

Views of Preservice Social Studies Teachers regarding the Use of Virtual Tours during the Pandemic

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Abstract

This research aims to determine the views of preservice social studies teachers regarding the use of virtual tours during the pandemic period. The study was carried out with the phenomenology design, one of the qualitative research designs. 20 preservice Social Studies teachers studying at Kutahya Dumlupınar University participated in the study in the 2021-2022 academic year. The criterion sampling method, one of the purposeful sampling types, was used to determine the research group. The criteria were being a preservice social studies teacher and participating in virtual tour application training. The research data were collected with a semi-structured interview form developed by the researchers and analysed with the content analysis technique. As a result of the data analysis, it was seen that the views of the preservice teachers about the virtual tour application were primarily positive. The data obtained from the interviews were divided into six themes: informative, persistent and embodied, attractive and entertaining, practical and easy, economic and providing equal opportunity, and negative opinions. The informative theme is divided into two sub-themes as giving preliminary information and explanation

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INTRODUCTION

Technology is applying and using scientific knowledge applied in a particular field to meet human needs effectively (Ogut, 2003). Technology has been evaluated as an action that has increased its impact by changing on a local and global scale since the existence of human beings. Technology cannot be thought of independently of the society in which it is located or produced (Kara, 2017). Since societies are in constant motion, the concept of technology has gained a different meaning in every age (Apali, 2016). According to Tonta and Küçük (2005), the society people live in is an information society. The transition from the industrial society, which is the last level, to the information society is full of technological changes (Kocacik, 2003). This change has led to the differentiation of the perception of technology today, and this concept to be perceived as products containing high-quality scientific knowledge and technique (Aksoy, 2005). With its increasing power, technology has been effective in many fields as well as in the field of education and has paved the way for the emergence of the educational technology discipline (Erden & Pehlivan, 2020). Education plays a significant role in systematically transferring knowledge to new generations (Parlar, 2012). The way to benefit from education in accordance with today's conditions is through educational technology. Any material that facilitates the transfer of knowledge is called educational technology (Dere & Ates, 2019). Educational technologies are diversifying day by day in parallel with the developments in the field of technology. Along with this diversity in educational technologies, educational models are affected, and a revolutionary development and change are experienced in education (Özciftci & Cakir, 2015). One of the changes made is the re-preparation of the programs based on the constructivist approach as of 2004 (Akkus, 2004). One of the renewed programs is the Social Studies Curriculum. To raise good and responsible citizens at the primary and secondary school level, importance is given to the integrity of science and technology in the social studies course, which utilises various disciplines (Erden, 1999; Tay, 2017). It is possible to see the reflections of this integrity in the 2005 and 2018 Social Studies Curriculum (MEB, 2015; MEB, 2018). In both programs, the learning area of "Science, Technology and Society" is included, and the students' conscious and effective use of information and communication technologies is the particular purpose of the course (MEB, 2018; Tay, 2017). Therefore, teachers are expected to know information and communication technologies (ICT) and reflect this in their courses. The use of technology in the social studies course positively affects the students' attitude, interest, attention and motivation towards the school subjects and positively impacts their success in the course (Akgun & Koru-Yucekaya, 2015; Dere & Ates, 2019; Inel & Cetin, 2017; Kazu & Yesilyut, 2008; Yaylak & Inan, 2018; Yesiltas, 2014; Yildirim & Tahiroglu, 2012). Benefiting from educational technologies in the classroom and extracurricular environments positively affect students.

Virtual tours and virtual museum applications allow students to gain different experiences by eliminating the time-space boundary in extracurricular settings (Derman, 2012). While virtual museums are called museum tours in the most general sense, virtual tours are defined as creating artificial travel environments by transferring real places to electronic media (Ozen, 2006; Tastan, 2017; Yildirim & Tahiroglu, 2012). Virtual tours and museum applications reflect the characteristics and works of different geographies and the socio-cultural structures of individuals (Erbay, 2001). These applications, which provide information about societies' history, present and future, are preferred more than in the past due to their ease of use (Aktas, 2017). According to Baillargeon (2008), many collections in the virtual environment have been brought together with many people through virtual museum applications. Therefore, people have had the opportunity to observe and have various experiences. In the virtual tour application from virtual museums, visitors can feel inside the space by using panoramic photographs that help obtain three-dimensional images (Tay, 2020). Virtual tours can be held in virtual museums as well as in various environments that are considered to be visited (Surme & Atilgan, 2020). For this reason, it is frequently used in different fields such as tourism, apart from education (Aksoy & Bas, 2020). Disadvantaged situations such as time, money, permission and planning are commonly encountered in museum education, which is tried to be carried out on-site before the virtual tour and virtual museum applications (Keles, 2003). In particular, since 2020, the risks of disease transmission, which started with the Covid-19 pandemic, have been added to these disadvantageous situations. Since forming large groups in local museum education, visits will

increase the probability of students catching the disease, families and the administration are hesitant at the permission stage. It is known that virtual tours and virtual museum applications, which are equivalents of on-site museology, can be used to eliminate this and many similar disadvantageous situations (Sahan, 2005). When the studies in the related literature are examined, it is seen that there are various studies on the use of virtual tour application in education (Altinbay & Gumus, 2020; Iskender, 2019; Koca & Dasdemir, 2018; Surme & Atilgan, 2020; Tay, 2020; Teker & Ozer, 2016). Apart from these studies, there are also various studies on the use of virtual tours and virtual museum applications during the pandemic period (Akyol, 2020; Ekinici, 2021; Halac & Doruk, 2021; Ortac, 2021). When the studies were evaluated in general, it was seen that especially the studies during the covid-19 pandemic period were primarily studies in the literature review type that evaluated the current situation. Knowing the experiences and perceptions of preservice teachers regarding the use of virtual tour applications during the pandemic period is extremely important in terms of shaping the future of the application and ensuring its integration into the lessons. This research aims to determine the views and experiences of social studies teachers about the virtual tour application used during the Covid-19 pandemic period.

METHOD

This part further discusses the research design, study group, data collection tool, data collection and analysis

Research Design

The phenomenological research design, one of the qualitative research methods, was used in the study. Phenomenology is a type of research that includes an in-depth examination of phenomena and events that we have encountered and experienced before (Yildirim & Simsek, 2011). According to Creswell (2007), phenomenological studies are divided into two as interpretive (hermeneutic) and descriptive (empirical). In descriptive phenomenology studies, interpretation is given less place and more attempts to define what experiences are. Understanding real-life experiences are essential in interpretive phenomenology studies (Aydin, 2015). Since the research was based on interpreting the experiences of preservice social studies teachers about the virtual tour application, this research was conducted with an interpretive phenomenology design.

Study Group

The study group consists of 20 preservice social studies teachers studying at Dumlupinar University, Faculty of Education, Department of Social Studies Education. Criterion sampling, one of the purposeful sampling methods, was used to determine the study group. According to Buyukozturk (2020), in the criterion sample, the subjects of the sample may consist of people, objects, events and situations with specific characteristics. In this case, it is necessary to work with people who meet the criteria determined in selecting the sample. The criteria determined within the scope of the research were determined as being a preservice social studies teacher and having experienced the virtual tour application. The reason why preservice social studies teachers were chosen as the study group in the research is that there are many contents with the virtual tour and virtual museum applications in the social studies course (Aladag, Akkaya & Sensoz, 2014) and a new course was added under the name of Art and Museum Education in 2018 Social Studies Education Undergraduate Programs (Tonga, 2020). The data about the preservice teachers participating in the research are given as in Table 1

Table 1. Demographic characteristics of the study group

Information about the Participants		f	%
Gender	Female	14	70
	Male	6	30
Age	19 and under	4	20
	20-22	10	50
	23-25	4	20
	26 and above	2	10
Virtual Tour Application	I know	13	65
	I do not know	7	35
Experience in using Virtual Tour Application	Yes	12	60
	No	8	40

When Table 1 examined is, 14 of the preservice teachers participating in the research are female, and 6 are male. Ages range from 19 years and younger to 26 years and older. 13 of the preservice teachers stated that they had information about the virtual tour before the training, and 12 of them stated that they had used the virtual tour application before.

Data Collection Tools

Research data were collected with an open-ended interview form developed by the researchers. Before the interview form was prepared, the relevant literature was reviewed, and the interview form was finalised in line with the views of two field experts. Due to the pandemic, face-to-face meetings could not be held with preservice teachers, as the education was carried out through remote education in the fall semester of 2021-2022. Before the interview with the preservice teachers, a virtual tour event lasting approximately 50 minutes was held by the researchers introducing the Kutahya Castle, the Ulu Mosque, and the Donerler Mosque. Before the event, the participants were given theoretical information about the virtual tour application and taught how to use the application. The questions prepared after the activities were asked individually on Google Meet to 20 preservice social studies teachers participating in the application on different days, and the interviews varied between 15-30 minutes.

Data Collection and Analysis

Research data were analysed by the content analysis method. The content analysis includes an in-depth examination of previously unspecified themes and dimensions (Yildirim & Simsek, 2016). Accordingly, after the interviews with the participants were made over Google Meet, the answers were written down and carefully read and interpreted by the researchers. The answers given by the participants were first separated into codes, and sub-themes and themes were reached from the codes, and tables were created using various visuals. To ensure the validity and reliability of the research, credibility, transferability and consistency strategies were used. Credibility and transferability are considered some of the strategies used to ensure validity and consistency to ensure reliability (Lincoln & Guba, 1985). The research findings were shown to the participants, and their confirmation was obtained to increase the credibility of the research. Some of the participants' statements were supported with direct quotations, and details were included to increase transferability and consistency.

Ethical Aspect of Research

In this study, the contribution level of the researchers is equal. There is no conflict of interest between the authors of the article. Ethics committee approval was obtained for the article (Decision dated 30.11.2021 (E.60623)) research and publication ethics were complied with.

FINDINGS

The findings obtained for the question of "What are the views of preservice social studies teachers regarding Virtual Tour applications during the pandemic process?" related to the research

problem were divided into themes and sub-themes as a result of the content analysis and are shown in Figure 1.

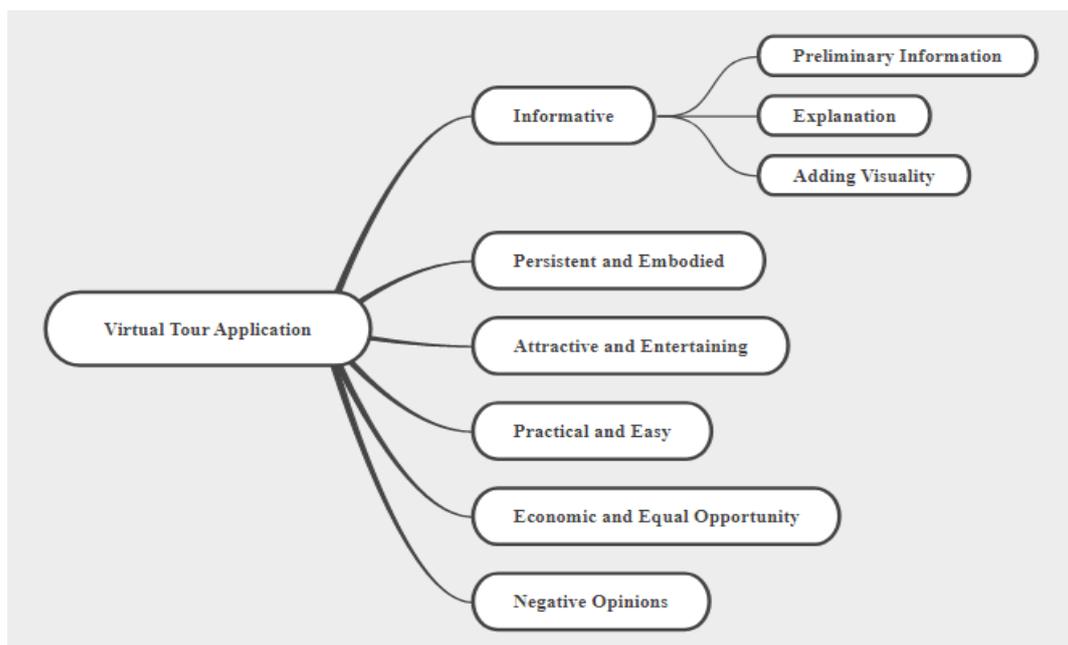


Figure 1. Theme and sub-themes regarding the virtual tour application

When Figure 1 is examined, the participants' views about the virtual tour application are gathered under six themes. Accordingly, the informative theme is divided into preliminary information and explanation sub-themes. Other themes are persistent and embodied attractive and entertaining, practical and easy, economic, and equal opportunity. Views that were not positive regarding the virtual tour application were discussed under the theme of negative opinions.

Findings Regarding the Informative Theme

As a result of the analysis of the interviews with the preservice teachers participating in the research, the informative theme was divided into two sub-themes as giving preliminary information and explanation. The codes created for these sub-themes are shown in Table 2.

Table 2. Sub-theme and code table regarding the informative theme

Theme	Subtheme	Code	Participant
Informative	Preliminary Information	Pre-discovery of the destinations and places	P3, P10
	Explanation	Historical and visual information about the city visited through virtual tour	P1, P4, P9, P15, P17, P20

When Table 2 is examined, it is seen that the informative theme is divided into two sub-themes, namely, giving preliminary information and explanation. Preservice social studies teachers, who tried to get to know Kütahya, the city they studied, using the virtual tour application, stated that it was informative. Before the application, the Kütahya castle, the great mosque and the returning mosque were introduced by the researchers using the virtual tour application and information was given. After the application was finished, preservice teachers were guided to use it and explained how to use it. After the process was completed, the preservice teachers' views about the virtual tour application were received. Direct quotations regarding the sub-theme of giving preliminary information from the participants' opinions are shown below.

We only took face-to-face lessons for one semester in Kütahya. Since the second semester of the first year, we have been taking classes through distance education. Since we

stayed for a short time, we did not have the opportunity to visit most places. In this respect, it created preliminary information. I was satisfied with the tour. When we started face-to-face training, I wanted to visit these places that I saw virtually (P3).

I also use the virtual tour application when appointed as a teacher. Because I want to give healthier information to my students. Especially before I travel, if I'm going to have a virtual tour application, I use it and try to get preliminary information. I found this app informative in every way (P10).

When the quotations given above are examined, preservice teachers stated that they would use the virtual tour application to obtain preliminary information about the places and environments they plan to go to. Thus, the participants, who thought they could get more detailed information, stated that they would benefit from this application before their school trips. Most of the participants said that this application could be explanatory about the places they have not been to or have not been to before. P1, P15 and P17 stated that we could explore the places we want to see but cannot go to with this application, and we can explain to our students with this application, while P9 and P20 stated as follows.

“I think this application is more appropriate for interdisciplinary courses such as social studies. Because my field covers many fields, including history and geography. With this application, I can explain many things using various visuals (P9).”

“I especially use this application to explain and explain historical subjects with various visuals (P20).”

Unlike the other participants, P1 stated that with the virtual tour application, s/he was informed about the virtual tour application and the city s/he was studying.

Findings Regarding Persistent and Embodied Theme

When the data obtained from interviews with preservice teachers were analysed, another theme reached was persistent and embodied. The codes created for this theme are shown in Table 3.

Table 3. Code table for persistent and embodied theme

Theme	Code	Participant
Persistent and Embodied	Embodied information	P6, P12
	feeling oneself in the place	P10
	Increasing retention	P8, P16, P17

When Table 3 is examined, it is seen that the codes created under the persistent and embodied theme are divided into three as the embodiment of knowledge, feeling oneself in the place and increasing retention. The direct statements about the embodiment of knowledge about the preservice teachers are as follows.

“The virtual tour application is very suitable for the content of certain courses. I think that it would be good for students to embody what they learned in courses such as geography and history (P6).”

“Students can understand better with the visuals used in the virtual tour application. Abstract issues can become somewhat concrete (P12).”

It is understood from the statements of the preservice teachers that the virtual tour application can be used to embody the social studies lesson subjects since it contains various visuals. P10 said that the virtual tour application creates a feeling of being in a natural environment, *“As it provides us with*

360-degree tours, we can feel ourselves as if we are in that environment. It offers us the opportunity to recognise the place and objects there. Even if we are not there, even if we do not go, we feel like we are there”. Examples of direct quotations reflecting the views of preservice teachers who stated that the virtual tour application increased memorability in addition to its embodied feature are given below.

“While I am teaching social studies, when I come across a country or city, I tell the students not from the book but the virtual tour, if available. Thus, I can increase memorability (P8).”

“The students of today’s era are learning with technology. With the Covid-19 pandemic, our dependence on technology has increased even more. For this reason, I think that students’ having various experiences by using technology makes the subject matter more beautiful and permanent (P16).”

“I believe that the visual resources I will use while explaining the subject or a place will leave a more lasting effect on students. The fact that the virtual tour application is based on visuals in the real environment will provide better and permanent learning of the subject (P17).”

Preservice teachers describe the social studies course as an abstract and low-memorability course in terms of its structure. For this reason, enriching it in terms of visuality and bringing it closer to life embody the lesson and increase permanence about it.

Findings Regarding the Attractive and Entertaining Theme

When the data obtained as a result of the interviews were analysed, another theme reached was attractive and entertaining. The codes created for this theme are given in Table 4.

Table 4. Code table for the attractive and entertaining theme

Theme	Code	Participant
Attractive and Entertaining	Entertaining	P10, P11, P19
	Attractive	P7, P13

Themes created under the attractive and entertaining theme are attractive and entertaining. Direct quotes from entertaining coded teacher opinions are as follows.

“I used the virtual tour application for the first time. I really enjoyed feeling like as if in a real environment. I had a lot of fun both watching the virtual tour application and using it myself. It can also be fun when used in lessons (P10).”

“It was an entertaining activity to see the places we visited during the orientation trip organised by our school in Kütahya, even partially. When we started school, I had the opportunity to visit the places described. Seeing it in the virtual environment helped me remember the places I went (P11).”

“Although I don’t think it will replace the real thing, it’s a pretty fun app (P19).”

When the opinions of the preservice teachers are examined, it is seen that those who use the virtual tour application for the first time find the application more enjoyable. In addition, it is considered that the application can be remarkable for students with its feature of reflecting reality. “I want to address the interests of students in my lessons. Technology supported applications such as virtual tour applications can attract students’ attention and make them more interested in the lesson,” P7 stated. According to P7, virtual tour applications can be considered an alternative for student learning due to their remarkable feature. P13, one of the students, expressed his opinion about the virtual tour application, “This activity was very remarkable with the visuals provided and its strong presentation style. I have not been to the places described before, so I was curious. When face-to-face training starts, I would like to go there”.

Findings Regarding the Practical and Easy Theme

Another of the themes obtained as a result of the interviews with the participants was gathered under the theme of Practical and Easy. The codes created for this theme are shown in Table 5.

Table 5. Code table for practical and easy theme

Theme	Code	Participant
Practical and Easy	Not requiring any movement effort	P5
	Participating by sitting at home	P16
	Easy	P14
	Practical	P2, P18

According to Table 5, the codes determined under the practical and easy theme do not require any movement effort, participate by sitting at home, and are easy and practical. The direct statements regarding the preservice teachers who stated that they could use the virtual tour application by sitting at home without requiring any movement effort are as follows:

“I think it will be easy, especially during the covid period. Instant access without any movement effort is very practical in terms of the convenience of the application (P5).”

“During the pandemic, when there was a curfew, and we spent most of our day at home, we used the virtual tour application comfortably by sitting at home. We can benefit from this application not only for Kütahya but also for the promotion of many cities and historical buildings (P16).”

The fact that the application was planned during the pandemic period and the students spent only one period with face-to-face education increased the interest in the event. Preservice teachers stated that they easily use the virtual tour application without leaving the house, and they talked about the practicality of using this application. P14 noted that *“I think it is an application that will once again reveal the importance of individual isolation during the pandemic process that has affected the world. I am new to this application. We were able to examine any place we wanted to see in Kütahya without being there personally as if we were there.”* Preservice teachers’ views on the practicality of the application are as follows:

“The virtual tour application is one of the easiest applications we can access to get to know and learn about cities during the pandemic process (P2).”

“I learned about the aspects of Kütahya Castle that I did not know. We missed Kütahya because of the virus; it was a nice trip. It is very practical to use, and I plan to use this application from now on (P18).”

When the expressions of the preservice teachers are examined, it is seen that the virtual tour application is perceived as practical and easy. Due to these advantages, it is estimated that preservice teachers who are informed about the virtual tour application will also benefit from the applications in their professional lives.

Findings regarding the theme of economic and equal opportunity

The opinions of preservice teachers about the virtual tour application of social studies were collected under the theme of providing economic and equal opportunity. The codes collected under this theme are as follows.

Table 6. Code table for the theme of economic and equal opportunity

Theme	Code	Participant
Economic and equal opportunity	Cannot find time	P5, P15
	Financial Impossibility	P2, P19
	Equal benefit for all	P18

Examples of direct quotations regarding the preservice teachers' evaluation of the virtual tour application as an economic and equal opportunity are as follows.

“With the virtual tour application, you can see the places you want to go or see without wasting time. This application, which is one of the benefits of technology, can be very useful when planning our daily work (P5).”

“It’s a nice app for the community. Those who do not have the time and financial means to travel can easily benefit from this application (P15).”

“The possibilities of the place where I started my job may not be excellent. When I want to travel, I may not be able to. In this context, while explaining cities to my students, I can make them benefit by using this application (P2).”

“This application can be used especially for places abroad that you want to go but cannot go to (P19).”

Preservice teachers evaluated the virtual tour application positively since it is an application that can be accessed remotely and does not require time or money. In addition, it may not be convenient in terms of time and economy to go to a place, especially to organise collective events within the scope of the school. The number of students who want to participate but cannot participate in the activities held for economic reasons is not tiny. P18 expressed this situation with the words, *“After being appointed as a teacher, I use this application because the class can benefit from this activity equally”*. For such reasons, the use of such applications among students can be supported more.

Negative Opinions

When the preservice teachers' opinions regarding the use of the virtual tour application are examined, it is seen that the positive thoughts are in the majority. However, some preservice teachers stated that virtual applications would not be as practical as on-site applications in the interviews. These opinions of the preservice teachers were gathered under the theme of negative opinions. The codes created for this theme are given in Table 7.

Table 7. Negative opinions

Theme	Code	Participants
Negative Opinions	Confusing and dizzying	P17
	Not as effective as the real one	P7, P19

Examples of direct quotations from the evaluations in which preservice teachers expressed negative opinions about the virtual tour application are below.

“There is a movement throughout the application. It’s hard to focus. This situation is confusing and dizzying for me. I can say that I do not find it very effective (P17).”

“I did not find the application effective enough to replace the real thing. It may be an alternative for those who cannot go but seeing it on the spot is different (P7).”

“Although I don’t think it will replace the real thing, it’s a pretty fun app (P19).”

Unlike other teachers, although P19 stated that she could not replace the actual practice, she evaluated it as fun. For this reason, this expression of P19 is given both under the theme of remarkable and entertaining and under the theme of negative opinions since the expression has both positive and negative features.

DISCUSSION, RESULTS AND RECOMMENDATIONS

In this research, preservice social studies teachers’ views on virtual tour applications during the pandemic period were examined, and it was determined that preservice teachers generally had a positive opinion. Due to the pandemic, many countries, including Turkey, have restricted physical access to museums and historical sites to reduce the risk of transmission. Therefore, visits to these environments through applications such as virtual tours and museums have increased during the pandemic period (Halac & Doruk, 2021). According to Tepecik (2007), virtual museums are among the programs that can be used for life due to their advantages in distance education.

The research was carried out with students residing in provinces other than Kütahya, who participated in face-to-face education for only one semester and received distance education for three semesters. Therefore, it is thought that the participants do not have enough knowledge about the historical and cultural specialities of the city they are studying. According to the research results, the students stated that they could have more information about the features of the city they studied with the virtual tour application. When the participants’ opinions about the virtual tour application are evaluated in general, it is seen that they are positive. The relevant literature was reviewed, and similarly, positive results were obtained in various studies conducted with the virtual museum and virtual tour application (Aktas, Yilmaz & Ibrahimoglu, 2021; Ilhan, Tokmak & Aktas, 2021; Surme & Atilgan, 2020; Yildirim & Tahiroglu, 2012). The codes obtained from interviews with preservice teachers were divided into themes under the headings of informative, permanent and embodied attractive and entertaining, practical and easy, economic and equal opportunity, and negative opinions. The informative theme is divided into two sub-themes as preliminary information and explanation. Under the informative theme, the teachers described the virtual tour application as preliminary to explain the characteristics of a city or feature or to get to know the places that are planned to be visited and seen beforehand. This finding of the research is in parallel with the fact that Aksoy and Bas (2020) see the virtual tour application as a tool that can be used to promote the city. According to Halac and Izci (2020), similarly, with the virtual tour application, the promotion of the cities can be reached, and the desired data can be accessed without going to the cities.

When the data obtained with the virtual tour application is analysed, another theme obtained is the embodied and permanent theme. Under this theme, the preservice teachers stated that the virtual tour application could embody the information due to the visuals it contained, and thus the permanence would increase. Virtual tour application makes visual objects three-dimensional rather than two-dimensional (Koca & Dasdemir, 2018). Information technologies, which make the lesson three-dimensional, enable the class to be taught in a more embodied and realistic way (Karaman & Akbaba, 2020). The embodiment of abstract subjects in the social studies course makes the subject understandable and straightforward and increases memorability (Soylu & Memisoglu, 2019).

Another theme reached regarding the virtual tour application was gathered under the title of attractive and entertaining. The virtual tour is a three-dimensional simulation model created using virtual reality (Bayraktar & Kaleli, 2007). Preservice teachers stated that they had a lot of fun while using the virtual tour application and that it was entertaining for them to feel like they were in a natural environment. Similarly, in his study, Ulusoy (2010) states that the participants evaluated the virtual museum education process as fun.

The participants consider the virtual tour application practical and easy because it can be used online, is free of charge, and is easy to access. In the 21st century, the speed, continuity and

practicality of accessing information are as important as access to information. For this reason, the internet and mobile technologies should be used more (Uyar & Karakuyu, 2019). Virtual trips to any part of the world in the classroom environment provide an excellent convenience for students in the speed of accessing information (Varol, Yigit, & Ulvi, 2021).

Attending local museum education or tours requires effort, time and cost. Today, the risks of transmission of the disease experienced with the Covid-19 pandemic have been added to these difficulties. For all these reasons, virtual museum and virtual tour applications have gained greater importance compared to the past, and their use has increased compared to the past (Aditia & Fadilla, 2020; Akyol, 2020; Halac & Doruk, 2021). At the end of the interviews with preservice teachers, the virtual tour application was evaluated as one of the applications that can be preferred in cases of time constraint and financial impossibility. In addition, the equal opportunity for all students to benefit from this service was seen as an equal opportunity and was determined as one of the reasons for preference. Peker (2020) has similarly concluded in his study that virtual museums provide equality of opportunity in education, albeit partially. Since the virtual museum and virtual tours have the same function, it is thought that both applications may contribute to ensuring equality of opportunity in education.

At the end of the interviews about the virtual tour application, it was seen that some preservice teachers found the application confusing and distracting. At the same time, some preservice teachers did not find the virtual tour application as practical as the field trips. Similarly, in Ortac's (2021) study, some participants did not find the application as effective as field trips.

- According to the research results, nearly half of the participants stated that they did not know about the virtual tour application and did not use it. There are many contents in the social studies course with the virtual tour and virtual museum applications. Therefore, preservice social studies teachers, who are the course practitioners, should be more informed about virtual tours and museum applications.
- Applications that can be accessed via remote access are an alternative for individuals, especially in extraordinary times such as the pandemic period. Therefore, the number of places accessible through virtual tours and museum applications should be increased.
- This research was carried out with a qualitative research design. Future studies can be carried out with different variables and research designs. Research can be presented with a more holistic and broad perspective.

REFERENCES

- Aditia, P., & Fadilla, A. N. (2020). Tur pariwisata di masa pandemi (analisis pengalaman virtual melalui pendekatan aware-ness). *Jurnal Budaya Nusantara*, 4(1), 205-209.
- Akgun, M., & Koru-Yucekaya G. (2015). Teachers' perceptions and students' attitudes towards usage of smart board (Ankara city sample). *Qualitative Studies*, 10(3), 1-12.
- Akkus, Z. (2014). Preservice social studies teacher's views on assessment and evaluation activities based on constructivist approach. *Journal of Selcuk University Institute of Social Sciences*, 31, 13-27.
- Aksoy, G., & Bas, M. (2020). Dijital turizm kapsamında sehir tanıtımında kullanılan bir araç olarak sanal tur [Virtual tour as a tool used in city promotion within the scope of digital tourism]. *Journal of Turkish Tourism Research*, 4(3), 2542-2564.
- Aksoy, H. H. (2003). Eğitim kurumlarında teknoloji kullanımı ve etkilerine ilişkin bir çözümleme [An analysis of technology use and effects in educational institutions]. *Education Science Society Journal*, 1(4), 4-23.

- Aktas, V. (2017). Use of virtual museum in social studies and social studies teachers 'attitudes to use virtual museum of candidate [Unpublished master's thesis]. Marmara University, Istanbul.
- Aktas, V., Yilmaz, A., & Ibrahimoglu, Z. (2017). Social sciences teachers' attitudes towards the use of virtual museums *Trakya Journal of Education*, 11(3), 1294-1313. <https://doi.org/10.24315/tred.806159>
- Akyol, P. K. (2020). Museum activities during and after the covid-19 pandemic. *National Folklore*, 16(127), 72-86.
- Aladag, E., Akkaya, D., & Sensoz, G. (2014). Evaluation of using virtual museums in social studies lessons according to teacher's view. *Trakya University Journal of Social Sciences*, 16(2), 199-217.
- Altinbay, R., & Gumus, N. (2020). Social studies teachers' views on the virtual tour applications. *Journal of Innovative Research in Teacher Education*, 1(1), 60-71. <https://doi.org/10.29329/jirte.2020.321.5>
- Apali, Y. (2016). The change and conversion of the information in terms of the social change. *Mehmet Akif Ersoy University Journal of Social Sciences Institute*, 8(17), 395-405.
- Arat, T., & Baltacioglu, S. (2016). Virtual reality and tourism. *Journal of Selcuk University Social Sciences Vocational School*, 19(1), 103-118.
- Aydin, S. (2015). Olgubilim araştırması. M. Metin (Ed.) Kuramdan uygulamaya eğitimde bilimsel araştırma yöntemleri içinde [Phenomenological research. M. Metin (Ed.) In scientific research methods in education from theory to practice] (s. 287-311). Ankara: Pegem Akademi Pub.
- Baillargeon, T. J. (2008). Planning, developing, and evaluating museums: step-by-step handbook for museum professionals [Unpublished Ph.D. Thesis]. Kansas State University, Kansas.
- Bayraktar, E., & Kaleli, F. (2007). Virtual reality and application areas. *Academic Informatics*, 1-6.
- Buyukozturk, S., Kilic- Cakmak E, Akgun Ö.E, Karadeniz, S., & Demirel F. (2019). Eğitimde bilimsel araştırma yöntemleri [Scientific research methods in education] 29. Baskı. Ankara: Pegem Akademi Yayıncılık.
- Creswell, J. W. (2007). *Qualitative inquiry & research design, choosing among five approaches*. The USA: Sage Publications Inc.
- Dere, I., & Ates, Y. (2020). The use of technological tools and materials in social studies courses: a case study. *Journal of Erzincan University Faculty of Education*, 22(2), 496-514.
- Derman, E. (2012). The sample of 360 degree panoramic virtual tour application dumlupinar university [Unpublished master's thesis]. Dumlupınar University Institute of Social Sciences, Kütahya.
- Durmaz, C., Bulut, Y., & Tankus, E. (2018). The integration of virtual reality into tourism: application in the hotels with five star in Samsun. *Turkish Journal of Marketing*, 3(1), 32-49.
- Ekinci, B. (2021). A review of student's products for museum studies and practices classes held online during the covid-19 pandemic. *Journal of International Museum Education*, 3(1), 56-73. <https://doi.org/10.51637/jimusemed.985700>

- Erbay, F. (2001). Sanat eğitiminde müze ve sanat galerilerinin önemi [The importance of museums and art galleries in art education]. *Türkiye’de Sanat Plastik Sanatlar Dergisi*, 48, 26-29.
- Erden, M. (1999). *Gelişim ve öğrenme [Development and learning]*. Ankara: Pegem Akademi Pub.
- Halac, H. H., & Doruk, B. S. (2021). Shaping visitor management through virtual museums during the pandemic period. *Electronic Turkish Studies*, 16(4), 1261-1277. <http://dx.doi.org/10.7827/TurkishStudies.50048>
- Halac, H. H., & Izci, B. S. (2021). Evaluation of cultural heritage in city virtual tours. *Journal of Turkish Tourism Research*, 5(2), 985-1004. <https://doi.org/10.26677/TR1010.2021.749>
- Ilhan, G. O., Tokmak, A., & Aktas, V. (2021). Virtual museum experiences of social studies teacher candidates *Journal of International Museum Education*, 3(1), 74-93. <https://doi.org/10.51637/jimusemed.958918>
- Inel, Y., & Cetin, T. (2017). Determination of the effects of computer based instructional materials used in social studies education of sixth grade students’ attention levels via using an electroencephalography device. *Journal of History Culture and Art Research*, 6(4), 831-848.
- Kara, S. (2017). A research in the context of the social constructivism of technology approach for the relations between technology and social change. *Dört Öge*, 12, 117-132.
- Karaman, B., & Akbaba, B. (2020). The place of information technologies in the students' dreamed social studies course. *Journal of Research in Education and Society*, 7(1), 1-27.
- Kazu, H., & Yesilyurt, E. (2008). Teacher’s aims of using instructional tools and materials. *Firat University Journal of Social Sciences*, 18(2), 175-188.
- Keles, V. (2003). Modern müzecilik ve Türk müzeciliği [Modern museology and Turkish museology]. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2(1-2), 1-17.
- Koca, N., & Dasdemir, I. (2018). Virtual tour application in social studies. *Electronic Turkish Studies*, 13(27), 1007-1016. <http://dx.doi.org/10.7827/TurkishStudies.14420>
- Kocacik, F. (2003). Bilgi toplumu ve Türkiye [Information society and Turkey]. *CÜ Sosyal Bilimler Dergisi*, 27(1), 1-10.
- Kurtoglu- Erden, M. & Uslupehlivan, E. (2020). The study of pre-service teachers thoughts about technology usage in education today and the future. *Usak University Journal of Social Sciences*, 13(1), 109-126.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, California: Sage Publications.
- MEB., (2018). *Sosyal Bilgiler dersi (4,5,6,7. sınıflar) öğretim programı* [Social Studies course (4th, 5th, 6th and 7th grades) curriculum]. Ankara: Devlet Kitapları Müdürlüğü Basımevi.
- Millî Eğitim Bakanlığı [MEB] (2005). *İlköğretim sosyal bilgiler dersi öğretim programı ve kılavuzu* [Primary education social studies course curriculum and guide]. Ankara: Devlet Kitapları Müdürlüğü Basımevi.
- Ogut, A., (2003). *Bilgi çağında yönetim* [Management in the information age]. Ankara: Nobel Pub.
- Ortac, O. (2021). *Yeni medya teknolojilerinin müze farkındalığı üzerindeki etkisi: Covid-19 pandemi sürecinde Türkiye’deki sanal müzeler* [The impact of new media technologies on museum

- awareness: Virtual museums in Turkey during the Covid-19 pandemic] [Unpublished master thesis]. Istanbul Gelisim University, İstanbul.
- Ozciftci, M., & Cakir, R. (2015). Teachers' lifelong learning trends and self-efficiencies about the educational technology standards. *Educational Technology Theory and Practice*, 5(1), 1-19. <https://doi.org/10.17943/etku.57410>
- Ozen, A. (2006), Mimari sanal gerçeklik ortamlarında algı psikolojisi [Perception psychology in architectural virtual reality environments], Bilgi Teknolojileri Kongresi IV, Akademik Bilişim, Denizli.
- Ozer, A. Y. (2016). Using the contextual model of learning effect of academic achievement, motivation and satisfaction levels of students in virtual museum [Unpublished doctoral thesis]. Ankara University, Ankara.
- Parlar, H. (2012). Information society, change and new education paradigm. *Yalova Sosyal Bilimler Dergisi*, 2(4), 193-209.
- Peker, N. (2020). Sosyal bilgiler dersinde sanal müze kullanımı ve sosyal bilgiler öğretmen adaylarının sanal müze kullanımına yönelik tutumları: Aksaray Müzesi örneği [The use of virtual museums in the social studies course and the attitudes of social studies teacher candidates towards the use of virtual museums: The example of Aksaray Museum]. V. *Uluslararası Aksaray Sempozyumu Bildiri Kitabı*, 3-4 Kasım 2020 içinde, (s. 20-31), Aksaray: Aksaray Üniversitesi.
- Sahan, M. (2005). Museum and education. *Turkish Journal of Educational Sciences*, 3(4), 487-501.
- Soylu, T., & Memisoglu, H. (2019). Determination of social studies teachers' views on concept teaching. *International Journal of Social Sciences and Education Research*, 5(4), 464-484. <https://doi.org/10.24289/ijsser.648605>
- Surme, M., & Atilgan, E. (2020). A research to determine the satisfaction levels of individuals who make a virtual tour in a virtual museum. *Turkish Journal of Tourism Studies*, 4(3), 1794-1805. doi: 10.26677/TR1010.2020.4
- Tay, B. (2017). 2005 comparison of 2005 social studies course curriculum and 2017 social studies course draft curriculum. *International Journal of Eurasia Social Sciences*, 8(27), 461-487.
- Tay, V. (2020). Evaluation of the effects of the virtual campus tour application designed according to panoramic based virtual reality [Unpublished mater thesis]. Ankara University, Ankara.
- Tepecik, A. (2007). Sanat eğitimi ve sanal müze [Art education and virtual museum]. *Geçmişten Geleceğe Türkiye'de Müzecilik I. Sempozyumu*. 21-22 Mayıs (ss. 233-240). Ankara: VEKAM.
- Tonga, D. (2020). Social studies education undergraduate programs in Turkey over the last twenty years. *Bolu Abant İzzet Baysal University Journal of Faculty Education*, 20(3), 1547-1564.
- Tonta, Y., & Kucuk, M. E. (2005). Main dynamics of the transition from industrial society to information society. *Turkish Librarianship*, 19(4), 449-464.
- Ulusoy, K. (2010). Open education students' perspectives on using virtual museums application in teaching history subjects. *Turkish Online Journal of Distance Education*, 11(4), 36-46.

- Uyar, A., & Karakuyu, A. (2019). Investigation of the relationship between university students' tendencies for technology use in course and attitudes towards mobile learning. *Route Educational and Social Science Journal*, 6(11), 960-970. doi: 10.17121/ressjournal.2446
- Varol, F., Yigit, A. Y. Y., & Ulvi, A. (2021). 3D Archiving of cultural heritage in digital medium: The Magoki Attar Mosque virtual model example. *Tourism Academic Journal*, 8(1), 181-191.
- Yaylak, E. (2018). Sosyal bilgiler eğitiminde etkinlikler. In S. İnan (Ed.), Öğretmenler ve öğretmen adayları için sosyal bilgiler eğitime giriş: Kavramlar, yaklaşımlar, etkinlikler [Activities in social studies education. In S. İnan (Ed.), Introduction to social studies education for teachers and prospective teachers: Concepts, approaches, activities] (pp. 267-287). Ankara: Ani Pub.
- Yesiltas, E., & Kaymakci, S. (2014). Technological dimension of Turkish social studies curricula. *International Journal of Eurasia Social Sciences*, 5(16), 314-340.
- Yildirim, A., & Simsek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri* [Qualitative research methods in the social sciences]. Ankara: Seçkin Pub.
- Yildirim, T., & Tahiroglu, M. (2012). The effects of virtual museum visits on elementary students' attitudes towards social studies courses. *Electronic Journal of Social Sciences*, 11(39), 104-114.