

Full Length Research Paper

An alternative educational method in early childhood: Museum education

Güzin Özyılmaz Akamca*, R. Gunseli Yildirim and A. Murat Ellez

Dokuz Eylül University, Buca Faculty of Education Department of Early Childhood Education, Turkey.

Received 16 January, 2017; Accepted 27 June, 2017

According to the preschool education program that came into effect by Turkish Ministry of Education in Turkey in 2013, teaching should be offered not only in classrooms but also in places outside classrooms likely to boost learning. The program required utilizing learning techniques, and environments different from conventional ones. The aim of the present study was to raise awareness about history through a museum education program created as described by the Ministry in 2013, and offering information about cultural heritage of Turkey and other cultures, and to test effectiveness of the program. The study was conducted in İzmir Tarih ve Sanat Müzesi (The History and Art Museum in İzmir, Turkey). Data were collected at face to face interviews with a semi-structured interview form created to determine what children thought about museums. Obtained data was evaluated with content analysis. The analysis showed that the education program offered was effective.

Key words: Preschool education, museum education, and preschool education program.

INTRODUCTION

According to the International Council of Museum (ICOM), museums are institutions which are open to public use to collect and protect things witnessing history of human beings and their environment, to display them for educational and entertainment purposes, to do research on them, to share obtained knowledge through this research with people and to contribute to development of societies (McLean, 1996). They have collections related to art, science, history, health and technology which give understanding to protect, examine and evaluate cultural values and to enhance esthetic values of societies (Riviere, 1962).

At present, learning is not restricted to books or school. Based on contemporary learning theories, learning require that individuals should be active, put what they

have learned into practice, think about what they implement and make sense of them, utilize their linguistic skills and participate in social activities.

Museums are defined as “classrooms without walls”. They are known to be important educational environments and offer a considerable learning potential. Museum education involves effective use of museums as experiences based on multifaceted learning and as living environments during life-long learning. They enable students to understand the value of and protect historical artifacts and cultural heritages, to respect different cultures and to adopt multiculturalism (Sheppard, 2001).

Collections exhibited in museums allow students to see how history is evaluated and to develop critical thinking skills about history (Marcus, 2007). Historical artifacts

*Corresponding author. E-mail: guzinozyilmaz@gmail.com.

help to preserve national identity, culture and memory and transmit historical and cultural heritage to future generations (Crane, 2000).

It is clear that education should also take place outside classrooms. In the present era, in addition to their respective historical value, museums are places where individuals' ability to search information, question, criticize, analyze and create can be raised. All modern approaches underscore the idea that what is learned through on the job training or experiences can be retrieved for a long time (Hooper-Greenhill, 1994).

Education offered in museums contributes not only to learning about artifacts available there but also to the development of cognitive, affective and linguistic skills such as verbal expression, observation skills and making associations (Ampartzaki et al., 2013; Synodi, 2014; Hackett, 2014).

Constituents of a museum create an important opportunity for on-site learning. Main learning methods employed during museum education are touching original or false objects, performing dramas, working at a protected natural area, carving sculptures or drawing, attending a performance and using a voice recorder or a video recorder (Hooper-Greenhill, 1994).

It has been revealed that museums do not have educational programs, are not advertised well and are not usually used for educational purposes but are visited only as part of a sightseeing program (Mercin, 2002). However, at present, all activities in museums are considered as potential educational opportunities and museums develop educational programs directed towards learners. These programs are usually created by education departments or educators in museums. Museum education primarily involves scheduled educational activities. Science, culture and art courses directed towards children and adults are organized in museums in many countries (Seidel and Hudson, 1999).

Museums as learning environments

Theoretical and empirical studies show that there is a strong connection between museum visits and learning. Museum education defines education via museums.

Museum education helps individuals to identify themselves and other people, maintain cultural heritages, associate between the past, the present and the future and develop intercultural understanding and empathy. It establishes a relation between objects coming from the past and learners (İlhan and Okvuran, 2000).

As earlier mentioned in different studies, physical spaces of museums could be imposing and intimidating for young children. Despite this, there is consistent evidence that young children can and do engage positively in museums (Piscitelli, 2001; Piscitelli and Anderson, 2002; Piscitelli et al., 2003), creating imaginative insights and new perspectives (Jeffers, 1999) when they have the opportunity and motivation to do so.

According to Hooper-Greenhill (1994), current education approach does not give emphasis on the result. Instead, it gives emphasis on skills, activities, experience and creative potential that lead to the result. One of the most significant aspects of museum visits is that students get a chance to study actively with tangible evidence while they encounter with alternative learning methods.

For some children, this method brings about the skills and abilities, that are rarely seen in the classroom environment which is more formal compared to museum environment. It is encouraging for all children to go somewhere new, meet new people, try new methods and encounter with real materials (Hooper-Greenhill, 1994).

It is known that education in the museums, beyond a simple museum visit, contributes positively to teachers and students (Xanthoudaki, 1998). Falk and Dierking (2000) emphasize that children develop not only knowledge but also social skills in the museums. Museum education and classroom education should be considered as complementary rather than comparative (Miotto, 2002).

In the 19th century, J.J. Rousseau put on emphasis on the fact that education for the children must be given based on their senses. Montessori, Froebel, Pestalozzi, McMillan ve Isaacs, who are early childhood education pragmatics, suggest that organizing rich environments that can provide necessary skills for both school and day-to-day life and letting them be free are effective in gaining problem-solving skills without any adult help (Bilton, 2010).

Throughout early childhood, children learn more easily when their senses are stimulated and when they actively participate in activities, have direct experiences, interact with people around, join trips and observe and discover things. As well as providing information about things exhibited, education offered in museums lead children to improve their verbal expressions, observation skills and cognitive abilities like making sense of things and making associations (Ampartzaki et al., 2013).

Preschool age, occupying 3 to 5 years of life, is an important stage of life during which children develop their linguistic and social skills. Education directed towards senses and providing children with opportunities to encounter different objects give significant support for their development. Therefore, one of the most effective ways to equip preschool children with appropriate skills is museum education (Dilli and Dümenci, 2015). Akman et al. (2015) found that although preschool education teachers believed that museum education was necessary, they were not found to be competent enough in use of museums as educational environments.

Hooper-Greenhill proposes a three-stage model for educational studies in museums to support school learnings. In this model; the first stage is defined as the preparation of the class for the visit of the museum, the second stage is defined as the visit of the museum, and the final stage is defined as evaluation in class after the

visit. According to the model, the studies carried out in the classroom following the visit of museum contribute to the achievement of the museum education's aim. In the three-stage model, museum education is considered as an important complement to classroom education (Hooper-Greenhill, 1994). In this study, a study is applied in accordance with this model.

Considering the aforementioned views, the present study was directed towards offering knowledge about cultural heritages of Turkey and other prior cultures to preschool children, and to raise their awareness about history and prior lifestyles through museum education created in accordance with the preschool education program of The Turkish Ministry of Education. The research problem was whether museum education designed in accordance with the education program of Turkish Ministry of Education would increase preschool children's knowledge of museums.

MATERIALS AND METHODS

The study had a qualitative design with semi-structured interviews. One of the most frequently used data collection tools in qualitative research is to conduct interviews. They are very strong tools utilized to reveal points of view, subjective experience, feelings, values and perceptions (Yıldırım and Şimşek, 2008). A semi-structured interview form taking account of the aim of the study was developed by the researchers. The form was composed of two sections. Section I included questions about personal characteristics and section II included questions about students' opinions about museums. Students' responses to the questions were recorded by the researcher. Data were collected at face to face interviews with 30 students in autumn 2015 before and after museum education was given. Care was taken in order not to influence the students during the interviews, which took 15 min on average. Obtained data was analyzed with content analysis, and codes and categories were created.

Study group

The study group was formed by using convenience sampling, and included 30 preschool students who were studying at government and municipality schools in İzmir and the researchers could access. The group in which the study was conducted consists of children between the ages of 5 and 6, who are at lower and middle socioeconomic levels. Children have no previous experience with museums. They did not receive this kind of education before the museum education.

Procedure

The module was composed of interactive education sessions in Tarih ve Sanat Müzesi (the history and art museum), located in İzmir, and educational trips to historical places in and near İzmir, including Agora, Bergama, Ephesus, Metropolis, Teos, Urla underwater archeological excavation site, Klazomenai, Boncuk Köy (a village famous for beadmaking) and Archeological Museum. In museum education, booklets for children prepared by Çakır et al. (2009), appropriate methods and techniques to be used in activities held in museums are presented and dramas and games are shown to be the most effective ones. In this study, during interactive

museum education sessions, the students performed dramas, watched a 3D cartoon about historical and cultural heritages of İzmir, and joined games and activities in the garden based on preschool abilities and learning outcomes. They had opportunities to examine historical artifacts closely, and were informed by the museum teacher. They were asked to draw pictures of the objects in the museum on pieces of paper given to them. They also made sculptures from clay and displayed them in an open-air museum.

Data collection

Data was collected before and after the museum education module prepared according to the preschool education program of The Turkish Ministry of Education. The semi-structured interview form was completed face-to-face with 30 children before and after the museum education module to test its effectiveness. In this interview form; children were asked about what a museum is, what historical artifacts are in a museum, and what can be found in a museum. This interview form was applied before and after the museum education, and the answers of the children were recorded.

Data analysis

Content analysis of obtained data was made. For this reason, the data was coded separately by two researchers. To achieve intercoder reliability, the reliability coefficient was calculated. It was found to be 0.90. Frequencies of coded data were calculated and presented in tables. Children's comments were directly quoted to enhance validity.

RESULTS

The results of the pre- and post-tests performed to determine changes in knowledge of the children attending the museum education module will be presented here. The children were asked the following questions in the tests:

- (1) What can you find in a museum?
- (2) What is a historical artifact?
- (30) What is a museum?

Children's responses to these questions are presented in Tables 1, 2 and 3. It was striking that most of the children's responses in the pre-test to the question what can be found in a museum were either wrong or irrelevant, while they were more relevant in the post-test. A higher number of children were found to give correct answers in the post-test as in the following:

"Historical artifacts and old coins and plates etc. can be found in a museum". This may suggest that the children had a more positive perception about museums after the museum education module.

Given that there are different types of museums and that there can be very different works in the museum, it would not be appropriate to say that the answers given by the children in the pre-tests are wrong. However, in general,

Table 1. What can be found in a museum based on children's responses.

What can be found in a museum?	
Pre-test	Post-test
Historical artifacts (sculptures and old vases, lambs, glasses, plates, paintings, toys and coins) (n=11)	Historical artifacts (sculptures and old vases, plates, glasses, paintings, toys and coins) (n=22)
Radios, smoke machines, old telephones, gramophones (n=3)	Historical artifacts, which have been kept so far (n=2)
I don't know. (n=4)	Bones, fossils and dinosaurs (n=4)
Old articles (n=2)	I don't know (n=1)
Books, cupboards (n=2)	-
Bones, fossils, dinosaurs, mummies (n=6)	-
Atatürk, Atatürk's mother, Atatürk's father (n=1)	-

Table 2. Children's opinions about what a historical artifact is.

What is a historical artifact?	
Pre-test	Post-test
Valuable works created in old times (n=3)	Valuable objects used in old times (n=17)
Historical artifacts (n=2)	Things unearthed from soil and kept so far (n=5)
Spoiled fruit juice (n=1)	The place where there are vases (n=1)
Things unearthed from soil (n=1)	Sculptures found on the beach (n=4)
I don't know (n=19)	I don't know (n=2)
Very important things (n=3)	-

Table 3. Children's opinions about what a museum is.

What is a museum?	
Pre-test	Post-test
A place where there are sculptures of Atatürk - Atatürk's home (n=5)	A place where historical artifacts are found and exhibited. (n=6)
A place visited (n=3)	A place visited to see sculptures (n=9)
Dinosaur museum (n=2)	A place where there are beautiful things (n=1)
Articles kept since old times (sculptures, plates) are displayed. (n=2)	Articles kept since old times (sculptures, plates) are exhibited (n=7)
A place where there are bones (n=3)	A place where bones of dinosaurs and fossils are found (n=4)
-	A place where there are enemies (n=1)
I don't know (n=12)	I don't know (n=1)

it can be said that the answers given to the pre-tests are somewhat "naïve" when it is thought that museums are places that contain various cultural heritage items. Participant 9 responded to the question "what can be found in a museum" before (C1) and after (C2):

C1: "There are cupboards and books. There are old things."

C2: "There are historical artifacts and valuable objects, which have been kept so far."

Participant 15 responded to the same question before

(C1) and after (C2):

C1: "There are Atatürk's clothes in the museum".

C2: "There are historical artifacts, that is, old sculptures, coins, fossils and dinosaurs in a museum".

The question "what is a historical artifact?" was answered correctly by very few students in the pre-test while it was striking in the post test that the number and variety of correct responses were very high. Although, many students did not know in the pre-test what a historical artifact is, the number of the students responding to the

question correctly increased to 27 in the post-test. These findings show that the students had a positive change in their perceptions about the concept of historical artifacts after the museum education module. The participant 7 responded to the question “what is a historical artifact?” before (C1) and after (C2):

C1: *“Historical artifacts are things dug out of soil after a long time.”*

C2: *“Historical artifacts are valuable things used in the past.”*

The participant 8 responded to the question before (C1) and after (C2) the module as follows:

C1: *“I don’t know what a historical artifact is.”*

C2: *“Historical artifacts are things kept since old times and valuable articles dug out of soil.”*

When the answers of the question “What is a historical artifact” are examined, it can be said that the children have a more accurate understanding of the concept of historical artifacts after the education they received in the museum, and the responses in the final tests are shaped by their learning there. Twelve students did not know the answer to the question what a museum is, and some students could not make a correct explanation in the pre-test. However, 27 were found to give a correct definition of the museum in the post-test. The high number of such responses as “articles, sculptures and plates used in the past are found in a museum” in the post-test suggests that the children were influenced by works of art and historical artifacts in History and Art Museum in a positive way and displayed a considerable increase in their knowledge of a museum. Participant 12 responded to the question “what is a museum?” before (C1) and after (C2):

C1: *“a place visited and seen”*

C2: *“Places where historical artifacts are found and exhibited. Sculptures, stones and old coins are exhibited there.”*

Participant 28 answered the same question before (C1) and after (C2):

C1: *“a place where bones are found. We visit it to see them.”*

C2: *“a place where historical artifacts are found and exhibited.”*

After their experiences in the museum, it is observed that children’s knowledge has developed regarding the museums.

DISCUSSION

The findings of this study showed that the museum education module offered to preschool children was

effective. The education module increased children’s knowledge about what a museum and a historical artifact are, and what can be found in a museum.

Several studies investigating the benefits of field trips showed that students who visited museums showed clear cognitive gain, compared with those who had not (Stronck, 1983; Griffin, 2004). Some studies found no difference in cognitive or affective learning (Borun and Flexer, 1983; Griffin, 2004) while some studies expressed more positive attitudes and motivation toward learning after visiting museums (Orion and Hofstein, 1991).

Middle East Technical University Development Foundation (1997), conducted a project about museum education in 1997. The purpose of the project was to examine effects of a museum education program based on input from teachers, students and experts on cognitive, affective and psychomotor abilities. Observations and practices in the project revealed that the relationship between teachers, students and museums have a role in use of museums as active learning environments. At the end of the project, it was recommended that development and establishment of pilot museum education services and school-based museum education projects could be useful.

Topallı (2001) reported that the number of students visiting museums was low, and that students more frequently considered a museum as an archeology museum. However, the researcher noted that students had fun during three-dimensional activities after a visit to a museum, and that what they learned was permanent. The findings obtained in the pre-test in the present study were similar to findings of the study by Topallı (2001). In fact, the participants of this study gave far-fetched answers to the questions what a museum is, and what can be found in a museum before museum education; however, the education program created a considerable difference in their answers.

In a study by Arıkan (2001), visual and auditory elements like cartoons in museum education helped students acquire knowledge and target behavior more quickly. As in prior studies, the current study also provided children with opportunities to watch cartoons, work with three-dimensional materials and clay, and look for historical artifacts in a sandpit. These activities encouraged the children to join trips to historical places and museums.

As well as a rise in motivation, the museum education module brought about an increase in children’s knowledge of museums and artifacts as shown by their responses to the questions “what is a museum?”, “what is a historical artifact?” and “what can be found in a museum?”. In fact, 12 children did not know what a museum is in the pre-test, only one child gave the same response in the post test.

In addition, before the museum education module was offered, four children reported they did not know what can be found in a museum, and two children said there were

cupboards and shelves in a museum. After the module, only one child still did not know what a museum has. The children's responses to the question what an artifact is clearly showed effectiveness of the education given. Before the education module was given, only three children could define an artifact, the number of children not knowing about an artifact decreased to two after the education. Akman and Güler (2009) in their study on opinions of 6-year-old children about a museum found that the children focused on collection, protection and exhibition functions of museums.

Akdağ and Erdiller (2006) offered an education program to 11 preschool children in Tabiat Tarihi Müzesi (a museum displaying findings of research about earth sciences like geology, mineralogy and paleontology) to give information and to increase awareness about protecting seas and underwater life. The program was effective in enhancing children's knowledge and awareness about the issue.

Dilli and Dümenci (2015) in their experimental study with a control group, investigated effects of museum education on cognitive skills of 6-year-old children in a state kindergarten about extinct animals which once lived in Anatolia. They found that knowledge of the experimental group significantly increased.

Abacı and Usbaş (2010) in their experimental, controlled study on 42 6-year-old children provided the experimental group with visits to four museums and education activities before, during and after the visits and the control group with just visits to four museums; namely, The Istanbul Archaeology Museum, The Turkish and Islamic Art Museum, The Beylerbeyi Palace, and The Rahmi Koç Museum.

The results of the study revealed that the children offered educational activities were more successful in the post-test for the education given, which is consistent with the results of the present study. Similarly, Önder et al. (2009) in their experimental study with a control group on fifth-year students attending primary school reported that knowledge about an archeology museum and clothing significantly differed between the groups, and the difference was in favor of the experimental group. Miglietta et al. (2008) in their study, reported that students retained information they had learned up to three months after a museum visit. In light of the findings of the present study and evidence from other studies, it can be concluded that museum education lends support for school education programs and contributes to learning.

RECOMMENDATIONS

A museum atmosphere offers an opportunity to have alternative learning methods, and to actively work on tangible evidence. In this study, a museum education program administered in a museum and historical places was found to be effective in early childhood. Based on

the results of the study, the following recommendations can be made:

(1) Since use of environments other than classrooms in early childhood ensures direct access to objects and situations, it enables students to retrieve what have been learned for a long time. Education programs offered in these environments and based on gains and indicators reported by The Turkish Ministry of Education can inform children about cultural heritage of the country and make learning permanent.

(2) Museum education programs help children learn about and become aware of cultural heritage of the country. Therefore, importance should be placed on these education programs in early childhood. Children should be taken to museums, and be allowed to interact with objects displayed there. Educational activities to be offered at these programs should be planned beforehand and incorporated into the education programs designed by The Turkish Ministry of Education. They should be appropriate for developmental stages of children, entertaining and allow them to be active participant. They should also be combined with practicums, dramas and art related activities.

(3) Curriculum for undergraduate preschool teacher education should include museum education related courses and pre-service and in-service training programs can also provide such courses.

(4) Education departments should be established in museums. This can help museums to adopt educational services in addition to their exhibition roles.

(5) The present study was performed on learners in their early childhood, and only sought for answers to the questions "what is a museum, what is an artifact and what can be found in a museum?". Therefore, it could be useful to investigate effects of museum education on children from different age groups and on developments of children in different fields.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Abacı, O, Usbaş, H. (2010). Investigation of the Effects of the Program "Utilization of the Museums for Preschool Education" on 6 Years-Old Children. *Procedia-Soc. Behav. Sci.* 2(2):1205-1209. <http://dx.doi.org/10.1016/j.sbspro.2010.03.173>
- Akdağ Z, Erdiller Z (2006). Okulöncesi eğitim çağındaki çocuklara çevre bilincini kazandırmak için gönüllü kuruluşlar ile işbirliği yapmak. VII. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Ankara.
- Akman B, Güler T (2009). 6 yaş çocuklarının müze ile ilgili düşünceleri, Uluslar arası katılımlı II. Çocuk Gelişimi ve Eğitimi Kongresi Bildiri Kitabı, Gündüz Eğitim ve Yayıncılık, s.408- 418.
- Akman B, Altınkaynak ŞÖ, Ertürk Kara G, Can Gül Ş (2015) Okul Öncesi Öğretmenlerinin Müze Eğitimine İlişkin Görüşleri, Uludağ Üniversitesi Eğitim Fakültesi Dergisi 28(1):97-115. <http://dx.doi.org/10.19171/ueefd.49876>.
- Ampartzaki M, Kyriotaki M, Voreadou C, Dardioti A, Stathi I (2013).

- Communities of practice and participatory action research: the formation of a synergy for the development of museum programmes for early childhood. *Educ. Action Res.* 21(1):4-27. <http://dx.doi.org/10.1080/09650792.2013.761920>
- Ankan A (2001). Yedi On iki Yaş Arası Çocuklara Çizgi Film Yöntemi ile Müze Eğitiminin Verilmesi, Konya, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Yayınlanmamış Yüksek Lisans Tezi.
- Bilton H (2010). Outdoor learning in the early years: Management and innovation. New York: Taylor & Francis.
- Borun M, Flexer B K (1983). Planets and pulleys: Studies of class visits to science museums. Philadelphia: Franklin Institute Science Museum.
- Crane SA (2000). Museums and memory, Stanford University Press, Stanford.
- İlhan Çakır A, Okvuran A (2000). Bir eğitim ortamı olarak müzeler. N. Aslan (Ed.). *Dramaya Merhaba*. Ankara, Oluşum Yayınları.
- Çakır İlhan, A, Artar, M, Okvuran, A. ve Karadeniz, C. (2009). Çocuk müze eğitimi Program kitapçıkları. <http://www.unicef.org.tr/tr/knowledge/detail/846/cocuk-muze-egitimiprogrami-kitapciklari-2>, Retrieved:27.10.2013.
- Dilli R, Dümenci S (2015). Okul Öncesi Dönemi Çocuklarına Anadolu'da Yaşamış Nesli Tükenmiş Hayvanların Öğretilmesinde Müze Eğitiminin Etkisi, *Eğitim ve Bilim Dergisi*, 40(181):217-230. DOI: 10.15390/EB.2015.4653
- Falk JH, Dierking LD (2000). Learning from museums. Visitors experiences and the making of meaning. USA: AltaMira Press.
- Griffin J (2004). Research on students and museums: Looking more closely at the students in school groups. DOI10.1002/sce.20018 Published online in Wiley InterScience (www.interscience.wiley.com).
- Hackett A (2014). Ziggling and zooming all over the place: Young children's meaning making and movement in the museum. *J. Early Childhood Literacy*, 14(1):5-27. DOI: 10.1177/1468798412453730
- Hooper-Greenhill E (1994). *Museum Education: Past, Present and Future*. Towards The Museum of the Future, London and New York: Routledge
- Jeffers C (1999). When children take the lead in exploring art museums with their adult partners. *Art Educ.* 52(6):45-51.
- Marcus AS (2007). Representing the past and reflecting the present: museums, memorials, and the secondary history classroom, *Soc. Stud.* 98 (3):105-110. <http://dx.doi.org/10.3200/TSSS.98.3.105-110>
- Mclean F (1996). *Marketing the Museum*. London: Routledge
- Mercin L (2002). Anadolu Güzel Sanatlar Liselerinde Müzelerin Sanat Eğitimi Amaçlı Kullanılmasına İlişkin Yönetici ve Öğretmenlerin Görüşlerinin Değerlendirilmesi. Yayınlanmamış Yüksek Lisans Tezi. Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Ankara.
- Middle East Technical University Development Foundation (1997). ODTÜ Geliştirme Vakfı Ankara Okulları Müze Eğitimi Uygulamaları). Retrieved:12.12.2016 <http://ww2.odtugvo.k12.tr/denizli/projelerimiz/muze-egitimi-uygulamaları-projesi.aspx>
- Miglietta AM, Belmonte G, Boero F (2008). A summative evaluation of science learning: A case study of the Marine Biology Museum "Pietro Parenzan". *Visitor Stud.* 11(2):213-219.
- Miotto E (2002). Museums and Schools: The Case of the National Museum of Science and Technology Leonardo da Vinci of Milan. In M. Xanthoudaki (Eds.), *A Place to Discover: Teaching Science and Technology with Museums*, Milan, Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci with the support of the European Commission.
- Orion N, Hofstein A (1991). The measurement of students' attitudes towards field trips. *Sci. Educ.* 75(5):513-523.
- Önder A, Abacı, Kamaraj I (2009). "Müzelerin Eğitim Amaçlı Kullanımı Projesi: İstanbul Arkeoloji Müzesindeki Marmara Örneği", *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 1(25): 103-118.
- Piscitelli B (2001). Young children's interactive experiences in museums: Engaged, embedded and empowered learners. *Curator: Museum J.* 44:224-229.
- Piscitelli B, Anderson D (2002). Young children's perspectives of museum settings and experiences. *Museum Management and Curatorship*, 19:269-282.
- Piscitelli B, Weier K, Everett M (2003). Museums and young children: Partners in learning about the world. In Wright, S. (Eds.), *The arts and young children*, 167-192. Sydney: Prentice-Hall.
- Riviere GH (1962). Müzelerin Eğitimdeki Rolü, UNESCO Bölge Semineri Çev. Selma Inal. İstanbul: İcom Milli Komitesi Yayınları 1.
- Seidel H, Hudson K (1999). Müze Eğitimi ve Kültürel Kimlik. Uluslar Arası İki Çalışma Raporu. Yay. Haz. Bekir Onur. Ankara: Ankara Üniversitesi Sosyal Bilimler Enstitüsü Yayınları, 12:6-11
- Sheppard B (2001). *Museums, libraries and the 21st century learner*, Institute of Libraries and Museum Services, Washington, DC.
- Stronck DR (1983). The comparative effects of different museum tours on children's attitudes and learning. *J. Res. Sci. Teach.* 20(4):283-290.
- Synodi E (2014). Verbal Communication in Museum Programs for Young Children: Perspectives From Greece and the U.K. Retrieved:10.12.2016 <http://www.tandfonline.com/doi/abs/10.1080/00094056.2014.894814?journalCode=uced20>
- Topallı KÖ (2001). İlk ve Orta Dereceli Okullarda Güzel Sanatlar Eğitimi Kapsamında Müze Eğitiminin Rolü ve Önemi. Yayınlanmamış Yüksek Lisans Tezi: Gazi Üniversitesi Eğitim Bilimleri Enstitüsü. Ankara.
- Xanthoudaki M (1998). Is it always worth the trip? The contribution of museum and gallery educational programs to classroom art education. *Cambridge J. Educ.* 28(2):181-195.
- Yıldırım A, Şimşek H (2008). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*, Seçkin Yayıncılık, Ankara.