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Investigation of the effects of the program “utilization of the museums for pre-school education” on 6 year-old children

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Abstract

This research has been supported by Marmara University Scientific Research Project Committee under project number EGT-C-YLP-171108-0271. The research aimed to determine the effects of the program “Utilization of Museums for Pre-School Education” which was carried out according to the social-emotional and cognitive field gains determined by the education program of Ministry of Education on 6 year-old children continuing to pre-school educational institution. The research was carried out in three stages as pre-visit, visit and post-visit to the museums where various educational techniques were used. Educational program set on the themes of sheltering, clothing and intercommunication were applied on experimental group and the control group of students. Control group were only taken to the museums and not involved in the program. Statistical analyses revealed that the experimental group was more successful than the control group.

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1. Introduction

Learning is a quite complicated process. General talents, cognitive development, emotions, impetus, progressive attribute, pre-knowledge, previous living experiences, social environment and family of the individual and the culture of the society etc are the variables that affects learning. Definitely there are important differences on the learning process of each individual who are influenced by this many factor. (Erden, Altun, 2006). Gardner argued that the human has multiple intelligence and specified that the ingenuity and productivity of the individual will increase in multiple learning environment (Artut, 2004).

In fact people have all types of intelligence determined by Gardner but on some people, one or some of these intelligence types can be dominant since the intelligence profile of each person is different. The importance is to explore the affinity and intelligence area of the students in the educational system and to direct them according to their dominant intelligence type. On the conventional education only one type of standard education method is applied by focusing on specific intelligence profiles. (Artut, 2004). However, in order to provide active participation

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for students with different intelligence profiles, different methods and techniques should be used. One of these learning areas is museums. “The museums, that provide different environments to gain living experience to children, are ideal educational environments at pre-school era. To support the programs applied in each steps of pre-school education by out of school visits, especially by museum visits, which bring in historical consciousness and provide the students to view the cases and facts in cause and effect relation, is important to create learning variety.” (Abacı, 2003).

International Community of Museums (ICOM) defines the museum as an association which is continuously governed for society benefits in an effort to save the cultural components, to analyze, to evaluate and especially to exhibit in order to upgrade the education and appreciation of the community. (Atagök, 1999, Akt., Yenigün, 2002).

Education is an activity leaning against living experiences. The natural education environment, that museums present, provides the visitors of children and adults, to explore by themselves and learn by practicing and living in that environment. The learning and exploring in the museums is actualized by the interaction of the objects that are exposed in the museums (Anadol, 2001). For that reason the museum education can be said to be quite different than conventional school education.

Today, the use of the museums as an education area has become inevitable. If the “boring dusty old museum” is to become a living museum, a place for children, then three important educational steps are necessary, as it now recognized throughout the world: a personal guided tour, elaboration by educational media, from blackboard and chalk via scale models to videotapes, comparing the children’s experiences in the museum with the “real world” as they know it (Vogt, 1986). Today, in many countries museums are working as “education associations” for children and teenagers by adopting the principle of “living museums”. Almost all museums have their own education department and attend to cooperate with the schools (Akar, 2001; Akt. Artut, 2004). Museums can provide the needed environment for the active learning with its collections, facilities and the services which can not be performed at another place (Vogt, 1985; Akt. Yılmaz, 1996). In Turkey since the pre-school education has been adopted as mandatory, a program in the modern education standards has been developed by the cooperation of the dedicated and creative studies of Ministry of Education together with the relevant department of the universities. In this program the development targets of the children and the principle of learning variety is important. Thus, out of school visits especially the museum visits are suitable environments for this program (Abacı, 2003).

2. Method

2.1. The design of research

On the research pre-test and post test is used to investigate the effects of the program on the experimental and control groups. Experimental group attended both to the museum visits and education program whereas the control group attended only to the museum visits. Before the visit pre-test and after the visit post-test was applied to both groups.

2.2. The sample

This study was carried out with the participation of 6 year-old 42 students studying in Acıbadem Türk Telekom Elementary School in Istanbul. Students both in control group (N=19) and experimental group (N=23) joined the planned museum visits. Four different museums “Istanbul Archaeology Museum, Turkish and Islamic Art Museum, Beylerbeyi Palace, Rahmi Koç Museum” were determined as visit areas located in European and Asian side of Istanbul.

2.3. Instruments

The data of the study was collected on an observation notebook and gathered from the “Information Form” about the Cultural Experience of Children” consisted of 6 questions; “Student Evaluation Form” consisted of 40 questions and the studies of the children.

Information Form About the Cultural Experience of Children: The form is developed by the researcher and consisted of questions like the frequency of the children going to the museum visit, theater, cinema, the frequency of

the parents reading books to the children, the frequency of the children watching TV to reveal the cultural experiences of the children.

Student Evaluation Form: The form is developed by the researcher and includes total 40 questions to evaluate the children's aims and gains determined by the pre-school education program of Ministry of Education. This form was applied both to the experimental and control group of children before the visit as pre-test and after the visit as post-test.

Observation Notebook: Observation notebook consists of the worksheets on which the students can express their observations related to the museum visits, their experiences and emotions. Since the study was carried out with 6 year-old students, the pictures they painted related with this study were also included in the observation notebook.

2.4. Educational Program

The research was carried out according to the aims of the social-emotional field and cognitive fields determined by the education program of Ministry of Education on 6 year-old children continuing to pre-school educational institution. This research was performed in three stages as pre-visit, visit and post visit to the museums with the cooperation of the school and the museums. First stage includes the activities to be held in the class. These classroom exercises were performed only with the experimental group. In the second stage, museum excursion was realized with visits to the specific parts of "Istanbul Archaeology Museum, Turkish and Islamic Art Museum, Beylerbeyi Palace, Rahmi Koç Museum" determined by the researcher. Museum visits were performed both with the experimental and control groups. Studies of the program were applied to the experimental group during museum visit. In the last stage, post-excursion activities were performed with the experimental group at the school.

Pre-museum excursion is a preparation to the museum visits and includes the activities to be held in the classes. At this stage, educational materials and techniques are prepared and applied. The preliminary activities of excursion are used in class by the teacher three days before the excursion. The first activity is to talk about the function of the concept of museum with discussion in the classroom. In this activity, the answer to the question of "what is a museum?" is sought. In the following courses, students are made ready for the excursion by the activities such as drama, art, and verbal field related concepts with the subject matter (Abacı and Kamaraj, 2009).

In the present study, the museum visits were held by the classroom teacher, experimental group consisted of 23 students, and control group consisted of 19 students and voluntary parents. Total 4 museums "Istanbul Archaeology Museum, Turkish and Islamic Art Museum, Beylerbeyi Palace, Rahmi Koç Museum" were visited and the activities were applied on the experimental group. The activities like hunting art in museums, painting pictures, worksheets and drama were held during museum visits. For some of the activities students were divided into two groups and held under the supervision of two teachers. Abacı (2008) specified that the museum visit won't include the whole museum. Thus, the study was carried out in the specific parts of the museums that were determined by the researcher. The study was conducted under the themes of sheltering, clothing and intercommunication. These themes were handled in a period of the first human life to migratory community and to palace life up to the present time. Abacı (2003) recommended the children to be set free to visit whole museum after the activities in the program were applied.

The post-museum stage is the practice of the information learned during pre-museum and during museum stages which can be executed in 3-5 school days after the visits. In this stage the methods like discussion, brain storm, art education, project development, three dimensional design activity were used. The student while analyzing history by the help of the objects, and trying to understand it with comparing the objects of today and past, actually acquire knowledge during the process via objects. Opportunities are provided for students to utilize their creative thinking by asking them to design a futuristic object which is the continuation of past and present (Abacı, 2008).

2.5. Procedure

The Information Form about the cultural experiences of children were given to the parents of the children via class teacher and filled out by the parents. The questions in the student evaluation form were held by face to face interviews between the student and the researcher before and after the program. Observation notebook was held by the students according to the worksheets prepared during the program by the researcher. Analyses were performed based on the whole data gathered.

2.6. Analysis of Data

The data gathered as pre-test and post-test before and after the educational program employed in the study was analyzed with the statistical program SPSS 11. Wilcoxon analyze was used to investigate the significance level of the difference between the pre-test and post-test scores of the experimental and control group; Mann Whitney-U technique was used to investigate whether the pre-test and post-test scores of experimental and control group becomes statistically different or not depending on variables of gender and attending to museum visits or not.

3. Results (Findings)

In this stage difference analyze was held to investigate the difference between the pre-test and post-test scores of experience and control groups.

Table 1. The Wilcoxon test results to determine the significant of the difference between the pre-test and pos-test average scores of the experimental group

Ranks (pts)	N	Mean Rank	Sum of Ranks	Z	p
Negative Ranks	0	,00	,00		
Positive Ranks	23	12,00	276,00	-4,205	,000
Ties	0				
Total	23				

As you can see in Table 1. The dissimilarity between averages of the ranking is statistically meaningful according to the Wilcoxon test, which is to measure the differences between the pre-test / post-test average of the experiment group ($z=-4,205$; $p<,01$). The results were in favor of the last test. Consequently, students achieved better scores under the program.

Table 2. The Wilcoxon test results to determine the significant of the difference between the pre-test and pos-test average scores of the control group

Ranks (pts)	N	Mean Rank	Sum of Ranks	Z	p
Azalanlar	4	6,88	27,50		
Artanlar	9	7,06	63,50	-1,277	,202
Eşit	6				
Toplam	19				

As you can see in Table 2, The dissimilarity between averages of the ranking is not statistically meaningful according to the Wilcoxon test, which is to measure the differences between the pre-test / post-test average of the experiment group ($z=-1,277$; $p>,05$). Thus, no differentiation is observed statistically, when pre-test and last test scores of the experiment group are considered.

3. Discussion

When the local and international literature is investigated, the studies and researchs that were focused on the pre-school period are not seen to be sufficient. Many of the researchs related with the museum education studies and museum education function studied with the elementary and secondary education students. Mayfield (2005) mentioned the purpose and education function of the children museums and the severity of the game in the museums on his study "Children's museums: purposes, practices and play". Eğitmen (1995) studied on the subject "The place and the importance of the creative drama on the increase of the efficiency of the Archaeological Museums as an educational environment. Belen (1992) conducted the research named "To set the educational responsibility in Archaeological Museums for elementary and 2nd grade education, a practice for the solution". Yılmaz studied the subject "An evaluation of children education in museums in terms of museum collections and investigation in the sample of Rahmi Koç Museum" in 1996. Benuğur (2000) investigated the activities of the Archaeological Museums for children. The study of Abacı, Önder and Kamaraj, "Museums as an education medium" carried out in 2005 revealed that the experimental group of students are more successful than the control group relevant to the knowledge level of clothing and their opinions about Archaeological museums. Güler (2009) carried out her study

“Efficiency assessment of museum training package program prepared for the purpose of fruitful museum visits” with a sample of art activities lesson Ankara primary school 3rd grade students. Orhan Gökmen (2004) analyzed the place of the museums as education environment for elementary first grade students.

4. Conclusion and Recommendation

As a conclusion of the research; the investigation of the influences of the program ‘utilization of the museums for pre-school education’ on 6 year-old students revealed that the scores of the experimental group of students increased significantly after the program. The scores of the pre-test and post-test of the control group, who joined the museum visits but not involved in the program, did not show any statistic difference. Based on these results, the program of utilization of museums in pre-school education may be considered to contribute on the social and cognitive development of children and the below proposals can be made accordingly:

- Future studies in this direction may include different development areas.
- New programs may be prepared oriented towards different museums which are not included in this study.
- The content of the program may be adapted for 4-5 year-old children.

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