

Self-Efficacy Beliefs of Teachers who participated in Museum Education Certificate Program as regards Museum Education¹

Galip ÖNER²

Abstract

In Turkey, the "Museum Education Certificate Program" was launched in 2019 in cooperation with the Ministry of National Education and the Ministry of Culture and Tourism, and within the scope of this program, museum training was given to thousands of teachers from different branches. Within this framework, the purpose of this study is to display the self-efficacy beliefs of teachers who completed museum education formateur or trainee training. This study, which employs survey model, a quantitative research method, the sample constitutes 102 teachers working in various branches of different education levels, who voluntarily participated in the study. Self-Efficacy Scale for Museum Education was used as a data collection tool in the research. The data were statistically analyzed and interpreted with SPSS 16.0 program. As a result of the study, it was found out that teachers who received museum education had high levels of self-efficacy beliefs. However, it was concluded that those who received education as formateur had higher levels of self-efficacy compared to those who received education as trainee. Based on the findings, it has been recommended that in-service training activities for museum education should be continued with expanded coverage.

Keywords: Museum education, museum education certificate program, self-efficacy, teachers.

Article Type Research article

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Introduction

The concept of museum, which has been used since 17th century to name the institutions which collect and exhibit various objects, comes from the Greek word "mouseion" meaning the place where muses (fairies of inspiration) live (Latham & Simmons, 2014). Hooper-Greenhil (2007), who gave reference to the historical roots in one sense, defined museums as rich and surprising places of display that engage and inspire new ideas. Talboys (2005), on the other hand, described museums as venues that enable the museum to preserve and exhibit works of aesthetic, archaeological, historical, cultural, social and spiritual importance, as well as places where people can discover cultural heritage, interact, deliberate, and obtain information and inspiration. Finally, Henning (2006) stated that museums are not just a place, but a network of relationships between objects and people. The International Council of Museums (ICOM), which is the most competent body on the international platform regarding museums, has been updating the definition of museum since 1946 and presenting it to the literature. ICOM revised its definition of museum on 24 August 2022 as follows:

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² Res. Assist. Dr., Erciyes University, Türkiye, galiponer@erciyes.edu.tr, ORCID: 0000-0001-5683-1127

"A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally, and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing."

For many people outside the museum community, the main function of museums is usually to preserve and display objects with archeological and historical importance. However, for the members of museum community, museums are understood as much more complicated institutions that play several interconnected roles (Talboys, 2005, s.5). As mentioned in the definition made by ICOM given above, museums have research, education and entertainment functions in addition to their collection, preservation and exhibition roles. Among these functions, education comes to the fore following collection, preservation and exhibition roles. The use of museums for educational purposes started towards the end of the 18th century, but formalizing the educational purposes of museums was a phenomenon of the 19th century, while museum education in today's sense came to the agenda in the 20th century (Hooper-Greenhill, 1999). However, Hooper-Greenhill (2007) states that the educational role of museums still remains unclear. The author attributed this situation to the fact that for some, education expresses the general purpose of the museum, while for others, education is perceived as studies carried out by museum experts. Johnson et al. (2009), on the other hand, stated that museum education refers to the activities performed in a museum, but that education as a whole is a museum mission. Today education in museums is performed both formally and informally. Formal education refers to the execution of a purposeful and planned learning-teaching process in a museum within the scope of a formal course. Informally, it can be defined as all visits performed other than an official school visit. Hooper-Greenhill (2007) stated in his study that museums are defined by students as exciting places useful for school work, which are also good venues for learning. In this context, one of the most important roles of museums is keeping a unique pool that students and teachers can utilize in their courses (Reynolds, 2010). Today there are several kinds of museums from which students and teachers can benefit in their classes.

Although archeology and ethnography museums come to mind when museums are mentioned, there are an increasing number of types of museums. Today, museums can focus on very different subjects such as science, technology, nature, industry, military, vehicles, or any object such as stamps, toys, wax, in addition to genres such as history, archeology, and art (Binekci & Öner, 2019). Due to these characteristics, museums are places that can easily be transformed into a learning environment for all courses regardless of the level of education. For this effect, the capabilities of teachers in this field have to be improved first. In this context, an in-service training program called "Museum Education Certificate Program" for teachers from various branches has been carried out in cooperation with the Ministry of National Education and the Ministry of Culture and Tourism in Turkey since 2019. With these trainings, it is aimed that teachers use the historical and cultural places and museums in the provinces where they work effectively in their education and training activities (Binekci & Öner, 2019). There are studies in the literature which analyzed the capabilities of teachers (Çıldır, 2007; İşlek, 2017; Solmaz, 2015) and pre-service teachers (Demirel, 2020; İşlek, 2019; Körükcü, 2019; Tural & Kala, 2018; Yeşilbursa & Uslu, 2014) as regards museum education. However, no study has been detected on the museum education capabilities of teachers who participated in Museum Education Certificate Program. In this context, the research aims to determine the self-efficacy beliefs of the teachers participating in the Museum Education Certificate Program towards museum education. The study is important in this regard. In this context, answers to the following questions were sought in the study:

- What are the participants' self-efficacy beliefs about museum education?
- What are the self-efficacy belief scores of the participants who took the museum education as trainee and trainer education?
- Do the museum education self-efficacy beliefs of the participants differ according to the variables?

Method

Research Design

In this study, which aims at determining the self-efficacy beliefs of teachers as regards museum education who participated in the Museum Education Certificate Program realized with the cooperation between Ministry of National Education and Ministry of Culture and Tourism, utilized survey method, a qualitative research method. The quantitative research model, which is based on the collection of information on a sample group in a specific and short time, in order to explain the characteristics of a universe such as opinions, attitudes, and beliefs is called "survey model" (Creswell, 2017).

Research Sample

The sample of the study consists of 102 teachers from various branches (Social Studies, History, Visual Arts, Physical Education and Sports, Turkish, Special Education, Pre-School and Classroom Teaching) who participated in the local in-service or central training of trainer sessions of Museum Education Certificate Program. 37 of the participants received the relevant training in Kayseri, 50 in Şanlıurfa, 11 in Muğla, 3 in Istanbul and 1 in Ankara. Participants in Kayseri filled the scale used in the study in printed form, whereas participants in other provinces filled the scale online. Convenience sampling and snowball sampling methods were used in the identification of the participants. Demographic information about the sample group included in the study is given in Table 1.

Table 1

Demographic Information on the Sample Group

		n	%
Gender	Female	59	57,8
	Male	43	42,2
Education Type	Local In-Service Training (Trainee)	44	43,1
	Trainer Training (Formatter)	58	56,9
Professional Experience	1-5 year	11	10,8
	6-10 year	19	18,6
	11-15 year	23	22,5
	16 year and above	49	48,0
Museum Card Ownership Status	Yes, I have.	36	35,3
	No, I don't have it.	66	64,7
Having an Event Experience at the Museum	Yes	78	76,5
	No	24	23,5

As given in Table 1, 59 of the participants are women and 43 are men. While 44 of the participants received the training within the scope of Museum Education Certificate Program as in-service (Trainee) in their own provinces, 58 of them received Training of Trainers (Formateur) in central places. A significant portion of the participants are people who have 10 years or more experience and have performed activities with their students in museums previously. It is observed that a significant portion of the teachers do not have the Museum Card.

Research Instrument and Procedures

The "Self-Efficacy Scale for Museum Education" developed by Uslu & Yeşilbursa (2014) was used in the study. The relevant scale was prepared in the form of 5 Likert type and consisted of 24 questions. Uslu & Yeşilbursa (2014) found the reliability (Cronbach Alpha) of the study they developed to be .96, whereas Yeşilbursa & Uslu found the reliability value to be .94 and Körükçü (2019) calculated the same value as .96. Therefore, and since no additions or deletions were made in the number of items, there was no need for a new reliability test. The relevant scale was presented in print to 37 participants, and sent online to the other participants via Google Forms.

Data Analysis and Process

The data of the study obtained through Self-Efficacy Scale for Museum Education were transferred to IBM SPSS 16.0 program and statistically descriptive (n, %, \bar{x}) findings were obtained. In the study, arithmetic mean (\bar{x}) was used in the evaluation of self-efficacy beliefs of teachers as regards museum education. The comments used by the developers of the scale (Yeşilbursa & Uslu, 2014) were taken into account in the interpretation of the arithmetic mean. Accordingly, the interval 1.00-1.79 was interpreted as "Very Low", 1.80-2.59 was interpreted as "Low", 2.60-3.39 was interpreted as "Medium", 3.40-4.19 was interpreted as "High", and 4.20-5.00 was interpreted as "Very High" (Özdemir, Vural & Tan, 2020). In addition to the foregoing, findings as regards whether the answers given to the scale showed variance depending on independent variables were obtained using t-test and ANOVA (One-Way Variance Analysis). While the groups according to gender showed a homogeneous distribution (p=1.000), the type of education did not show a normal distribution (p=0.042). Accordingly, the data on gender, education type, possession of museum card ownership and performing activity in the museum were analyzed with the t-test whereas seniority was analyzed using ANOVA test.

Findings

The findings regarding the self-efficacy beliefs of teachers from different branches participating in the Museum Education Certificate Program are given in Table 2.

Table 2

Total Self-Efficacy Belief Scores of All Participants for Museum Education (All Participants)

	n	Lowest Score	Highest Score	\bar{x}	sd
All Participants (Total)	102	71	120	106,2	12,78

According to Table 2, it was determined that the arithmetic mean of all participants' self-efficacy beliefs regarding museum education was 106,2 out of 120 points. 44 of the participants received museum training as trainees in in-service trainings held in their own cities. The findings regarding the self-efficacy beliefs of the participants who received the relevant training as trainees are given in Table 3.

Table 3

Total Self-Efficacy Belief Scores of Teachers Trained as Trainees for Museum Education (Trainees Only)

	n	Lowest Score	Highest Score	\bar{x}	sd
Trainees (Total)	44	71	120	100,7	14,12

According to Table 3, it was determined that the arithmetic average of the self-efficacy belief scores of the teachers who took the museum education as trainees was 100,7. The findings regarding the self-efficacy belief scores of the participants who took the museum education as a formatter in the trainer's training are given in Table 4.

Table 4

Total Self-Efficacy Belief Scores of the Teachers who received Trainer Training for Museum Education (Trainer Training Trainees Only)

	n	Lowest Score	Highest Score	\bar{x}	sd
Training of Trainer (Total)	58	73	120	110,4	11,45

It was determined that the arithmetic average of the self-efficacy belief scores of the teachers who completed the museum education as the education of the trainer was 110,4. According to this, it was determined that those who took museum education as trainer education had higher self-efficacy

beliefs in museum education than those who took it as trainees. The t-test findings related to this will be given in Table 7.

The arithmetic mean and standard deviation values of the answers given by the participants regarding the "Self-Efficacy Belief Scale for Museum Education" items are given in Table 5.

Table 5

Self-Efficacy Beliefs of the Teachers Participating in the Museum Education Certificate Program towards Museum Education

Substances	\bar{x}	sd
1. I can provide information about the trip to be organized and make sure that students foresee what they will encounter.	4,37	,67
2. I can offer museum education efficiently so that students can make comparisons between their culture and other cultures in the world.	4,27	,77
3. I can create a more systematic education setting by coordinating with school administrators on museum education.	4,33	,69
4. I can guide students so that they can build on the information they obtain at the museum.	4,38	,66
5. During the museum tour, I can have the students do an improvisation activity on the subject of the course.	4,43	,68
6. I can benefit from virtual museums when there is no opportunity to organize a museum tour in real environment.	4,36	,79
7. By using interdisciplinary methods and techniques in museum education, I can offer students the opportunity to learn while having fun.	4,35	,73
8. By creating a trip and observation corner, I can enable students to share their experiences.	4,40	,70
9. I can organize in-class activities (drama, drawing pictures, writing texts, presentations, etc.) related to the work done during the museum visit in order to obtain higher efficiency from the museum education.	4,44	,79
10. I can create a better learning environment in museum tours by planning activities that students may enjoy.	4,41	,68
11. I can prevent deviations from the purposes of the tour by continuous information during the visit.	4,39	,67
12. I can create working groups that students will share their experiences during the museum tour.	4,48	,62
13. I can inform museum officials in advance so that they can contribute to the purpose of the study.	4,48	,62
14. I can use the time spared for museum tour efficiently.	4,41	,69
15. I can make interdisciplinary associations with other courses in line with the achievements of the course to be taught in the museum..	4,35	,69
16. I can enable students to make comparisons between the conditions of the present and the past through the works exhibited in the museum.	4,40	,73
17. I can make the tour interesting by informing about the museum tour.	4,55	,63
18. I can cooperate with administrators within the bounds of school facilities and organize a school museum with the purpose of encouraging other students.	4,24	,73
19. I can decide on the museums to be visited in line with the relevancy, expectations and opinions of students and objectives of the course.	4,41	,69
20. I can use methods and techniques suitable for the level of students in the museum education.	4,40	,66
21. Through museum education, I can guide students in familiarizing with other cultures.	4,43	,66
22. I can correlate objects exhibited in the museum with the learning outcomes of the curriculum.	4,36	,74
23. By offering an environment where they can post-facto evaluate the tour, I	4,44	,75

can make sure that students share their experiences.

24. I can utilize museums with the purpose of reinforcing prior achievements. 4,35 ,79

When Table 5 was examined, it was determined that the arithmetic mean of all items was between 4,23 and 4,55, in other words, all participants had "Pretty High" self-efficacy in all items related to museum education. The t-test results of the total scores of the participants' museum education self-efficacy beliefs according to the gender variable are given in Table 6.

Table 6

T-Test Results of Museum Education Self-Efficacy Belief Total Scores Related to Gender Variable

Gender	n	\bar{x}	sd	df	t	p
Female	59	106	13,61	100	1,089	,279
Male	43	103	14,10			

According to Table 6, it was determined that there was no significant difference in museum education self-efficacy beliefs of teachers according to gender [$t(100)=1.089$; $p>.05$]. Accordingly, it can be said that the gender factor does not have an effect on museum education self-efficacy beliefs. The t-test results regarding the effect of the type of education that the participants mentioned in Tables 3 and 4 regarding museum education have on their self-efficacy beliefs are given in Table 7. Local In-Service Training (Trainer)
Trainer Training (Formator)

Table 7

T-Test Results of Museum Education Self-Efficacy Belief Total Scores Related to Education Type Variable

Education Type	n	\bar{x}	sd	df	t	p
Local In-Service Training (Trainee)	44	98,9	14,12	100	-4,521	,000
Trainer Training (Formatter)	58	110	11,45			

According to Table 7, it was determined that there was a significant difference in favor of the teachers who received museum education in the form of trainer education [$t(100)=-4,521$; $p>.05$]. Accordingly, it can be said that those who take museum education as a formatter have higher self-efficacy beliefs than those who take it as trainees. The results of the Anova test regarding the professional experience variable are given in Table 8.

Table 8

One-Way Analysis of Variance (ANOVA) Results of the Differences of Participants' Total Scores on Self-Efficacy Beliefs for Museum Education According to Professional Experience

Professional Experience	n	\bar{x}	sd
1-5 year	11	98	15,71
6-10 year	19	107	12,79
11-15 year	23	106	13,45
16 year and above	49	106	13,91
Total	102	105	13,83

Variance Source	Sum of Squares	df	Mean Square	f	p
Between Groups	640,240	3	213,413	1,119	,345
Within Groups	18697,251	98	190,788		
Toplam	19337,497	101			

According to Table 8, it was determined that the participants' self-efficacy beliefs towards museum education did not differ according to professional experience [$F(3, 98)=1.119, p>.05$]. Accordingly, it can be stated that teachers' professional experiences do not have an effect on their self-efficacy beliefs towards museum education. However, it is seen that the average of total self-efficacy belief scores of teachers with 1-5 years of professional experience is lower than other seniority ranges. The t-test results on the effect of participants' museum card ownership on their self-efficacy beliefs are given in Table 9.

Table 9

T-Test Results of Museum Education Self-Efficacy Belief Total Scores Related to Museum Card Ownership Variable

Museum Card Ownership Status	n	\bar{x}	Ss	Sd	t	p
Yes, I have.	36	110	13,17	100	2,624	,010
No, I don't have it.	66	102	13,59			

As stated in Table 9, it was determined that there was a significant difference in favor of teachers with museum cards [$t(100)=2,624; p<.05$]. Accordingly, it can be said that teachers who have museum cards have higher self-efficacy for museum education than teachers who do not. In Table 10 below, the t-test results regarding the effect of participants' previous activities with their students in museums on museum education self-efficacy are given.

Table 10

T-Test Results of Museum Education Self-Efficacy Belief Total Scores According to the Variable of Previous Activity in the Museum

Having an Event Experience at the Museum	n	\bar{x}	sd	df	t	p
Yes	78	106	13,65	100	,889	,376
No	24	103	14,48			

According to Table 10, it was determined that there was no significant effect of having done an activity in a museum before on the total self-efficacy belief scores of the participants for museum education [$t(100)=,889; p>.05$].

Discussion, Conclusion, and Recommendations

As a result of the research, it was determined that the teachers who participated in the museum education had very high self-efficacy beliefs towards museum education. It has been found out that self-efficacy beliefs of participant teachers in museum education is very high. In the study, it was determined that teachers who attended the museum education as formateur had higher level of museum education self-efficacy belief compared to the teachers who attended as trainees. In other words, it has been concluded that participants who received training of the trainer in museum education had higher self-efficacy as regards museum education. İşlek (2019) displayed that pre-school teacher candidates had low self-efficacy beliefs as regards museum education. It can be stated that self-efficacy levels of people who have not received any museum education is expected to be low. However, as in this study, it is seen that the targeted acquisitions from museum education can be achieved. In a study conducted with classroom teacher candidates, Demirel (2020) found that museum education activities positively affected the museum education self-efficacy beliefs of pre-service teachers. Similarly, İşlek (2017) determined that museum education in-service training offered to art teachers increased the self-efficacy belief levels of teachers.

In the study, it has been found that gender variable is not effective on the museum education self-efficacy beliefs of participants. When the literature is examined, it is seen that a significant portion of the studies (Çıldır, 2007; İşlek, 2017; Tural & Kala, 2018; Solmaz, 2015; Yeşilbursa & Uslu, 2014)

show that the gender variable does not have an effect on self-efficacy. However, Körükcü (2019) revealed in his study that there is a significant difference in favor of women.

The study revealed that there is a significant difference in self-efficacy belief in favor of teachers who have Museum Card of the Ministry of Culture and Tourism, which gives the right to enter all museums. Accordingly, it has been found out that teachers who have Museum Card has higher levels of self-efficacy as regards museum education compared to the teachers who do not have the card. Teachers can enter free of charge to the museums operated by Ministry of Culture and Tourism since 2018. However, it can be claimed that teachers who had the museum card previously want to visit museums more frequently compared to other teachers. This desire might have affected museum education self-efficacy of participants positively.

Another result obtained in the study is that professional experience period of teachers has no effect on self-efficacy beliefs as regards museum education. However, although not statistically demonstrated, it has been found out that teachers with 1 to 5 years of professional experience has lower level of museum education self-efficacy beliefs compared to teachers with higher seniority. Çıldır (2007) and İşlek (2017) also found in their studies that there is no difference according to seniority.

Finally, it was determined that the fact that the teachers participating in the research had conducted activities with their students in a museum before did not have an effect on museum education self-efficacy beliefs. İşlek (2017) also concluded that previous museum education activities did not have an effect on the self-efficacy beliefs of teachers. Based on the conclusions, it can be recommended that museum education should be expanded and continued so as to cover all branches and in-service education conditions should be improved like training of the trainer conditions. Finally, it can be suggested that the Ministry of Culture and Tourism's application of free admission to museums for teachers and students should be expanded.

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