condoled. We got more loyal to each other. Also, the guide teacher came and talked to me about the loss and tried to relax me. I faced no difficulty in clicking with them”.

Burcu states that her teachers, the school manager and guide and psychological counsellor didn't help her except condoling and she explains this as follows;

“When I went to school my best friends and teachers came near me and condoled. I didn't have difficulty in clicking them”.

Osman says that teachers and psychological counsellors of the school came to their home after the loss and supported him in terms of everything and their caring and attention went on when he was back to school after the bereavement period. He explains all as follows;

“My teachers came to our house when they heard my mother died. They supported me and their support continued when I went to school again”.

Another participant, Sinem, states that her teachers and the guide teacher only condoled. She gives the following comments;

“My teachers came near me and condoled when I went to school. They said they were sorry for me. I didn't have any difficulty in clicking with them”.

Umut indicated that his teachers and the guide teacher were in his house during the first days of the loss and they supported him being with him and their support continued when he was back to school. He explains all as follows;

“My teachers came to our house after my mother's death and they supported me. Their support continued when I was back to school”.

RESULTS

In this research, it is assumed that individuals who lost one or both of their parents in the last 10 years who live in Turkish Republic of Northern Cyprus remember all correctly, provide true and real information about what they experienced on the issue of losing one or both of their parents during their school age.

The research is done aiming to investigate effects of the loss on the individuals' psychological state and education after losing one or both of their parents in children and adolescents who live in Turkish Republic of Northern Cyprus. How the bereavement period influenced psychological state and education life of the individuals who experienced parental loss, how they handled the situation, how and by whom the loss is informed the children or adolescents and interventions of school administration and guidance services after the loss and bereavement period are investigated in the search.

In the search, it is determined that the loss was informed the children or adolescents by their primary relatives, secondary relatives, some other people who aren't relatives of them or they witnessed the death as they were with their parents while they were dying. It was seen that when participants were informed the loss by their secondary relatives or others who aren't their relatives, that affected their bereavement process negatively and when participants witnessed death of their parents as they were together with them while they were dying caused psychological collapse in children and adolescents.

All participants had physical (getting weak, losing power), cognitive (being unable to accept, not believing), behavioral (eating and sleep disorders, crying) and emotional reactions. These reactions



were observed heavy and at high levels in some participants and this affected their nature and daily life negatively causing damage.

In addition, it is determined that it was very difficult for the participants who experienced a parental loss to cope with the situation when they had negative emotions and children and adolescents need external factors in order to recover and surpass the period in a healthy way. They need support and help of these factors and agents.

It was determined in the search that children and adolescents think of their death parent(s) much more and longer comparing to adults and experiencing a parental loss influence both psychological state and academic success of children and adolescents (Papalia and Wendkos, 1987).

It was observed that some of the children who participated in the search had to do duties and responsibilities of their death parent(s) and they became at the place of their death parent(s) after they died. Besides, some of the participants had decrease in their success at school, got lower grades, participated into course less and they were less interested in social activities.

It was observed that some of the participants got help in order to cope with the loss and bereavement period while some didn't get help and tried to cope with all on their own. It is seen that the participants who got help to surpass the bereavement period could manage it quickly and more healthily rather than participants who didn't get any help and tried to surpass the bereavement period on their own.

It was noticed that some of the participants' friendship relations were influenced negatively when they were back to their school after the loss while some of the participants' friendship relationships weren't affected. It was seen that the participants whose relationships were influenced negatively were the ones who didn't get social support from their friends when the participants whose relationships weren't affected were the ones who took social support from their friends.

It was observed that some of the participants were helped and supported by the guide teacher or psychological counsellor of the school when they were back to school after the loss and bereavement process while some participants were helped and supported by teachers and school manager. It was determined that the guide teacher or psychological counsellor helped the students in motivating themselves on their courses and school by dealing with their loss closely. On the other hand, school manager and teachers supported the students who experienced a parental loss by comforting and supportive words. The results of this study and others done in Turkey are supportive of each other and same (Warren, 2005).

RECOMMENDATIONS

The universe of the research is limited as the participants were only 18 or over individuals who experienced a parental loss of their one or both parents in the last 10 years living in Turkish Republic of Northern Cyprus during studying at any primary or secondary education foundations. It was determined by the researcher that the children or adolescents who experienced a parental loss in Turkish Republic of Northern Cyprus had a difficult process in which they had to cope with the loss in the bereavement period and they needed external agents and factors in order to surpass the period quickly and in a healthy way. Worden (2001), states that, therefore, it is necessary that experts take necessary measurements and precautions in order that the children and adolescents surpass the period quickly and in a healthy way. As school atmosphere is the place in which children and adolescents spend most of their time after their home after the loss, school administrations and guide teachers or psychological counsellors are accountable for a series of responsibilities.

**Recommendations devoted to application**

It is suggested by psychological counsellors that the children and adolescents who are in the bereavement period after a parental loss and trying to cope with the negative emotions should be explained first that these emotions are normal as the first step. Owen (2007), stated that such children and adolescents should look for help and social support from their teachers, friends and teachers and as psychological counsellors suggest, they should go on doing sports, their hobbies and relax by means of physical activities besides.

Owen (2007), states that guide teachers and psychological counsellors working at schools should determine the psychological state of the students at that point and help them understand that their parent(s) are no longer available. That they make efforts to make them adapt the fact may be so important. In addition, such efforts may help the individuals be able to adapt themselves to the life and environment again in the absence of their parents, increase their motivation and attention on their school and courses, direct them into social activities at school and prevent collapse they may have in their social interactions (introversion, decrease in interest on social activities). Providing the individuals personal counselling services, being able to understand emotions of the students aiming to help them eliminate the negative emotions may be so important in their survival in a healthy way.

Having psychological sessions in groups devoted to such children and adolescents who experienced a parental loss may be beneficial and relaxing in making their life normal and sharing problems they are experiencing with someone in order not to feel alone.

Informing parents on trauma and its effects may be so important for the alive parents and other members of the family in minimizing the problems they may face and being able to surpass undesired events, enabling the ability of coping with all. Therefore, it is advised by the researcher that programmes that train mothers and fathers should be organized, there should be organizations such as seminars at schools on family information and perform programmes by means of the media which teaches effects of parental loss on children. Also, by means of seminars, meetings and preventing organizations in which how children of different ages perceive such loss, how to explain and inform them about death, what type of reactions should a family have in case of a death, can be so helpful and beneficial. So, the children who experience a loss can surpass the period of bereavement more quickly.

It is supposed that school administrations and teachers should be informed about loss and its effects and teachers should be careful and self-sacrificing in order that such students can focus on their courses well. Also, it is thought that informing the student's parents about the student's participating in social activities and cooperation with the parents devoted to this, can be so beneficial.

Recommendations devoted to further studies

That there is no research on the same issue which is parental loss and its effects which include university students as well and investigates psychological state of the left parent and university students, how the bereavement period affect the education of university students and there is no search on counselling for university students of all ages cause a scientific lack and blank. It is believed that searches on the left parents (still alive ones after the death of other parent) and university students in our country in order to be able to help such people are necessary and it is suggested by the researcher that the scientific lack should be completed by means of such further searches.

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TEACHING VOCABULARY THROUGH POETRY IN AN EFL CLASSROOM

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ABSTRACT

This study has been conducted to investigate the effectiveness of using poetry to teach vocabulary in a foreign language classroom. It aims to find answers to two research questions (1) “Do the learners enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities?” (2) “Is there a statistically significant difference between male and female students in the experimental group considering the vocabulary test?” (3) “Do the learners enhance more extensive grammar knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities?”. This experimental study took place in Çorlu Private Trakya College. In order to test the above given two hypotheses, two groups were selected, an experimental group and a control group. Totally forty-eight pre-intermediate level 7th grade students participated in the study, twenty-four of them were in the experimental group and the other twenty-four were in the control group. Before carrying out this experimental study, a pre-test was applied to both the experimental group and the control group to determine their knowledge of the target vocabulary items and English grammar. The target vocabulary items were taught through poetry-based vocabulary teaching activities to the students in the experimental group, and the same vocabulary items were taught through the traditional activities stated in the coursebook to the students in the control group. After the treatment, in order to measure the students’ vocabulary and grammar expansion in both groups, the same pre-test was applied to both groups as a post-test. Data analysis results revealed a significant difference between the pre-test and post-test scores of the experimental group students receiving vocabulary instruction through the poems. In addition, the experimental group had higher scores of posttest than control group especially in terms of vocabulary knowledge. Furthermore, at the end of the study it was observed that the posttest scores of students in the experimental group were higher than the posttest scores of students in the control group even though they were equal before the study. Based on these findings, the current study shows that it is possible to use poetry-based vocabulary teaching activities instead of vocabulary activities in the coursebooks used in the EFL classrooms.

Keywords: vocabulary teaching, poetry, poetry-based vocabulary teaching activities.

INTRODUCTION

Until recently vocabulary has not been considered as an important factor in language teaching. Vocabulary was not as important as it is and vocabulary teaching was positioned in the secondary importance in foreign language teaching. Moreover, vocabulary instruction was considered as unimportant, useless and time-consuming. The required importance was not given to the vocabulary instruction at all in foreign language teaching all over the world. Fortunately the last few decades have witnessed a considerable interest in vocabulary teaching. (Nunan 1999, Coady & Huckin 2000, Richards & Renandya, 2002).

Today the importance of vocabulary for language teaching is admitted by all second language theorists and practitioners. Although it was believed that vocabulary could be taught only in isolated word lists for a long time, nowadays there are lots of ways to teach vocabulary. The most common idea among them is the crucial importance of vocabulary in communication and in language teaching ; it is believed that the more words we know, the more fluently we can communicate. (Schmitt 2000, Coady & Hucking 2000, Richards & Renandya 2002).

Furthermore, vocabulary has gained so much importance that it is now the most important component of learning any foreign language. Vocabulary is important because it carries the meaning. In this day and age, the value of vocabulary in learning a foreign language is approved and it is accepted as the most important element of language. Some scholars such as Carter & McCarthy 1997, Nation 2002,

Thornbury 2005, Harmer 2009 advise that knowing vocabulary is essential in the target language for learners.

The importance of vocabulary has been accepted by many scholars, but now techniques of teaching vocabulary are controversial. There are some different views about how to teach vocabulary, teaching vocabulary through literary texts is one of the essentials. Even though some researchers believe that many literary texts are not suitable for teaching a foreign language, some scholars such as Brumfit et. al. 1997, Duff & Maley 2002, Burke 2003 advise using literary texts such as poetry in EFL classrooms to develop language skills of the learners, of course, by choosing them carefully with the consideration of the students' needs, levels and ages, etc.

Many studies have been conducted on poetry in Turkey in recent years. For example, Özal (2006) conducted a study in order to show the effects of the poetry-based instruction on the students' attitudes towards foreign language learning. According to the questionnaire results, it was concluded that poetry-based instruction created a positive effect on the students' attitude towards foreign language learning. It was proved that poetry-based instruction created an encouraging classroom environment with activities and materials, and this decreased the level of the students' anxiety.

Kadıoğlu (2005) investigated the effects of the poetry-oriented learner centered activities on the students' overall communicative abilities and the vocabulary repertoire of the students at elementary level. According to the results of this study, the study depicted that the poetry was an effective means of enhancing communicative abilities of the students at elementary level. And also, the use of poetry was contributive to the improvement of the communicative abilities and effective vocabulary learning of the students at elementary level for communication.

Atay (2007) did a study in order to show the effects of analyzing poetry with the principles of Language Based Approach on the students' language awareness and critical thinking skills. The results revealed that the language awareness and critical thinking skills of the students were affected positively with the help of analyzing poetry. There was an increase in participants' language awareness and critical thinking skills by means of analyzing poetry.

Gültekin (2006) studied the effects of using poetry in EFL speaking classes. It was indicated that using poetry in speaking courses was useful because it created meaningful situations for the learners to be able to communicate with each other in a 2nd language.

In these studies, the researchers used authentic poems for their studies but in this study, poems were written for the purpose of using in EFL classrooms. In this study, it is hypothesized that language teachers need to find various techniques for vocabulary instruction and this study investigates the effects of teaching vocabulary through poetry in an EFL classroom.

Statement of the Problem

Generally, students study English in order to pass the exams at schools in Turkey, they may be successful at these exams most of which focus on grammar more than vocabulary or language skills. The students pass the English exams but unfortunately they are unable to communicate. They know the dictionary meanings of the words, but they do not know how to use it in a sentence, how it is pronounced and how it collocates with other words and so on. Furthermore, the students may forget what they know a short time after the exam; the reason of such situations is that they memorize the words by heart in isolated lists. Most of English teachers use traditional vocabulary teaching techniques and vocabulary items are learnt through translation technique, so they are forgotten in a short time.



Studying a foreign language with the same kind of activities in a coursebook becomes boring in time for the students, so the teacher should find new and interesting techniques for the purpose of teaching vocabulary in a more meaningful way to motivate and encourage the students. In this study it is believed that poetry-based vocabulary teaching activities are new and interesting for the students, and they will motivate and encourage the students to use the target language in a more meaningful way because students' motivation is one of the important factors in an EFL classroom. In this context, literary texts might be regarded as appropriate sources which offer wide range of interesting and motivating topics for the foreign language students.

Teachers teach vocabulary by only using coursebooks without preparing any extra vocabulary teaching activities. The coursebooks seem optimum source for the teachers; they can be exactly best source at the beginning but later on there is a need for extra materials which are more interesting and motivating for the students who are getting bored because of seeing the same coursebook every English lesson. Since the function of poetry is generally disregarded in the coursebook, poetry should be a good choice for motivating the students while improving their vocabulary knowledge.

In this study, the importance of using poetry is emphasized, and it is an ideal way to help the students to improve their vocabulary knowledge in a motivating classroom environment. This study offers lots of ideas to the language teachers about different kinds of interesting poetry-based activities.

Aim and Significance of the Study

The aim of this study is to investigate if teaching vocabulary through poetry will result in more extensive vocabulary knowledge than teaching vocabulary through the traditional activities in the coursebook.

This study is important in that poetry-based vocabulary teaching activities might be one of the useful materials to solve the problem in vocabulary teaching by offering a wide range of texts for teachers and students and ideas for using in the classroom as vocabulary teaching materials. This study will analyse the effects of using poetry-based vocabulary teaching activities on vocabulary learning. As Duff and Maley (2002) state, literary texts such as poetry offer wide range of interesting and practical language development materials for both teachers and students at different ages and levels.

Vocabulary has a crucial role in both language teaching and communication. It is impossible to communicate without words, so learning vocabulary is the most important aspect of learning any foreign language. While teachers are presenting new vocabulary items, they should be aware of all aspects of vocabulary such as synonyms, antonyms and collocations etc. And also they should know how to present new vocabulary items in different ways such as using a literary text which is interesting and motivating for the students. For this reason, an effective language teacher should know how to adapt himself/herself into the new techniques.

The Scope of the Study

This study was applied on 48 students in the 7th grade classes of Çorlu Private Trakya College during the fall semester of 2010 – 2011 academic year. The students in the experimental group were exposed to 5 poems which had the same vocabulary items that the students in the control group were learning in the coursebooks at the same period. The students mostly focused on the vocabulary items in the poems with different kinds of activities during the study. The development of the students was analysed with the comparison of the tests made at the beginning and at the end of the treatment.

Statement of the Research Questions

This study will investigate the following research questions:

1. Do the learners enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities?
2. Is there a statistically significant difference between male and female students in the experimental group considering the vocabulary test?
3. Do the learners enhance more extensive grammar knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities?

Statement of the Hypotheses

In this study the following are hypothesized:

1. The learners enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities than the traditional activities.
2. There is not a statistically significant difference between male and female students in the experimental group considering the vocabulary test.
3. The learners do not enhance more extensive grammar knowledge by means of poetry-based vocabulary teaching activities than the traditional activities.

METHODOLOGY

Research Design

At Çorlu Private Trakya College, an experimental and control group were selected in order to test the hypotheses of the study. There were twenty four 7th grade students in each group at pre-intermediate level. Before the experiment, a pre-test was given to both the experimental and the control group to determine their levels before the treatment. The pre-test included forty vocabulary and forty grammar questions in the form of multiple choice test with three options. (see Appendix F)

A pilot study was carried out at Çorlu Primary School in order to determine the reliability of the items in the test. It is the only school in Çorlu which has more than 100 students in 7th grade so this school was selected for the pilot study and the test was applied after the implementation of pre-test because of waiting a few weeks for the required formal written permission of Çorlu District National Education Directorate. The written permission was taken and attached on the appendix. (see Appendix G) If some of the items had not been reliable in the test, they would have been omitted in the analysis of the items in pre-test and post-test.

Treatment materials were carried out in five sessions (two class hours=80 minutes for each one) during the fall semester of 2010 – 2011 academic year in the experimental group while the control group practiced vocabulary items through the traditional activities in the coursebook of which name is *Access 3* published by Express Publishing.

After the treatment process, the same pre-test was given as a post-test to the both experimental and control group. The analysis of the post-test results was used to verify the research questions.

Subjects

While the pilot study was conducted on 131 students who studied 7th grade at Çorlu Primary School, there were forty eight students at the 7th grade classrooms at Çorlu Private Trakya College in this study. Students were placed to the classrooms randomly and actually there were only two 7th grade classrooms in which *Access 3* was used at the school, so one of them was selected as control and the other one was selected as experimental group randomly and they had equal number of students in the classrooms. The treatment was conducted on 7A (experimental group) and the 7B was the control group. The ages of the students in both groups ranged between 13-14 with the similar social and education backgrounds.

Materials

The multiple choice vocabulary test, which was used as pre-test and post-test through the study, involved forty vocabulary and forty grammar questions including the target vocabulary items (see Appendix F). It was prepared by Express Publishing that is the publisher of *Access 3* which is used as a coursebook in the both control and experimental group.

The materials used in the experimental group were five poems written by the researcher and for these poems there were different kinds of vocabulary teaching activities which were prepared by the researcher, too. (see Appendix A,B,C,D,E). These poems were written by considering the vocabulary items studied in the first five units of *Access 3*. The poetry-based vocabulary teaching activities were prepared by considering some important factors explained in the literature review part. Most of the activities were formed in consideration of *the types of necessary vocabulary development activities* listed by Scrivener and explained in the part of “Activity Types” in this study. The content of the activities was formed in the consideration of suggestions of some scholars such as Nation, Schmitt, Cameron, and Hedge etc. explained in the part of “Necessary Aspects of Word Knowledge” in this study.

Data Collection Procedures

In order to analyse the effects of poetry-based vocabulary teaching activities on the vocabulary development of the subjects, this study was conducted. For this reason an experimental group was exposed to do poetry-based vocabulary teaching activities while the control group was not.

The experiment was implemented on the 7th grade pre-intermediate level students at Çorlu Private Trakya College in the first semester of the 2010 – 2011 academic year. By analysing the curriculum and the vocabulary items in the coursebook, five poems were written for the experimental group and some poetry-based activities were prepared by considering the contemporary techniques.

The test was piloted to 131 students on the 7th grade pre-intermediate students at Çorlu Primary School. The reliability was analysed as 0,944 according to the results of analysis which was done with the programme of MicroCAT Iteman. The indexes of item facility and discrimination of 80 items were analysed. According to results, all of the items were reliable and suitable for this academic study.

The pre-test was applied by the teacher and the duration of the pre-test was fifty minutes. The aim of the pre-test was to determine the difference between control and experimental group in terms of eighty items in the test. Both of the groups were equal according to analysis of the pre-test results.

The treatment was started at the beginning of the first semester and conducted on equal intervals until the end of the semester in 2010 – 2011 academic year. The treatment process had five sessions for the groups and the duration of each session was 80 minutes. The experimental group and control group practiced the same target vocabulary items at the same period with different techniques.

The post-test was applied at the end of the treatment to the groups at the same time. The aim of the post-test was to verify the research questions of the study. The results of the tests were analysed between groups and between pre-test and post-test. The results of the analyses were reported in the lists.

Data analyses

In this chapter, the results of the pilot test, pre-test and post-test are presented and evaluated and the findings are reported.



In this research, in order to analyse the research data the averages of the groups were analysed by SPSS to find out whether there are any significant differences between the two groups in terms of the levels of grammar and vocabulary knowledge as the aim was to test if the learners would enhance more extensive vocabulary and grammar knowledge by means of poetry-based vocabulary teaching activities.

In this investigation, a test was administered as a pre-test and post-test to both the control group and experimental group. In order to investigate whether there was a significant difference between the learners in the control and the experimental groups in the sample, this test was administered as the pre-test and post-test after the vocabulary items of the study were taught to the subjects. It was administered as a pre-test before the beginning of the experimental study in order to check the knowledge of the learners in both groups. The test was administered as the post-test after the experimental study in order to check how much they had learned about grammar and vocabulary items.

The aim of administering the pre-test was to find out whether the subjects were familiar with the grammar and vocabulary items that were used in this study. It was found out that the familiarity of the learners with these items was low since the Pre-test results were low. This provided us with evidence that they had not learned the words before. The data obtained in this study were evaluated by means of the SPSS.

As stated in Chapter One, this study addresses the research questions, the findings of which are presented in this chapter in the following order.

The Analyses of Vocabulary Pre-test and Post-test Results

Are there any differences between the vocabulary pre-test results of the experimental group and the control group?

The following table presents the independent t-test results for the two groups of the vocabulary pre-test.

Table 1: The Comparison of the Vocabulary Pre-Test Results of the Experimental Group and the Control Group.

	N	M	sd	t	p	Level of Significance
Vocabulary Pre-test	Experimental	24	9,87	4,65	1,166	0,250
	Control	24	11,33	3,98		

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value, p: level of significance $p > 0.05$

Table 1 shows whether there is a significant difference between the vocabulary pre-test results of the control group and the experimental group.

The vocabulary pre-test results reveal that statistically there is not a significant difference between the learners in the experimental group and those in the control group.

As can be seen in Table 1, the mean of the pre-test on the grammar items in the experimental group is 9,87 and 11,33 in the control group. The standard deviation of the experimental group test results is 4,65 and that of the control group is 3,98.



The mean value shows that the learners in the experimental group had lower mean scores when compared with those of the control group, and the t-test result shows that there is not a significant difference between the two groups at the $p > 0,05$ significance level, and this indicates the learners in the groups had similar averages in terms of vocabulary items before the treatment according to the results of pre-test.

The data was analysed with independent t-test. According to the results obtained, the vocabulary pre-test test results of the experimental group are lower than the control group. Yet as a result of the analyses, statistically there is not a significant difference at the level of $\alpha = 0,05$ between averages of control and experimental group in terms of vocabulary items ($t = 1,166, 46, p > 0,05$). The experimental group had the same level of vocabulary knowledge as the control group at the beginning of the study before the treatment.

Are there any differences between the vocabulary post-test results of the experimental group and the control group?

The following table presents the independent t-test results for the two groups of the vocabulary post-test.

Table 2: The Comparison of The Vocabulary Post-Test Results of the Experimental Group and the Control Group.

Vocabulary Post-test	N	M	sd	t	p	Level of Significance
	Experimental	24	33,91	4,64	3,664	0,001
Control	24	28,58	5,41			

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value, p: level of significance $p < 0.05$

Table 2 shows whether there is a significant difference between the vocabulary post-test results of the experimental group and the control group.

The vocabulary post-test results reveal that statistically there is a significant difference between the learners in the experimental group and those in the control group.

As can be seen in Table 2, the mean of the post-test on the vocabulary items in the experimental group is 33,91 and 28,58 in the control group. The standard deviation of the experimental group test results is 4,64 and that of the control group is 5,41.

The mean value shows that the learners in the experimental group had higher mean scores when compared with those of the control group, and the t-test result shows that statistically there is a significant difference between the two groups at the $p < 0,05$ significance level, and this indicates the learners in the experimental group had more averages in terms of vocabulary items than the control group after the treatment according to the results of post-test.

The data was analysed with independent t-test. According to the results obtained, the vocabulary post-test test results of the experimental group are higher than the control group. Yet as a result of the analyses, statistically there is a significant difference at the level of $\alpha = 0,05$ between averages of control and experimental group in terms of vocabulary items ($t = 3,664, 46, p < 0,05$). The experimental group had higher level of vocabulary knowledge than the control group at the end of the study after the treatment.

**The Analyses of Vocabulary Pre-test and Post-test Results of Male and Female Students in the Experimental Group****Are there any differences between the vocabulary pre-test results of male and female students in the experimental group?**

The following table presents the independent t-test results for male and female students of the vocabulary pre-test.

Table 3 shows whether there is a significant difference between the vocabulary pre-test results of male and female students in the experimental group.

The vocabulary pre-test results reveal that statistically there is not a significant difference between male and female students in the experimental group. Although, female students have a higher mean than male students but it does not mean any significant difference.

Table 3: The Comparison of the Vocabulary Pre-Test Results of Male and Female Students in the Experimental Group.

Vocabulary Pre-test	GENDER	N	M	sd	t	p	Level of Significance
	Male	11	8.90	4.63			
Female	13	10.69	4.69				

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value, p: level of significance p>0.05

As can be seen in Table 3, the mean of the pre-test of male students is 8,90 and female students is 10,69 in the experimental group. The standard deviation of male students is 4,63 and that of female students is 4,69.

The mean value shows that male students had lower mean scores when compared with female students in the experimental group, and the t-test result shows that statistically there is not a significant difference between male and female students in the experimental group at the p>0,05 significance level, and this indicates that male and female students had the same scores before the treatment.

The data was analysed with independent t-test. According to the results obtained, the vocabulary pre-test test results of male students are lower than those of female students in the experimental group. Yet as a result of the analyses, statistically there is not a significant difference at the level of $\alpha= 0,05$ between averages of male and female students in terms of vocabulary items ($t=0,932$, $p>0,05$). Male students had the same level of vocabulary knowledge as female students in the experimental group at the beginning of the study before the treatment.

Are there any differences between the vocabulary post-test results of male and female students in the experimental group?

The following table presents the independent t-test results for male and female students of the vocabulary post-test.

**Table 4: The comparison of the vocabulary post-test results of male and female students in the experimental group.**

Vocabulary Post-test	GENDER	N	M	sd	t	p	Level of Significance
	Male	11	33.09	4.63			
Female	13	34.61	4.71				

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value,
p: level of significance $p > 0.05$

Table 4 shows whether there is a significant difference between the vocabulary post-test results of male and female students in the experimental group.

The vocabulary post-test results reveal that statistically there is not a significant difference between male and female students in the experimental group. Although, female students have a higher mean than male students but it does not mean any significant difference.

As can be seen in Table 4.7, the mean of the post-test of male students is 33,09 and female students is 34,61 in the experimental group. The standard deviation of male students is 4,63 and that of female students is 4,71.

The mean value shows that male students had lower mean scores when compared with female students in the experimental group, and the t-test result shows that statistically there is not a significant difference between male and female students in the experimental group at the $p > 0,05$ significance level, and this indicates that male and female students had the same scores before the treatment.

The data was analysed with independent t-test. According to the results obtained, the vocabulary post-test test results of male students are lower than those of female students in the experimental group. Yet as a result of the analyses, statistically there is not a significant difference at the level of $\alpha = 0,05$ between averages of male and female students in terms of vocabulary items ($t = 0,795$, $p > 0,05$). Male students had the same level of vocabulary knowledge as female students in the experimental group at the end of the study after the treatment.

The study examined directly the effectiveness of using poetry to teach vocabulary in a foreign language classroom. The results of the data analysis revealed a significant difference between the pre-test and post-test scores of the experimental group students receiving vocabulary instruction through the poems. However, we examined indirectly the effectiveness of using poetry to teach grammar in a foreign language classroom. The results of the data analysis depicted that there is not a significant difference between the groups in terms of grammar. This is related to the lack of grammar activities in the treatment, since the main focus of the study was on vocabulary. The following descriptive statistical analysis depicts the results of the effectiveness of poetry-based activities on grammar in both groups.

The Analyses of Grammar Pre-test and Post-test Results

Are there any differences between the grammar pre-test results of the experimental group and the control group?

The following table presents the independent t-test results for the two groups of the grammar pre-test.

**Table 5: The Comparison of the Grammar Pre-Test Results of the Experimental Group and the Control Group.**

Grammar Pre-test		N	M	sd	t	p	Level of Significance
		Experimental	24	11,87			
Control	24	12,20	3,32				

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value,
p: level of significance $p>0.05$

Table 5 shows whether there is a significant difference between the grammar pre-test results of the control group and the experimental group.

The pre-test results of the grammar test reveal that statistically there is not a significant difference between the learners in the experimental group and those in the control group.

As can be seen in Table 4.8, the mean of the pre-test on the grammar items in the experimental group is 11,87 and 12,20 in the control group. The standard deviation of the experimental group test results is 3,69 and that of the control group is 3,32.

The mean value shows that the learners in the experimental group had lower mean scores when compared with those of the control group, and the t-test result shows that there is not a significant difference between the two groups at the $p>0,05$ significance level, and this indicates the learners in the groups had similar averages in terms of grammar items before the treatment according to the results of pre-test.

The data was analysed with independent t-test. According to the results obtained, the grammar pre-test test results of the experimental group are lower than the control group. Yet as a result of the analyses, statistically there is not a significant difference at the level of $\alpha= 0,05$ between averages of the control and experimental group in terms of grammar items ($t=0,328, 46, p>0,05$). The experimental group had the same level of grammar knowledge as the control group at the beginning of the study before the treatment.

Are there any differences between the grammar post-test results of the experimental group and the control group?

The following table presents the independent t-test results for the two groups of the grammar post-test.

Table 6: The Comparison of the Grammar Post-Test Results of the Experimental Group and the Control Group.

Grammar Post-test		N	M	sd	t	p	Level of Significance
		Experimental	24	27,91			
Control	24	24,79	6,78				

N: Number of participants, M: Mean, sd: Standard deviation, p:p-test value,
p: level of significance $p>0.05$

Table 6 shows whether there is a significant difference between the grammar post-test results of the experimental group and the control group.

The grammar post-test results reveal that statistically there is not a significant difference between the learners in the experimental group and those in the control group.



As can be seen in Table 6, the mean of the post-test on the grammar items in the experimental group is 27,91 and 24,79 in the control group. The standard deviation of the experimental group test results is 5,95 and that of the control group is 6,78.

The mean value shows that the learners in the experimental group have higher mean score when compared with those of the control group, and the t-test result shows that there is not a significant difference between the two groups at the $p > 0,05$ significance level, and this indicates the learners in the groups have similar averages in terms of grammar items after the treatment according to the results of post-test.

The data was analysed with independent t-test. According to the results obtained, the grammar post-test test results of the experimental group are higher than the control group. Yet as a result of the analyses, statistically there is not a significant difference at the level of $\alpha = 0,05$ between averages of the control and experimental group in terms of grammar items ($t = 1,695$, 46, $p > 0,05$). The experimental group had the same level of grammar knowledge as the control group at the end of the study after the treatment.

As a conclusion, Table 5 shows that the first research question is verified that the learners enhance more extensive grammar knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities. Table 4 shows that the second research question is not verified that statistically there is a significant difference between male and female students in the experimental group considering vocabulary test. Table 6 shows that the third research question is not verified that the learners enhance more extensive grammar knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities.

As a result of analysing these data obtained from the results of pre-test and post-test conducted to the experimental group and the control group, according to the results of the pre-test; at the beginning of the study, control group had higher average in terms of vocabulary and grammar, but there is not a statistically significant difference between the groups. The treatment was conducted to the experimental group and then a post-test was conducted in order to determine whether there is a statistically significant difference between the groups in terms of grammar and vocabulary knowledge. Averages of both groups increased when the result of the post-tests are compared with the pre-tests, but it is clearly seen that the experimental group had higher averages in terms of vocabulary in comparison with the control group when the results of the pre-test and post-tests are analysed and so there is a statistically significant difference between the experimental group and the control group in terms of vocabulary. The analysis of these data verifies that experimental group enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities than the traditional coursebook activities.

CONCLUSION

Findings and Discussions

This study investigates the effects of using poetry-based vocabulary teaching activities on vocabulary development. Therefore, it aims to find out the difference between the experimental group who learns new vocabulary items through poetry-based vocabulary teaching activities and the control group who learns vocabulary items through the traditional coursebook activities.

According to table 4.4 both experimental and control group had lower vocabulary knowledge before the treatment. After the treatment, according to the post-test results the experimental group had more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities. Therefore, the findings of the study verify the first hypothesis mentioned above.

There is not a significant difference between the groups in terms of grammar knowledge because the activities do not focus on the grammar knowledge much. However, the students in the experimental group have a bit more extensive grammar knowledge than the control group. The findings of the study do not verify the second hypothesis mentioned above.

This findings support the idea that poetry offers a great benefit in terms of vocabulary teaching and learning.

Implications of the Study

The findings of the current study show that teaching vocabulary through poetry in an EFL classroom is useful for the students in terms of developing their vocabulary knowledge because using poetry-based vocabulary teaching activities help the learners enhance more extensive vocabulary knowledge.

Poetry is an ideal and practical teaching material for both the teacher and learners in an EFL classroom in terms of vocabulary development. This study indicates that it is worth investigating the use of poetry alternatively in an EFL classroom to make the learners enhance more extensive vocabulary knowledge.

Language teachers should make use of the findings in the study while preparing and applying materials by using poetry in order to practice vocabulary items. This study sheds light on the way of the teachers and offers practical ideas in order to improve the language learners' vocabulary knowledge.

Therefore, the idea of teaching vocabulary through poetry in an EFL classroom may bring a change to the traditional coursebook activities and the use of poetry may be helpful for course designers to add poems into the programme, for teachers to prepare different kinds of activities and for language learners to practice the second language with these poems and different kinds of activities.

Limitations of the Study

While the current study successfully supports the effect of the implementation of the poetry-based vocabulary teaching activities in vocabulary teaching in order to enhance the learners' vocabulary development in English, some limitations of the study should be addressed.

This study aims to investigate whether the learners enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities in a pre-intermediate 7th grade EFL classroom. The number of the participants was limited to forty-eight, besides the number of the poems was limited to eight. Larger samples and more poems are needed in order to have more reliable findings. Not only the participants and poems but also the duration was limited to one semester. Making a longer implementation may give more reliable results.

Another limitation about the implementation is that there was only one pre-test and one post-test in this study. It would be better to have progress tests for indicating the effectiveness of each poem and poetry-based activities, but there were not suitable tests for it. A retention test would show a result about the effectiveness of the poetry-based vocabulary teaching activities on storing the vocabulary items in long-term memory, but there was not enough time for it.

This study is applied on the pre-intermediate 7th grade learners, so it is impossible to generalize the findings for the adult groups or other language levels. The findings are commented just for the young learners at the ages of 13-14. The level of the students was pre-intermediate, so it is limited with this language proficiency level.

Suggestions for Further Research

In this study there are limited number of participants, limited time and limited poems. There are only pre-intermediate level young learners who study at the 7th grade in a private school. Only one of the literary text types is used for the implementation. There is only one pre-test and one post-test. The implementation pays more attention to vocabulary knowledge in this study.

In order to have more reliable results,

- Since the focus of this study was on vocabulary knowledge, a similar study can be implemented by preparing poetry-based activities focusing on grammar knowledge.
- A similar study can be implemented on more number of participants.
- A similar study can be implemented in a longer period of time.
- A similar study can be implemented by using more poems and more activities.
- A similar study can be implemented on elementary or advanced level of language learners.
- A similar study can be implemented on adult language learners.
- A similar study can be implemented by using other types of literary texts such as short story, drama etc.
- A similar study can be implemented by applying progress test to see the development of the participants in a more detailed way.
- A similar study can be implemented in order to indicate the effectiveness of poetry on different genres.
- A similar study can be implemented in order to indicate the effectiveness of poetry on the learners' motivation.

CONCLUSION

This study was implemented in order to investigate the effectiveness of the poetry-based vocabulary teaching activities on the learners' vocabulary knowledge. According to the results of the tests applied before and after the treatment, it is verified that the learners enhance more extensive vocabulary knowledge by means of poetry-based vocabulary teaching activities.

It is clear that vocabulary knowledge is essential in an EFL classroom and in communication, so it must be surely improved in all possible ways. The most important role about it belongs to the teachers who should offer materials to help learners enhance more vocabulary items and knowledge. Poetry is a practical source for the teacher to use as a tool in language classrooms and it is easy to access, applicable and ready-to-use. As it is seen there are lots of reasons why teachers should use poetry in an EFL classroom.

As a conclusion it is hoped that this study has highlighted the importance of using poetry and poetry-based vocabulary teaching activities in an EFL classroom to teach vocabulary; this study will also shed light on researchers, course designers and teachers who want to use poetry in an EFL classroom in order to make learners enhance more extensive vocabulary knowledge.

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USING MUSIC AND MUSICAL ACTIVITIES IN SPECIAL EDUCATION: DEVELOPMENTS IN TURKEY*

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ABSTRACT

Music, as an expressive art, plays a significant role in the lives of all children and it can be used in education to improve non-musical educational objectives as well as the musical ones. Music has also positive contributions to the development of children with special needs in terms of feeling the sense of achievement, giving self confidence, and teaching academic concepts. Enriching educational programs with music would contribute to academic, social, emotional and cognitive development of these children. This paper begins with the overview of the related literature on the effects of music and musical activities in educating children with special needs. It focuses mainly on the practices and studies in Turkey, The authors are attempted to identify the developments of using music and musical activities in education of children with special needs in Turkey.

Keywords: children with special needs, children with mild mental disabilities, music, musical activities, music therapy.

INTRODUCTION

Music places an important part in the lives of all children. As an expressive art, music contributes to the total development of all children and can be used in education to meet non-musical educational objectives, such as improving academic, social, and/or language skills as well as the musical ones.

Music is one of the most effective and significant techniques used in education supporting all children's motor, mental, and language development. The aims of music education are related to communication, awareness, creativity and emotions (Artan & Bal, 1998). By the use of music, children's responses grow and skills like hand-eye coordination and eye-contact develop. Through music, children may enhance their self esteem, feel the sense of security and success, rely on themselves more, enhance communication, and derive a sense of pleasure (Flowers, 1984).

"Music offers every child an opportunity for fun, enjoyment and enrichment" (Zinar, 1987). It may also be used for different purposes, such as education, healing, and treatment (Artan, 1993). As in average children's development, music has also positive contributions to the development of children with special needs in terms of feeling the sense of achievement, giving self confidence, learning developmental skills, enhancing self esteem, having relaxation, and teaching academic concepts. Music is also a way to reach these children and help them to learn. Enriching educational programs with music would contribute to academic, social, emotional and cognitive development of these children.

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Zinar (1978) said that “All children have the need for expression through music, but for the handicapped child, the physical, emotional, and intellectual benefits that can be derived from music make it an essential part of classroom activities” (p. 56). Artan (2001) has listed the important topics to pay attention when music activities are integrated into educational programs of children with special needs: The problems of disabled children, aim of the activities, planning of the activities, characteristics of educator, conditions of the workplace and choosing materials.

For all children, music makes a difference if you use it in other subjects, because it makes learning easier (Zinar, 1987). In that sense, integrating music into curriculum appears to be important and this is also not different for the children with special needs. Only, the activities and the materials may be adapted in some way to enable children with special needs to participate and succeed. Some special materials and activities may also need to be developed to achieve desired goals. Artan (2001) reported that “Music programs for disabled children should comprise of voice listening and recognizing, singing, rhythm, creative movement and dance and musical stories. ...musical programs designed to appropriate criteria will provide countless benefits for disabled children” (p. 43-44).

Looking at the studies that focusing on the use of music and musical activities in Turkey; although there found limited number of studies about using musical activities in educating children with special needs reported in Turkey in 1990's, a rapid increase was observed in the interest of people studying the impact of music and musical activities for children with special needs.

From 1990's to present, it has been observed that there is increased number of studies conducted contributing to the related literature mostly in the form of theses and dissertations and there are several articles and non-academic contributions to this field.

This paper begins with the overview of the related literature on the effects of music and musical activities in educating children with special needs in 1990's and in the beginning of 21st century. . It focuses mainly on the practices and studies in Turkey. The authors are attempted to identify the developments of using music and musical activities in education of children with special needs in Turkey from 1990's to present.

Developments in using music and musical activities in special education in Turkey

In 1990's, there are limited number of studies reported about using music and musical activities and their effects on both average children and children with disabilities in Turkey. Few studies on using musical activities in educating children with special needs in Turkey focused on using music with autistic children (Basar, 1995), the effects of instrumental and movement activities in helping adolescents with mental disability in developing the ability to follow directions (Değirmenci, 1993), the degree of involvement of children with hearing impairment in musical practices (İzgü, 1993), the effects of music training in the development of auditory perception of children with hearing impairment (Bilir, Bal & Artan, 1992), the development of rhythm on kindergarten children with profound hearing loss (Bilir, Artan & Bal, 1995), and the effects of music enrichment program in academic and social skills of children with mild mental disabilities (Özeke, 1998).

İzgü (1993) concluded that music education positively affected the language, emotional, social, physical and psychomotor development of children with hearing impairment. Similarly, Bilir, Bal, and Artan (1992) revealed that music training positively affected the development of auditory perception of children with hearing impairment. Correlatively, analyzing the development of rhythm in 5-7 year old children with profound hearing loss, Bilir, Artan and Bal (1995) found significant improvements on the children's performance of different rhythm tasks. In Değirmenci's study (1993) on the effects of movement and



instrumental activities in developing the ability to follow directions for adolescents with mental disability, children who participated in the movement activities were found superior to the children who participated in instrumental activities. As a general point, it was revealed that music therapy was an effective technique with children with mild mental disability in gaining the ability to follow directions. Furthermore, in Başar's (1995) study on using music with autistic children, music was found affective with respect to interactions (cited in Özeke, 1998). In Özeke's study (1998), although no significant improvements were found in experimental group after the music enrichment program with children with mild mental disabilities, according to observations from parents and teachers, the study had positive effects on children especially in social skill development. It has been observed that using music helped the researcher to establish communication with the children, the children felt comfortable with musical activities, they learned concepts and skills easier, they enjoyed the activities and materials that have been presented and this stimulated their academic and social growth. Moreover, while they have shared an activity, gaining social skills such as participating into a group activity, following instructions, leading a group was observed.

In short, regarding the related literature, in 1990's, the studies and applications related to music in special education in Turkey appears to contribute to the field but limited in number.

In the beginning of 21st century, it could be said that there is significant increase in the interest of people studying music in special education, as a result, researchers began to look for the impact of music in the special education environments.

Çadır (2008) conducted a research about social skills education for mentally disabled students. Social skills education program which is designed by the use of musical therapy method for mentally disabled students was tested with nine mentally disabled students. The program was implemented in every weekdays, during 30-35 minutes classes. The social skills analyzed in the research were inviting others to play games, bringing back the objects that was borrowed, and fulfilling the duties. The research tested whether music therapy was effective in improving these skills or not. Results showed that the social skills education program prepared through musical therapy method was found effective.

Kurt (2006), in his research aimed to investigate the effect of music for achievement on a given task. He worked with 32 children between 4-6 years old and with moderate mental retardation in an experimental-control group design. Subjects were asked to complete a task in a laboratory which was controlled by a computer. In 4 weeks period, in each 30-35 minute session, experimental group had to listen music for 5 minutes and then during 30 minutes they had to complete the given task. In a pre-posttest design, "Denver II Prescreening Developmental Questionnaire" was used. Results revealed no difference between the experimental and control groups in success of a given task and no improvement in motor skills.

Kırşehirli (2011) tested the effectiveness of teaching self-care skills by songs with the mentally retarded students. As a result, teaching self-care skills by the song was found effective with children with mental retardation.

Beside the increasing interest on research in using music in special education, Ministry of Education (2011) published a source book about musical activities for special education which aimed to guide students in vocational schools to meet the increasing needs of guidelines in the area. The resource was aimed to help students, in other words, future professionals of special education, first to choose musical activities in terms of the different needs of different exceptionalities, and second, to prepare and practice musical activities for children with special needs.



Moreover, there are also studies focusing on the opinions and the problems when utilizing music in special education. Turan (2006) conducted a study to identify the problems that teachers teaching music in the special education area. The results of the study showed that teachers' qualifications of teaching music in special education were low, materials used were insufficient, educational environment was not very appropriate for music and the curriculum for music was also not sufficient.

In Yıldırım's study (2010), to determine the opinions of teachers working at different schools for mentally retarded about the use of music in teaching concepts, a descriptive study conducted. Results revealed that teachers from the school for the severely handicapped children felt that they are competent in using musical activities for teaching concepts and they use musical activities more than the other group of teachers in the study.

Çakır-Doğan (2011) investigated the status of the elementary music program for the educable mentally retarded children. Results revealed that the number of music teachers were low and music classes were thought mostly by the special education teacher. According to the teachers, elementary music program mostly fits for the needs of educable mentally retarded children. As part of the study, Çakır-Doğan also recommended a model music program for this group of students. Similarly, Kıvrak (2003) reveals about the problem of qualified music teacher for the area of special education and emphasized the importance of special education courses in music teacher education.

There are some more resources reported on the historical process of musical therapy in Turkey (Somakçı, 2003; Karahan, 2006), hospitals used music therapy in the times of Seljuk and Ottomans (Erer & Atıcı, 2010), music therapy practices in Turkey and in the world (Uçaner & Öztürk, 2009), and music therapy and its therapeutic effects on students (Özcevik, 2007). These resources are mostly focused on the treatment effects of music. As well as those resources, a book about music therapy (Çoban, 2005) including theoretical and practical information both for psychiatric population and for children with special needs is making the significant contribution to this area.

Above mentioned studies are only couple of examples coming out from the thesis and articles identify the developments of using music and musical activities in education of children with special needs in Turkey. Besides these literature, there are several private contributions to the field of music therapy. There are several private special education and rehabilitation centers that using music therapy methods for developing several skills and changing problematic behaviors of different groups of special children (<http://www.e-psikiyatri.com/psikiyatri-haberleri/MUZIKLE-ENGELLERI-ASIYORLAR/2093/>).

There are also some personal initiatives for practicing music therapy. Their work consists of wide variety of people changing from psychiatric patients to special children. For example, Çoban (2006) wrote about several subjects on music therapy practices on a website of a neuropsychiatry center, such as forming musical development objectives for children with speech problems (<http://www.e-psikiyatri.com/cocuk-psikiyatrisi/kekemelik-ve-diger-konusma-bozukluklari/Muzikle-Tedavide-Hedeflerin-Gelisimsel-Sirasi/21031/>), therapeutic effect of sound (<http://www.e-psikiyatri.com/eriskin-psikiyatri/muzikterapi-muzikle-tedavi/Sesin-Tedavi-Edici-Yonu/21798/>), and musical development processes (<http://www.e-psikiyatri.com/psikiyatri-haberleri/MUZIKAL-GELISIM-SURECLERI/68/>). Çoban (2000) also mentioned about music therapy in educational environments (<http://www.e-psikiyatri.com/psikiyatri-haberleri/EGITIM-ORTAMLARINDA-MUZIKLE-TEDAVI/43/>), planning in music therapy (<http://www.e-psikiyatri.com/psikiyatri-haberleri/MUZIKLE-TEDAVI-PLANI/275/>), and developmental therapy in treatment with music (<http://www.e-psikiyatri.com/psikiyatri-haberleri/MUZIKLE-TEDAVIDE-GELISIMSEL-TERAPI/301/>). As well as wrote about those subjects, giving concerts with children with special needs is mentioned as part of his work in sharing the knowledge



(<http://www.adnancoban.com.tr/muzikterapi.html>). Moreover, Sezgin's significant contribution in this area is published in the platform called "music therapy" (<http://www.muzikterapi.net/t/03/index.jsp>), includes information about using musical activities with different groups and examples of practices; where he is also mentioning about the project called "music without barriers", which includes musical group activities with the children with special needs for about 12 months.

There are some more people work especially with the group of autistics, such as Eracar, an academician and one of the founders of psychotherapy center, shares her articles on music therapy and autism at this center (<http://www.aurapsikoterapi.com>). Working with professionals of special education about art therapies, including music, is another contribution of her for the area.

In summary, information above shows that in the beginning of the 21st century there are significant developments in Turkey reported in the area of special education using music and musical activities with children with special needs.

CONCLUSION

All children need education. Children with mental disabilities need educational interventions differing from their normal peers. Music plays an important part in the lives of all children, especially for children with special needs. Using some music activities in education of children with special needs opens these children new windows to life, providing new stimulation for them. With music, they may have fun, gain pleasure, and develop their various skills. Therefore, this study aimed to identify and report the developments of using musical activities in education of children with special needs in Turkey.

Looking at the studies in 90's and beginning of the 21st century, although there is a slight increase in number of studies in using musical activities in special education and in music therapy, there seems an improvement in awareness and recognition of music therapy services in special education. Limited studies done in the field of special education on using music and musical activities were mostly focused on the outcomes of skill development, social skills, achievement, and teaching concepts. Moreover, music therapy practices seemed to be widening with the efforts of personal initiatives. More books, studies and tested practical work is needed to talk about an fully improvement in using music in special education.

Looking at the studies, it can be concluded that although most of resources have been written by the researchers mainly working in the area of special education, there is an increasing interest of music educators in this area. Musicians and music educators seems to show an interest but it is still limited. However, special education teachers or preschool teachers may not feel competent in using music activities with children with disability. Early childhood education specialists interested in the area contribute to the literature as well but it seems these efforts are also limited. Music specialist's contribution to use of music in working with children with special needs, either in form of music therapy or in form of musical activities is needed. Moreover, music teachers after graduating from the music departments can either work at the regular schools or special schools. For working in special schools they need special education courses, to understand and meet the needs of special students better and to feel more competent in the area. Music specialists' contribution can be achieved through sharing their knowledge with the special education professionals and through guidance. Therefore, it can be concluded that collaboration among different area of professions is strongly needed to reach the same goal of improving practices in special education. Moreover, contribution of the scientific knowledge in the area through books, studies and practices, and sharing those knowledge are also needed area of work.

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