

Views of primary school teachers on value acquisition in virtual museums

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Abstract

The purpose of this study is to evaluate primary school teachers' views on value transfer in virtual museums. In the research, the phenomenological design, one of the qualitative research methods, was chosen as the research method. The study group of the research consisted of 20 teachers who taught in various primary schools in Almaty, Kazakhstan, in the 2020–2021 academic year. Semi-structured interviews were conducted to obtain data. Teachers value the virtual museums' cultural heritage, scientific benevolence, aesthetics and patriotism. The quality of museums, teacher effect, student effect and the quality of the activity are factors that teachers find effective in transferring value to virtual museums. Teachers attributed the difficulties in transferring value in virtual museums to reasons originating from the museum, the student and the school. Increasing the number and quality of museums and the variety of activities, choosing the right method, enriching the curriculum, organising parent seminars, raising awareness and motivating students have been categorised by teachers as suggestions for value transfer in virtual museums.

Keywords; Virtual museums, value education, teacher opinions

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1. Introduction

During periods when face-to-face education is interrupted or not available at all, out-of-school learning activities come to the fore. So much so that due to the global health of COVID-19, education all over the world is being continued with distance and out-of-school learning methods, techniques and tools. In this respect, it is seen that online learning platforms are widely used in learning and teaching activities. In this context, the importance of Internet-based learning platforms, such as augmented and virtual reality, has greatly increased. One of these online learning platforms is virtual museums. The pandemic (COVID-19) has also contributed to the experience of cultural experiences in the digital environment, and many people from all over the world have been able to access the virtual museums, which are cultural distributors.

1.1. Theoretical and conceptual framework

A virtual museum is mainly prepared by using information technologies, and today it is widely used by network technologies. It is defined as a museum that contains information about the museum, displays museum collections online, aims for visitors to discover the items in the museum, provides detailed information about the collection, communicates uninterruptedly with the visitor and does not require physical spaces by providing worldwide access (Schweibenz, 2004). Thanks to new technologies, it has become possible to provide students with a more comprehensive museum experience in the classroom by using virtual museum data without going to the museum. In this respect, museums contribute to learning by renewing their educational goals within the scope of the mission they undertake and the collections they have (Grenier, 2010).

Virtual museums have a digital platform that allows the objects exhibited in physical museums to be visited on the Internet. For this reason, virtual museums are an alternative to museums with a physical and abstract reality. In this way, it is possible to say that virtual museums are one of the online learning platforms. It has been determined that there is an increase in the learning potential of students through the digital content in virtual museums (Ambusaidi & Al-Rabaani, 2009).

Within the educational function of museums, it acts as an information and learning resource for students during the academic year in schools, colleges and universities, providing a wide variety of experiences. There is also counselling for teachers. In addition, it provides written or audiovisual material support for classroom or self-learning, by lending service or mobile exhibits, conferences, talks, presentations, events and other leisure activities that are also very important (Hooper-Greenhill, 1999c). Museums are institutions that contain the value judgments of the time and transfer them from generation to generation. It is possible to say that virtual museums likewise have a great impact on the transmission of social values (Antonaci, Ott, & Pozzi, 2013).

Value education (alternatively moral education or character education) is an attempt to create pedagogies and supportive structures in schools to promote the development of positive, ethical, pro-social dispositions and competences, including strengthening young people's academic focus and achievement (Berkowitz, 2011). Value education is an area that is desired and important to be gained in our curriculum today. Museums are the places where the material, spiritual and cultural accumulations of societies are exhibited. The works exhibited in these places are of great importance for the society as they shed light on the past of the society, reflect the joys and sorrows of the past and try to bring the daily life in the old period, i.e., the essence of the culture, to the present day. In this context, it would not be wrong to say that museums reflect the values of a society.

1.2. Related research

In the related literature, it is mentioned that museums, especially when used as a learning environment, increase the motivation of students and provide more permanent learning (Cutsforth Kaschak, 2014). In the research titled 'Configuration of Museum and Exhibition Venues in Electronic Environment', conducted by Aren (2003), the emergence of physical 'place' and 'space' and

electronic 'place' phenomena was investigated. In this research, the websites of museums and exhibition venues were scanned and similar museums and exhibition venues were classified. The concept of 'electronic museum' and the structural and spatial characteristics of the 'electronic museum' were investigated by briefly giving place to the museum typology from the 18th century to the present. The websites of the museums that exist in the physical environment have been examined and it has been seen that the museums designed in the electronic environment have complementary features to the physical museums. Throughout the research, field research was conducted on the Internet. The research was supported by questionnaires. As a result of the research, it has been emphasised that the real museum spaces will not lose their importance with the use of museum and exhibition spaces on the Internet.

A study titled 'Online Museum Exhibitions and Examination of Cognitive Learning Preferences' was conducted by Alwi and McKay (2009). Within the scope of the research, an online museum was provided to the students as a learning environment by using web-based technologies by the RMIT University School of Business Information Technology. Questionnaires and scales were used to determine students' learning preferences. As a result of the research, it has been revealed that many museums around the world have now adopted the use of web-based multimedia, heavy ICT tools to enrich the learning experiences of their visitors. Eguz and Kesten (2012) examined the current state of education with museums and the contribution of making a museum tour in the social studies course, in light of teachers and students' views. It has been revealed that majority of the teachers participating in the research do not use the virtual museum in their lessons, although they are willing, and majority of the students think that it would be beneficial for their teachers to visit the virtual museum, which is not done in the classroom.

Alav et al. (2006) stated in their study that panoramic and 3D imaging techniques in virtual museums contribute to the knowledge and cultural repertoire of humanity by communicating national cultural values to museum users. In this context, a web page has been designed in this study, where 360-degree motion and three-dimensional video images of the works can be accessed. When the literature on museums and historical places is examined, there are direct studies, as well as indirect studies, taken within the scope of classroom and out-of-school learning environments. It is known in the studies that classroom or out-of-school teaching places will provide some benefits to students at every education level (Yesilbursa, 2008).

In Aktekin's (2008) study, 'The Views of Museum Experts on Schools' Visits to Museums for Educational Purposes', it is aimed to discuss the situation of museum visits made by schools for educational purposes, based on the opinions of museum experts. As a result of the research, all experts stated that they believe that museums have an educational function. In addition, it was emphasised in the research that in order for museums and historical artefacts to be used more effectively in education, teachers should be informed about this issue and the possibilities of museums, and museums should encourage students or teachers to work.

1.3. Purpose of the research

The purpose of this study is to evaluate primary school teachers' views on value transfer in virtual museums. For this purpose, sub-objectives were determined. The sub-objectives are as follows:

1. What are the teachers' views on the values that virtual museums bring?
2. What are the teachers' views on the factors that affect the value transfer of virtual museums?
3. What are the teachers' views on the difficulties experienced in value transfer in virtual museums?
4. What are the teachers' suggestions for value transfer in virtual museums?

2. Method and Materials

This section, which includes information about the method and form of the research, consists of five sub-sections. These are the method, the participants of the research, the data collection tools, the data collection process and the data evaluation.

2.1. Research method

In this study, the phenomenological design, one of the qualitative research methods, was chosen as the research method. Qualitative research is often stronger in terms of perceiving the process, because the purpose of qualitative research is to describe in depth, to interpret and to understand the point of view of the actors (Qu & Dumay, 2011).

The phenomenological design focuses on phenomena that we are aware of but do not have an in-depth and detailed understanding of (Osborne, 1994). Primary school teachers' views on value transfer in virtual museums were analysed in depth with a phenomenological design.

2.2. Participants

The study group of the research was determined by the criterion sampling method. Purposive sampling is the selection of situations that are suitable for the purpose of the research, at the same time, rich in information and include them in the research in order to conduct an in-depth analysis (Patton, 1987). It is the study of all situations that meet a predetermined set of criteria. The criterion is created by the researcher or a previously prepared criteria list can be used (Marshall & Rossman, 2014). Within the scope of the research, it is thought that the criterion sampling method is an appropriate method in terms of obtaining the desired efficiency from the phenomenological design and obtaining healthy data. While forming the study group of the research, first of all, a criterion was determined in order to carry out criterion sampling. The criterion determined is that primary school teachers organise virtual museum tours for their students. The study group of the research consisted of 20 teachers who accepted to participate in the research voluntarily and organised virtual museum tours for their students before. The study group of the research was selected from among the teachers teaching at various primary schools in Almaty, Kazakhstan, in the 2020–2021 academic year. The demographic characteristics of the primary school teachers participating in the research are included in the findings section.

2.3. Data collection tools

Semi-structured interviews were conducted in order to obtain the data of this study, which aims to examine primary school teachers' views on the role of virtual museums in transferring value. Some steps were followed in the preparation process of semi-structured interviews. The first of these is the literature review conducted by the researcher and interviews with field experts. Then, a draft interview form was prepared. In the draft interview form, there were questions for the participants to introduce themselves and questions about the content of the research. The draft interview questions prepared were then presented to three field experts, who worked in the field of value education, making a total of four experts, including one language expert, in order to examine the clarity of the questions and their compliance with the language rules. In line with the opinions of the experts, various arrangements were made to the questions. The prepared draft form was directed to five teachers by making a preliminary application in order to measure the intelligibility of the questions. In the preliminary practices, it was tried to determine whether the questions of the teachers were clear and understandable, whether there were any issues that left a question mark in their minds and it was also evaluated whether the teachers had difficulties in answering the questions. As a result of the pre-application, a comparison was made between what was asked to be understood from the interview form and what the teachers who participated in the pre-application understood. As a result of the comparison, it was revealed that the teachers who participated in the pre-application perceived the questions correctly. In line with this result, the results of the preliminary application were presented to the expert opinion again and the research questions were finalised. The semi-structured interview form is in the last part of the research.

The open-ended questions in the teacher interview form are as follows:

1. What are your views on the values that virtual museums bring?
2. What are your views on the factors that affect the value transfer of virtual museums?
3. What are your views on the difficulties in transferring value in virtual museums?
4. What are your suggestions for value transfer in virtual museums?

2.4. Data collection process

The interviews with the study group of the research were carried out face-to-face. Appropriate dates and times were determined for both the researcher and the teacher participating in the research, and the interviews were held at the schools where the teachers were assigned. The interviews, which were held in a quiet environment where one-on-one interviews could be conducted in the school environment, lasted an average of 30–40 minutes. At the beginning of the interview, the teachers were informed about the subject and purpose of the research. In addition, the participants were informed that their personal information would be kept confidential and that the information they provided would be used by coding in the research. Permission was requested from the participants so that the entire interview process could be recorded with a voice recorder. During the interviews, teachers were encouraged to express their views clearly. It took approximately 1 month to complete the interviews with all participants. The audio recordings taken were transcribed by the researcher and controlled by the other researcher.

2.5. Data collection analysis

In phenomenological studies, the analysis of data is aimed at revealing experiences and their meanings. In this context, the content analysis method was used to analyse the data obtained through interviews in this study. Content analysis requires a more detailed examination of the collected data, reaching the concepts, categories and themes that explain this data. Content analysis focuses on collected data. Codes are extracted from the events and facts that are frequently repeated in the data set or that the participant emphasises heavily. One can go to categories from codes and to themes from categories. In short, data (codes) that are found to be similar and related to each other are interpreted by bringing them together within the framework of certain concepts (categories) and themes. In content analysis, the content of participants' views is systematically separated (Bengtsson, 2016).

3. Results

In this section, the demographic characteristics of the primary school teachers participating in the research and their answers to the questions in the interview form are given in tables by calculating frequency and percentage. In addition, teachers' opinions are given below the tables with direct quotations.

In Table 1, demographic information regarding the gender distribution of primary school teachers participating in the research is given.

Table 1. Gender distribution of teachers

Gender	F	%
Female	7	35
Male	13	65
Sum	20	100

In Table 1, the gender distribution of the teachers participating in the research is given. 35% of the teachers are female and 65% are male. It is possible to say that majority of the teachers participating in the research are male.

Table 2 contains demographic information about the classes and experiences of primary school teachers participating in the research.

Table 2. Classes and experience distribution of teachers

Sınıf	1–4 Years		5–9 Years		10–14 Years		15 Years +		Sum	
	F	%	F	%	F	%	F	%	F	%
1.Class	-	-	-	-	1	5	2	10	3	15
2.Class	1	5	1	5	3	15	1	5	6	30
3.Class	1	5	3	15	1	5	-	-	5	25
4.Class	-	-	1	5	4	20	1	5	6	30
Sum	2	10	5	25	9	45	4	20	20	100

In Table 2, demographic information about the classes and experiences of the primary school teachers participating in the research is given. It can be seen that 2 of the teachers have 1–4 years of experience, 5 of them have 5–9 years of experience, 9 of them have 10–14 years of experience and 4 of them have 15 years or more experience. Three teachers taught first-grade students, six teachers taught second-grade students, five teachers taught third-grade students and six teachers taught fourth-grade students.

In Table 3, the views of primary school teachers participating in the research about the values gained from virtual museums are evaluated.

Table 3. Opinions of teachers about the values gained from virtual museums

Category	Subcategory	Sum	
		F	%
Cultural heritage	Traditions		
	Clothes	18	90
	Tools		
Scientificity	Curiosity		
	Questioning	14	70
	Experience		
Philanthropy	Solidarity		
	Empathy	9	45
	Helpfulness		
Aesthetic	Perception of beauty		
	Artworks	5	25
	Architectural		
Patriotism	Historical consciousness	3	15
	Love of country		

Table 3 evaluates the opinions of teachers participating in the research about the values gained from virtual museums. The values that virtual museums bring to students are divided into five categories. 90% of the teachers stated that cultural heritage, with traditions, clothes and tools, is a value that virtual museums bring. 70% of the teachers stated the value of being scientific, which is divided into sub-categories of curiosity, questioning and experiencing. 45% of the teachers stated that the value of benevolence, which is divided into sub-categories of solidarity, empathy and benevolence, can be gained in virtual museums. While 25% of the teachers expressed the aesthetic value, consisting of the perception of beauty, works of art and architecture as an achievement, and 15% of the teachers stated patriotism, which is the first in history and love of country, as a value gained by virtual museums.

The opinions of some teachers who participated in the research about the values that virtual museums bring are given below.

T1: I think that there is more than one value that virtual museums can bring to students. For example, it will enable students to acquire the ability to wonder and question and it will allow them to adopt the value of being scientific without realising it. It is an important window for them to learn the traditional structure, the style of clothing in the past, the tools used and get to know the culture.

T16: Virtual museums offer a structure that allows students to learn about traditions. Students can learn about clothes, tools and various cultural products in this way. Museums, which are the most important representatives of cultural heritage, will enable students to learn about this cultural heritage on the internet.

T19: I think that virtual museums have a very important effect on gaining some values to students. First of all, it takes the student on a journey to the past and instils patriotism. It enables students to learn aesthetic values. For example, students form ideas about architectural structures, a perception of beauty is formed and they develop a point of view towards works of art. Of course, transferring the cultural heritage to the students is also an important gain.

In Table 4, the views of primary school teachers participating in the research on the factors that affect the value transfer of virtual museums are evaluated.

Table 4. Teachers' views on the factors that affect the value transfer of virtual museums

Category	Subcategory	Sum	
		F	%
Nature of the Museum	Period		
	Contents	17	85
	Virtual quality		
Teacher Effect	Being knowledgeable		
	Being able to plan	16	80
	Being able to guide		
Student Effect	Motivation		
	Tendency	8	40
	Age		
	Event duration	4	20

Nature of the event Activity method

Table 4 evaluates the views of primary school teachers participating in the research on the factors that affect the value transfer of virtual museums. 85% of the teachers stated the nature of the museum in terms of term, content and virtual quality. 80% of the teachers stated the effect of the teacher in terms of being knowledgeable, being able to plan and being able to guide. 40% of the teachers stated that students have an impact on transferring value in virtual museums, considering motivation, education and age. In addition, 20% of the teachers stated the importance of the activity duration and activity method in terms of the quality of the activity.

The opinions of some teachers who participated in the research on the factors that affect the value transfer of virtual museums are given below.

T4: In order for virtual museums to convey values, the contents of the museum must be selected appropriately. The teacher who will accompany the students on the virtual museum tour should have a high level of knowledge about the museum and be able to guide well.

T14: Virtual museum activities should be carried out with methods that will keep the student's interest dynamic and within an appropriate time. The quality of the museum, the fact that it was created using advanced technology, the ability to appeal to the age group of the students, the fact that the teacher made the right planning are among the factors that affect the value transfer of virtual museums.

T20: If the student is disorganised, has no motivation, does not appeal to the age group of the student, if the virtual museum is not created professionally, if it does not reflect the selected period, virtual museums will fail to transfer value.

In Table 5, the opinions of the teachers participating in the research regarding the difficulties experienced in value transfer in virtual museums were evaluated.

Table 5. Opinions of teachers about difficulties in transferring value in virtual museums

Category	Subcategory	Sum	
		F	%
Standards of Museums	Limited	19	95
	Inability to embody		
	Technological constraints		
Student Effect	Indifference	13	65
	Distractibility		
	Unwillingness		
School Effect	Curriculum	8	40
	Lack of planning		

Table 5 evaluates the opinions of the teachers participating in the research regarding the difficulties experienced in value transfer in virtual museums. 95% of the teachers stated limitations, non-concretion and technological constraints as difficulties experienced in the field of museum standards. 65% of the teachers stated the student effect, which consists of sub-categories of apathy, distraction and reluctance, as the difficulty experienced in transferring value in virtual museums. The lack of

curriculum and planning was cited by 40% of the teachers as difficulties in transferring value in virtual museums due to school influence.

The opinions of some teachers who participated in the research about the difficulties in transferring value in virtual museums are given below.

T7: Since students cannot touch the materials in virtual museums, concretisation is not easy. Slow internet also reduces the effectiveness of the virtual museum. The student's indifference and unwillingness are also negative factors.

T8: I think the biggest problem is that virtual museums are not common enough. Each museum needs to create a virtual museum application. Since there are a limited number of virtual museums, we have to make limited use of virtual museums. I also think that virtual museum applications should take their place directly in school curricula.

T15: In virtual museums, students cannot touch the works exhibited in the museum, as in visiting a museum. This causes the works in the museum to remain abstract in their minds. Virtual museum activities are insufficient, the curriculum lacks content suitable for values education in virtual museums. Students are indifferent.

In Table 6, the suggestions of primary school teachers participating in the research regarding value transfer in virtual museums are evaluated.

Table 6. Teachers' suggestions on value transfer in virtual museums

Category	Subcategory	Sum	
		F	%
For Museums	Increasing the number	16	80
	Improving quality		
For Events	Variety of events	10	50
	The right method in the event		
For School	Curriculum enrichment	6	30
	Parent seminars		
For Teacher	Raising student awareness	5	25
	Motivating the student		

Table 6 evaluates the suggestions of the primary school teachers participating in the research regarding the transfer of value in museums. 80% of the teachers made suggestions for museums and stated that the number of them should be increased and their quality should be increased. 50% of the teachers stated the variety of activities and the necessity of applying the right method in the activity as suggestions for the activities. 30% of the teachers expressed their suggestions for the school as curriculum enrichment and parent seminars. On the other hand, 25% of the teachers stated that raising awareness and motivating students are suggestions for teachers.

The views of some teachers participating in the research on value transfer in virtual museums are given below.

T2: Virtual museum applications need to be increased in number. In addition, more technology-based museums should be designed and their quality should be increased. Parents also need to be made aware of this. The school administration has a responsibility in this regard.

T3: Activities for virtual museums need to be diversified. In addition, these activities should be applied by choosing the most appropriate method for students.

T12: Virtual museum applications should be increased. Teachers also have a great role to play in raising students' awareness on this issue. In addition, enriching the curriculum can have a positive effect on the transfer of values in virtual museums.

4. Discussion

The views of primary school teachers participating in the research about the values that virtual museums bring to students were evaluated. The vast majority of teachers stated that virtual museums provide students with cultural values and scientific value. They stated that the values of benevolence, aesthetics and patriotism can also be taught to students through virtual museums. While teachers categorise cultural heritage as traditions, clothes and tools, they categorise scientificity as curiosity, questioning and experiencing. In addition, benevolence, solidarity, empathy and benevolence were divided into subcategories, while aesthetics, perception of beauty, works of art and architecture were categorised. The teachers categorised the historical awareness and patriotism under the value of patriotism and stated that these values can be gained by the students in virtual museums. In their research, Barbieri, Bruno and Muzzupappa (2017) stated that virtual museum systems are very effective tools for the preservation and distribution of cultural content, and in this context, cultural interaction, thanks to their entertaining and educational approach. Kaschak (2014) stated in his study that museums will make it easier for students to understand historical events and citizenship issues.

The views of primary school teachers participating in the research on the factors that affect the value transfer of virtual museums were evaluated in four categories. They are the nature of the museum, the teacher effect, the student effect and the quality of the activity. Teachers associated the quality of museums with the period, content and virtual quality they reflect. Teacher influence is associated with being knowledgeable, being able to plan and being able to guide. Student influence, motivation, disposition, age and the quality of the activity were associated with the duration of the activity and the activity method. The opinions of the teachers participating in the research on the difficulties experienced in value transfer in virtual museums were discussed in three categories. The first of these is the standards of museums. The limitations of virtual museums, their inability to embody and technological constraints are defined as difficulties experienced due to the standards of virtual museums. Second, teachers stated indifference, distraction and reluctance as difficulties experienced in transferring value arising from students. Curriculum and lack of planning are categorised as difficulties in transferring value in virtual museums arising from school. In their research, Barlas and Bozkus (2014) stated that despite the various benefits of virtual museums, the most obvious criticism that can be made against virtual museums is that they do not provide a real museum experience due to the inability to touch the object and walk in the corridors.

The suggestions of the primary school teachers participating in the research on value transfer in virtual museums were directed towards museums, activities, school and teachers. It has been stated that the number and quality of virtual museums should increase for museums. The teachers stated the variety of activities and the use of the right method in the activity as suggestions for the activities. While teachers defined curriculum enrichment and parent seminars as suggestions for the school, they made suggestions to teachers about raising awareness and motivating students. In the research results of Sungur and Bulbul (2020), it was determined that a significant part of the classroom teacher candidates did not receive any training on virtual museum education during their undergraduate education. This situation reminds us that pre-service teachers should gain some experience about virtual museum education in pre-service education. Eguz (2011) stated that virtual museum visits are not made consciously and that the activities within the scope of museum education are not evaluated. In the research, it was emphasised that the methods used should be diversified in order to make use of virtual museums more effectively.

5. Conclusion

Technological advances in many countries of the world have also found their way in education and have paved the way for educational institutions to benefit from information technologies more effectively. In this context, museums, which are an effective tool for gaining knowledge and skills from different disciplines of education, have begun to move to digital platforms. Thus, museums that have adapted to the digital developments of the age have had the opportunity to exhibit their works in multiple environments. Accordingly, in this study, primary school teachers' views on value transfer in virtual museums were evaluated. Teachers value the virtual museums' cultural heritage, scientific benevolence, aesthetics and patriotism. The quality of museums, teacher effect, student effect and the quality of the activity are factors that teachers find effective in transferring value to virtual museums. Teachers attributed the difficulties in transferring value in virtual museums to reasons originating from the museum, the student and the school. Increasing the number and quality of museums and the variety of activities, choosing the right method, enriching the curriculum, organising parent seminars, raising awareness and motivating students have been categorised by teachers as suggestions for value transfer in virtual museums.

6. Recommendations

The research findings reveal the views of primary school teachers on value transfer in virtual museums. In line with the research findings, the following recommendations were developed:

1. The transfer of museum spaces to the computer environment should be expanded, and efforts should be made to increase the number of virtual museums.
2. While creating virtual museum platforms, the contents should be enriched and made interesting, taking into account age groups.
3. Education curricula should be arranged to include virtual museums in the content, and the influence of parents on the formation of virtual museum perceptions in students should be increased with parent seminars.

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