

Social Studies Teachers' Design and Use of Technological Materials



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ABSTRACT: The aim of this research is to examine the current situation of social studies teachers regarding the design and use of technological materials in lessons. The research was conducted with the case study method, one of the qualitative research methods. The research study group consists of 15 social studies teachers, 6 female and 9 male, working in public secondary schools in Reyhanlı district of Hatay. The data collected through semi-structured interviews were analyzed by content analysis method. As a result of the research, it was found that most of the teachers follow technology through different social networks, On the other hand, they stated that they use smart boards in every appropriate unit to attract students' attention and ensure their participation in the lesson, and that the use of technology makes teaching easier and learning more permanent.

KEYWORDS: Social studies, technology, material design, material use, case study.

I. INTRODUCTION

Technology has an important place in the design of teaching materials to deliver and support course content in the age of technology (Reinders & White, 2011). Materials are used in order to achieve the goals set in the teaching process and to increase efficiency. Moyer (2001) stated that teaching materials are designed to concretize abstract concepts and make them more understandable in order to achieve teaching goals. Heafner (2004) stated that the main purpose of the use of materials in education is to create an environment that will provide permanent learning by taking into account the different learning styles of the students, and stated that the use of materials also aims to increase the academic success of the students by providing permanence in learning. The use of materials in education plays an important role in the success of the program by preparing an effective education-teaching environment and enabling students to reach the foreseen goals more easily (Green, 2019). Enriching the teaching process with well-designed materials contributes to facilitating and reinforcing learning. In this context, it can be said that it is important for an effective education-teaching process that teachers benefit from qualified materials prepared in accordance with the objectives and learner characteristics.

In learning and teaching activities carried out in almost every field of education (such as science, social sciences, health sciences), the use of various technological tools and materials that make it easier to achieve the desired gains, make the lessons more efficient (Nalçacı & Ercoşkun, 2005) and support these processes is increasing. (Duhaney, 2000). However, the tools and materials used in education and training may lose their functionality over time and may be insufficient for the teaching to reach its goals. In order to eliminate these undesirable situations, it is necessary to follow the technological developments. Because the new developments followed contribute to the classroom becoming an active learning and thinking space supported by the available technological resources and to the dynamic creation of technology integration (Berson & Balyta, 2004). The tools and materials used with the integration of technology play an important role in making the lesson fluent, enabling students to focus and participate in the lesson, and obtaining unforgettable information (Kaya, 2006; Kuloğlu, 2019). At the same time, making use of modern technologies provides a constructivist learning and teaching environment (Manfra & Hammond, 2008).

Technological tools and materials that support teaching in many ways have a very important place for the social studies course. Since the social studies course includes the concrete and abstract concepts of many social science disciplines, it requires social studies teachers to use technological tools and materials in teaching the subject. On the other hand, in social studies lessons, teaching materials such as globe and (historical and geographical) maps are used in addition to traditional textbooks (Dere & Dinc, 2017). However, in parallel with the developments in digital technologies, especially after the 2000s, different sensor Technological tools such as computers, cameras, cameras, scanners, voice recorders, projectors, smart boards, flash memory, and mobile phones that can simultaneously address their organs have begun to be preferred (Manfra & Hammond,

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2008). Especially recently; tablet computers (Aydemir, Küçük & Karaman, 2012; Lin, Wong & Shao, 2012), e-books that can be read on electronic devices such as Kindle, iPod, iPhone, iPad and Blackberry (Soydan, 2012; Öztürk & Can, 2010), three-dimensional animation (Toroğlu & İlgür, 2007), virtual museum (Çalışkan, Önal & Yazıcı, 2016), virtual reality (Kayabaşı, 2005), Webquest (İnel, & Çetin 2017), virtual classroom (Green, 2019) and augmented reality (Koçoğlu, Akkuş & Özkan, 2018) innovative technologies and applications are used.

When the mentioned technological tools and materials are used in social studies lessons, they provide various benefits to students, teachers and social studies lessons. First of all, these teaching tools develop the skills and values of problem solving, decision making, self-efficacy, self-esteem, logical, creative and critical thinking, which are among the main purposes of social studies (Açıkalın & Duru 2005; Heafner, 2004; Kaya, 2008; Lin et al., 2012). In addition, it also positively affects students' interest, attention and motivation towards the lesson, ensuring their active participation and obtaining permanent information (Akgün & Kuru-Yücekaya, 2015; İnel & Çetin, 2017; Kuzu & Yeşilyurt, 2008; Yaylak & İnan, 2018; Yeşiltaş, 2014). From the teachers' point of view, the use of technological materials; It helps teachers in providing classroom dominance, addressing different intelligence areas, concretizing abstract concepts, and facilitating learning by doing (Ateş, 2010; Güler & Bilici 2016; Doğru & Aydın, 2018).

There are also some limitations and problems in the use of technological tools and materials, the benefits and contributions of which are mentioned. In this context, especially teachers' lack of technological knowledge (or competence), insufficient infrastructure of schools (Ateş, 2010; Güler & Bilici, 2016; Doğru & Aydın, 2018), technical errors related to the system as well as misuse of technology (Çetinkaya & Keser, 2014) some problems come to the fore. In addition to these, the fact that teachers do not use technology sufficiently and effectively due to various reasons related to or independent of these problems (Akbaşı, Taşkaya, Meydan & Şahin, 2012; Kurtdede-Fidan, 2008; Şahin, 2015) is seen among the most important problems in this regard.

Technological tools and materials, which are an indispensable part of learning and teaching activities and whose features have been covered in detail so far, have been discussed in various aspects in the literature. When we look at the studies in the field of social studies (İneç & Akpınar, 2017; Özel, 2012; Yaylak, 2019; Yılmaz & Ayaydın, 2015), which are within the scope of this study, it is seen that the necessity and importance of using technological tools are primarily emphasized. In addition, in other studies, the use of technological tools and materials in social studies courses; It facilitates learning by embodying abstract concepts, helps understanding by providing the opportunity to visually and audibly present the subject, positively affects interest, attention and motivation, and provides active participation in the lesson (Bulut & Koçoğlu, 2012; Dere, 2019; İneç, 2017; Kaya & Aydın, 2011; Lin et al., 2012; Şahin & Taşyürek, 2014). In addition to these, various problems arising from teachers, schools and technological opportunities were noted in related studies (Bulut & Koçoğlu, 2012; Çoban & İleri, 2013; Özel, 2012; Ulusoy & Gülüm, 2009).

When the studies in the literature are examined; It is seen that the focus is on technology integration, the contributions of technology use in lessons, and various problems encountered. After evaluating these studies, this research was designed to reflect the current situation in the use of technology and materials in social studies courses and to contribute to current discussions in social studies teaching. With this in mind, in this research, it is aimed to examine the current situation in the use of technological tools and materials in social studies lessons in depth with the observations and experiences of social studies teachers. For this purpose, answers to the following questions were sought in the study:

1. How do social studies teachers follow technological developments?
2. What are the channels through which social studies teachers follow technological developments?
3. What are the uses of technological materials used in social studies lessons?
4. What are the benefits to teachers and students of using technological materials in social studies lessons?
5. What are the problems encountered when using technological materials in social studies lessons?
6. Do social studies teachers design the materials they use themselves?

II. METHOD

In this research, a case study design was used to deal with the current situation in social studies lessons in terms of technological material design and use in depth with the observations and experiences of social studies teachers. Case studies often examine programs, events, people, processes, institutions, social groups, and other contemporary phenomena, although sometimes they focus on a representative of a group (for example, a female principal) (Hancock & Algozzine, 2017).

A. Working Group

The study group of the research consists of 15 social studies teachers (9 male and 6 female) working in secondary schools in Reyhanlı district of Hatay province in the 2022-2023 academic year and voluntarily accepting to interview. Purposive sampling method (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz & Demirel, 2018) was used in order to reflect the current situation on

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technology material design and use in social studies lessons in the light of different perspectives. Demographic characteristics of the teachers participating in the study are given in Table 1:

Table 1. Demographic Characteristics of Participating Teachers

Variable	Category	f
Gender	Bay	9
	Behind	6
Age range	between 25-35	5
	between 36-45	8
	between 46-55	2
Operation time	1-10 years	6
	11-20 years	7
	21-30 years	3

As can be seen in Table 1, participants with different genders, age ranges and working durations took part in the study. In addition, in accordance with the research ethics, codes such as T1, T2, T3... were used instead of the real names of the teachers.

B. Data Collection Tools

A semi-structured interview form, which was prepared by the researcher and reviewed by two field experts, was prepared to get the opinions of the teachers and was used in the interviews with the social studies teachers. Semi-structured interviews are conducted to delve deeper into and fully understand a topic. A guide (question list) is prepared containing the issues to be addressed in these interviews. The prepared guide ensures that the interview proceeds without going out of scope. Despite this, the researcher can ask follow-up questions according to the research topic (Harrell & Bradley, 2009). The interview form (guide), which was prepared taking into account the mentioned features, was created in accordance with the five basic research questions that were sought to be answered in the study.

C. Collection of Data

Social studies teachers working in public secondary schools in Reyhanlı district of Hatay province were contacted to collect the data. Then, suitable times for the interview were determined, the purpose of the study was explained to the teachers and it was stated that a voice recording would be taken during the interview. Face-to-face interviews were conducted with the teachers who accepted the interview and were recorded with a voice recorder. Interview recordings were transferred to MS Word one-to-one.

D. Analysis of Data

Content analysis method was used in the evaluation of the data obtained from the interviews with the teachers. Similar data gathered around certain concepts and themes in content analysis are organized in an understandable way (Akbulut, 2012). The data evaluated by content analysis were collected and interpreted under five themes in line with the research questions.

III. RESULTS

The details of the findings obtained as a result of the analysis of the data obtained from the interviews with the social studies teachers are presented below in order.

A. Social studies teachers' status of following technological developments

Within the scope of the first research question, the status of social studies teachers' following technological developments was examined and evolved in Table 2.

Table 2. Status of Social Studies Teachers to Follow Technological Developments

Variable	Category	f
Following Status	Closely	8
	whenever possible	5
	I am following	2

As presented in Table 2, the majority of the participants (8) follow technological developments closely. In addition, other teachers gave the answers as (5) and I follow (2) whenever possible. T8, one of the participating teachers, explained the reason

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for following technological developments as follows: I follow technological developments as much as possible due to both my professional development and the requirements of the age we live in." In addition to T8, who sees keeping up with technology as one of the requirements of professional development, T5, who thinks that teachers should keep up with innovations, conveyed the following on this subject: I'm following closely. Because in the age of information and technology, the teacher needs to constantly improve himself." T2, who evaluated the subject in a different way, said, "Technology is an indispensable phenomenon, so I follow it closely. When not used in classrooms, students quickly get bored with the lesson. Technology has to be used in order to follow the changes, see the differences and ensure permanence. "As it can be understood from the quote, T2 sees it as a need to follow technology closely in order to both make the social studies course effective and attract students' attention. In addition to these, T15, "The contribution of technology to students' better understanding of the social studies course.," T7 He emphasized that "teachers should follow technology closely in order to stay up to date".

B. Channels where osyal information teachers follow technological developments

In the second research question, the channels through which social studies teachers follow the developments related to technology were examined and given in Table 3.

Table 3. Channels Social Studies Teachers Follow Technological Developments

Variable	Category	f
Social networks	Facebook, Twitter, Instagram, You Tube, WhatsApp	9
Websites	Technology and education sites (EBA, ÖBA, MEBBİS)	4
Other	social studies org	1

In Table 3, it is seen that social studies teachers follow technological developments mostly through social networks (Facebook, Twitter, You Tube Instagram, WhatsApp). In addition, teachers use technology sites to be informed about technological developments and various internet sites and Facebook groups established by social studies teachers to share. As a matter of fact, T1 gave the following details about the groups of social studies teachers he followed in order to be informed about technological developments and to share information: I follow them on social media, for example, through groups on Facebook. "Similarly, T3 stated that "I use the sites recommended by the Ministry (EBA, ÖBA, MEBBİS) and You Tube", while T15 stated that he uses other sites on the internet (Social information org).

C. Intended Use of Technological Materials of Social Information Teachers

In the third research question, the tools and materials used by the participants in their lessons and for what purposes they were used were examined and the teachers' usage purposes are given in Table 4.

Table 4. Purposes of Use of Technological Tools and Materials

Technological Product	Purpose of usage	f
Smart board	Attract attention	11
	Making learning easier	9
	Giving an example	8
	Making 3D trips	5
	Watching videos and movies	3
Telephone	For evidential purposes	7
	Internet access	5
	Communication with parents	3
	Photographing events	3
Computer	Preparing a presentation	2
e-book	Keeping the focus	1
Augmented reality	Attract attention	1

Considering the findings in Table 4, social studies teachers mostly use technological tools and materials in their classes; attracting the attention and attention of students, ensuring their participation, increasing their motivation and thus long-term permanent it is seen that they are used to prepare the ground for learning. As a matter of fact, T9: "Our course consists of abstract concepts. I use the smart board, especially to embody some concepts." he said. The social studies course, which makes use of the information produced by social sciences, includes many different concepts. T14, who drew attention to the

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importance of technology in concretizing the concepts by referring to this feature of the social studies course, explained the purposes for which he used the Education Information Network (EBA) as follows: I use EBA to assign students homework, to follow up from there, to monitor how much homework is done on the basis of classes, to check, to send instant messages to students, to give instant tasks, to reach them quickly.” he said. As can be seen, T14 draws attention to the fact that the EBA application allows him to establish good communication with the students. T11, who made 3D space trips apart from the EBA application, explained how he used it as follows: We do 3D space trips for some subjects. For example, in the social studies class, we make virtual trips to the places where the Çanakkale wars took place. “As can be seen, T11 mentioned that places that require first-hand concrete data, but which cannot be visited in person for various reasons, can be introduced to students through virtual trips. Similarly, T5 explained the function of technological tools as follows. “No matter how much you talk about the sheriff of the Hagia Sophia mosque, it is not fully formed in the mind of the student. But when you reflect it in a technological tool or show it to the child with 3D shows, it has a much more impact and he understands it better. Then we create concept maps, they learn concepts better in line with concept maps on the smart board.” As seen in the excerpt, T5 reveals the role of 3D space trips in embodying and interpreting the Hagia Sophia Mosque in the eyes of the student and learning the concepts effectively.

The findings in this section show that teachers use EBA from technological materials intensively both in the classroom and outside the classroom, and they prefer technology to concretize information.

D. Benefits of the Use of Technological Tools and Materials in Social Studies Lessons for Teachers and Students

In the fourth research question, the benefits of using technological tools and materials to teachers and students are discussed in two dimensions. In the first dimension, the benefits of using technological tools and materials for teachers were examined and given in Table 5.

Table 5. Benefits of Using Technological Materials for Teachers

Benefits	f
Making teaching easier	7
Teaching targeted outcomes	5
Concretizing the subject	4
Saving time	3
Engaging the student	1
Mastering the subjects	1
Ability to use different applications	1
See and fix bugs	1
Maintaining class dominance	1

As given in the table, social studies teachers think that using technological materials in their lessons is most beneficial for facilitating teaching. T9 explained the benefits of using technological tools as follows: Social studies is a course related to all fields of social sciences. Therefore, the use of technological materials in the classroom provides a great advantage. It helps us to convey the subject to the student in a shorter time. Thus, we both save time and help to understand the subject better.” Like T9, T12, who emphasized the issue of saving time, said: “The most important benefit for me is that it allows me to do my work more practically and faster. “He pointed out how technology made his job easier. Unlike both teachers, T1 explained how classroom dominance was increased with technology as follows: It increases the teacher's authority in the lesson. We can attract the attention of the students more. “Apart from these, T7 is self-conscious about using technological materials. “It gives the opportunity to learn by doing and to correct mistakes “also emphasized.

In the second dimension, the benefits of using technological materials for students were examined and given in Table 6.

Table 6. Benefits of Using Technological Materials for Students

Benefits	f
Ensuring permanent learning	11
Increasing motivation	5
Ensuring class participation	4
learning by doing	3

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Increasing course success	3
Appealing to different senses	2
Ensuring readiness	1
endearing the lesson	1

According to Table 6, the most important benefit of technological materials for students is that they provide permanent learning of information. T13 expressed the role of technology in this issue with the following words: Students are more interested in a subject they learn with classical methods, by using material, that is, by seeing or hearing it, because they use more sense organs, they understand it better because their interest increases, they are more successful because they understand better, and they are more motivated to lessons." T13 draws attention to the fact that technological materials increase the interest and motivation of students by appealing to more than one sense organ. In addition, T4 mentioned the benefits of technological tools and materials in attracting attention and motivation and noted the following: It grabs the attention of the students first. In other words, monotonous lectures or lectures from textbooks do not attract the attention of the student enough. However, when students' interest in the lesson increases with both visual and auditory tools, their success and motivation are also affected. I think this is the contribution of technological materials to students". As can be seen, T4 emphasized that using only traditional methods in the lesson did not attract the attention of the students, and that the lessons should be supported visually and audibly with technological tools and materials. Along with these, T11, "embodying the subjects of using technological materials", T1 "learning by doing", T5 "love the lesson" and T3 "Making the lesson efficient" highlighted its benefits.

E. Problems Encountered in Using Technological Material

In the fifth research question, the problems arising from school, family and students in the process of using technological materials were discussed and presented in Table 7.

Table 7. Problems Encountered in Using Technological Materials

Technological Product	Purpose of usage	f
School	System Problems (Virus etc.)	13
	Infrastructure Deficiencies	10
	Filtering the Ministry of National Education Network	7
	Power Outages	3
	Not following new technologies	2
	Unprotected Sites	1
	careless use	1
Family	No computer or internet at home	9
	Inability to involve parents in the process	5
	Internet and computer ban	1
Student	Use for different purposes	4

As discussed in detail in Table 7, social studies teachers emphasized various problems arising from school, family and students while using technological materials. Emphasizing one of the school-related problems, T8 explained the following: "Smartboards can be infected by many people, because they are used in different lessons and carelessly. T15, "Viruses transmitted from USB Flash drives adversely affect smart boards and therefore the use of technology in the classroom. "In a word, it draws attention to this situation. In addition, T13 drew attention to the internet connection, which is a problem for all schools, and said: "Having a good internet infrastructure while using technological materials, therefore internet should work reliably and properly. "Referring to the problems caused by the family regarding the use of technology, apart from school-related problems such as viruses and internet connection, T8 conveyed the experiences as follows: "They can't trust it because they think they're wasting their time on the internet. In order to prevent this, we first informed the parents". As it is seen, the fact that families prevent them from using technology because they do not trust their own children prevents students from benefiting from technological tools sufficiently. In addition, T2 talked about a problem that is affected by the economic conditions of families as follows: "Unfortunately, not all of my students have computers and internet at home, so sometimes we cannot do the same activity. T2 "As emphasized, students who do not have internet and computers at home have difficulty in accessing all the studies. In

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addition, some of the families have to make limitations because they have the internet and a computer and use technology incorrectly. Apart from these, T3 explained the problems arising from the parents in the use of EBA regarding home lessons as follows: "We are experiencing great difficulties because parents make some restrictions because their parents cannot be fully involved in this process, and because students use the phone to access games and social networking sites." In addition to all these problems mentioned above; They mentioned the lack of infrastructure and internet access restrictions during the use of technological materials by teachers. When the problems mentioned as a whole are evaluated, it is seen that all responsibility holders do not fulfil their responsibilities adequately during the teaching process.

In the sixth research question, the issue of whether the teachers design technological materials was discussed and presented in Table 8.

Table 8. Views on Material Design

Do you design materials related to your course?	f
Yes	1
Partially	4
No	10

As discussed in detail in Table 8, social studies teachers expressed their thoughts on technological material design. In terms of material design, the majority of the teachers stated that they use ready-made materials, and some teachers partially design materials, but there is hardly anyone who teaches the lesson with the material they designed. Regarding this situation, T9 "I cannot design the necessary materials due to the lack of tools" while T2 said "Since designing materials is a costly business, I prefer ready-made materials instead of designing them." he said. Stating that he partially designed materials, T10 said, "When I cannot find materials suitable for the subject of the course or when the existing material is not suitable for the level of my students, I design materials suitable for the purpose of the course." he said. From all these explanations above; It is understood that teachers prefer to use ready-made materials, and teachers who partially design materials do not design materials unless they have to.

IV. CONCLUSIONDISCUSSION AND RECOMMENDATIONS

In this study, which examines the current situation in the use of technological tools and materials in social studies lessons in depth with the observations and experiences of social studies teachers, answers to five research questions were sought.

The results of the first research question showed that social studies teachers follow technological developments closely and have positive views on technology use. These results are in line with the findings of studies by Spaulding (2013). In related studies, it has been determined that teachers have positive views, attitudes and skills regarding the use of technology. In addition, Spaulding (2013) determined in his study that teachers with high technology skills have more positive perceptions and attitudes towards technology than teachers with low skills. Based on this study, it is possible to say that the knowledge of participant teachers about technology use skills is effective in their positive attitude towards technology.

The results of the second research question showed that the participating teachers mostly follow technology from social networks (Facebook, Twitter, Instagram, You Tube, WhatsApp), then from various technology and education sites. Social studies teacher groups established by teachers on Facebook and various internet sites (You Tube) are used effectively. In the context of this result, in the study of Avcı, Kula & Haşlamam (2019), which included teachers from various branches, it was seen that social media tools such as YouTube, forum and WhatsApp were the most used technologies among the technologies used by the participants in the technology integration process. These results are valuable in that they show that teachers follow technological developments more through social networks that social media tools have become an indispensable part of educational activities and that plans should be made for students to use these tools in a beneficial way (Yaylak & İnan, 2018).

In the third research question, the participant teachers' purposes of using technological materials were examined. The results obtained are the smart boards, which is the technological tool that teachers use most in their lessons; It shows that they prefer to attract the attention of the students and to ensure their participation in the lesson. For this, while teachers use videos and movies related to the subject, they make 3D space trips to places where it is not possible to take their students. Participating teachers think that these activities made through the smart board contribute to the students' learning of information permanently. When the literature is examined in the context of these results, Yılmaz & Naci (2017), in their study with participants from various branches, revealed that teachers use smart boards to reflect teaching materials, use them in the lesson, show them to students and make various applications. In addition, in the researches conducted by Kaya & Aydın (2011)

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and Aykat (2017), the use of smart boards; It has been determined that it is effective in attracting students' interest and attention, increasing their motivation and ensuring their participation. Çoklar & Tercan (2014) stated that it provides permanent learning by facilitating teaching have emphasized."

The results of the fourth research question and the benefits of using technological materials in social studies lessons for teachers and students were examined. From the teacher aspect, the use of technological materials facilitates teachers' work in teaching activities by concretizing the subject and saving time. From the student perspective, the use of technology; It provides a basis for the students' knowledge to be permanent, their motivation to increase, their active participation in the lessons and their learning by doing. This result is in line with the results presented in many studies in the literature. In this context, in some studies (Akgür, Uzunöz & Meydan, 2019; Brandström, 2011; Demir, 2015; Erdem, Uzal & Saka, 2018; İneç, 2017), the use of technological materials in school; It has been pointed out that it helps to attract the attention of the students, concretize the subjects and increase their motivation, thus contributing to the permanent learning of the students, saving time and facilitating the teacher's work. Apart from these results, Preston, Wiebe, Gabriel, McAuley, Campbell & MacDonald (2015) found that the use of technology enables active participation of students and teachers to be more productive as it increases learning motivation. These results reveal the importance of using technological materials in social studies courses.

The results related to the fifth research question showed that teachers mostly encounter problems arising from system (connection, not opening keys, virus, neglect, updating, etc.) and inadequacy of infrastructure while using technological materials. After computers and smart boards became widespread in schools in Turkey, there are many studies examining the problems that arise due to the increase in the use of technological materials in the classrooms. Karakus & Karakus, 2017); Riasati, Allahyar & Tan, 2012; Keleş, Öksüz & Bahçekapılı, 2013; Güler & Bilici 2016; Adıgüzel, 2010; Riasati et al., in their 2012 studies; during teachers' use of technology; School-related problems such as virus infection on the smart board, disruption of touch, encountering problems with accessing the internet, key lock, activation, screen shifting, infrastructure deficiencies in schools, lack of knowledge and skills of teachers, and negative attitudes of students and teachers were emphasized.

On the other hand, other problems encountered during the use of technological materials in the literature include the misuse of technology, its use for personal purposes, its use for purposes other than education, and it shows that both students and teachers are not trained as good technology and media literate (Açıklın, 2014; Açıklın & Duru, 2005; Avcı et al., 2019; Çetinkaya & Keser, 2014; Keleş et al., 2013; Preston et al., 2015; Yılmaz & Naci, 2017).

The results show that the use of technological materials makes many important contributions to social studies courses. However, the effective use of computer technologies and technological materials, which have the potential to support the principles of constructivist pedagogy in social studies lessons, and their contribution to teaching and students, depends entirely on the quality of the instructional design created by the teacher. For this reason, it is important to develop the knowledge and skills of social studies teachers about technology and to solve the problems they encounter.

The results for the sixth research question showed that teachers mostly used ready-made materials in material design. Although the 21st century is characterized as the age of technology, it would not be wrong to say that the best teaching is teachers, the best materials are books, and the best transmission tool is language. It is thought that teachers and textbooks will be among the important course resources for a long time in the ongoing processes (Çelikten, Şanal, & Yeni, 2005). However By better understanding the relationship between teachers' learning and design, new and original designs suitable for different learning styles materials should be designed. Because; effectiveness of education and training activities, originality of teaching materials, student level and is directly proportional to its suitability for needs. By designing innovative teaching materials, teachers It is one of the basic elements of the changing understanding of education and teaching programs.

In this context, some suggestions can be offered to school administrators, teachers and academicians:

1. In future studies, different research designs and different number of participants can be used.
2. Experimental studies can be carried out to determine the level of use of the materials designed by the teachers.
3. Trainings on material design can be given to teachers.
4. Connections can be established between social studies courses and different courses on the use of technological materials.
5. Action researches can be conducted to identify and solve problems in the use and design of technological materials.

REFERENCES

- 1) Açıklın, M. 2014 "How Turkish middle school students use the internet to study social studies." *Canadian Social Studies*, 47(1), 1-17.
- 2) Açıklın, M., & Duru, E. 2005 "The use of computer technologies in the social studies classroom." *Turkish Online Journal of Educational Technology-TOJET*, 4(2), 18-26.
- 3) Adıgüzel, A. 2010 "İlköğretim okullarında öğretim teknolojilerinin durumu ve sınıf öğretmenlerinin bu teknolojileri

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- kullanma düzeyleri." Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi, 15, 1-17.
- 4) Akbaşı, S., Taşkaya, S. M., Meydan, A., & Şahin, M. 2012 "Teachers and computer technology: Supervisors' views." *International Journal of Research in Social Sciences*, 2(2), 113-124
 - 5) Akbulut, Y. (2012). Veri çözümlene teknikleri. Ali Şimşek, (ed). *Sosyal Bilimlerde Araştırma Yöntemleri* (ss. 162-195). Eskişehir: Anadolu Üniversitesi Açıköğretim Yayınları.
 - 6) Akgün, M., & Koru-Yücekaya, G. 2015 "Akıllı tahta kullanımına yönelik öğrenci tutumu ve öğretmen görüşlerinin incelenmesi (Ankara ili örneği)." *E-Journal of New World Sciences Academy (NWSA)*, 10(3), 1-11.
 - 7) Akgür, M. Ş., Uzunöz, A., & Meydan, A. 2019 "Coğrafya öğretiminde interaktif ders sunumu kullanımı." *Uluslararası Sosyal Bilimler Eğitimi Dergisi*, 5(1), 47-56.
 - 8) Ateş, M. 2010 "Ortaöğretim coğrafya derslerinde akıllı tahta kullanımı." *Marmara Coğrafya Dergisi*, 22, 409-427.
 - 9) Avcı, Ü., Kula, A., & Haşlamam, T. 2019 "Öğretmenlerin öğrenme-öğretme sürecine entegre etmek istedikleri teknolojilere ilişkin görüşleri." *Acta Infologica*, 3(1), 13-21.
 - 10) Aydemir, M., Küçük, S., & Karaman, S. 2012 "Uzaktan eğitimde tablet bilgisayar kullanımına yönelik öğrenci görüşlerinin incelenmesi." *Eğitim ve Öğretim Araştırmaları Dergisi, Journal of Research in Education and Teaching*, 1(4), 153-159.
 - 11) Aykat, Ş. (2017). Mesleki Lise Öğretmenlerinin, Öğrencilerinin ve İdarecilerinin Hizmetiçi Eğitim Öncesi İle Sonrası Etkileşimli Tahtaya İlişkin Görüşlerinin İncelenmesi, Yayınlanmamış yüksek lisans tezi, Van Yüzüncü Yıl Üniversitesi, Eğitim Bilimleri Enstitüsü, Van.
 - 12) Berson, M. J., & Balyta, P. 2004 "Technological thinking and practice in the social studies: transcending the tumultuous adolescence of reform." *Journal of Computing in Teacher Education*, 20(4), 141-150.
 - 13) Brandström, C. (2011). Using the internet in education-strengths and weaknesses. Unpublished graduate dissertation, Hogskolan, Gavle. Retrieved from <http://www.diva-portal.org/smash/get/diva2>.
 - 14) Bulut, İ., & Koçoğlu, E. 2012 "Sosyal bilgiler öğretmenlerinin akıllı tahta kullanımına ilişkin görüşleri (Diyarbakır ili örneği)." *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 19, 242-258.
 - 15) Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. 2018 *Eğitimde Bilimsel Araştırma Yöntemleri* (25. Baskı). Ankara: Pegem Akademi.
 - 16) Çalışkan, E., Önal, N., & Yazıcı, K. 2016 "Öğretim etkinliklerinde sanal müzelerin kullanımına ilişkin sosyal bilgiler öğretmen adayları ne düşünüyor." *Turkish Studies*, 11 (3), 689-706.
 - 17) Çelikten, M: Şanal, M. Yeni, Y. 2005 "Öğretmenlik mesleği ve özellikleri." *Erciyes Üniversitesi Sosyal Bilimler Fakültesi Enstitüsü Dergisi*, 2, (19), 207-237.
 - 18) Çetinkaya, L., & Keser, H. 2014 "Öğretmen ve öğrencilerin tablet bilgisayar kullanımında yaşadıkları sorunlar ve çözüm önerileri." *Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü Dergisi*, 4 (1), 13-14.
 - 19) Çoban, A., & İleri, T. 2013 "Sosyal bilgiler öğretmenlerinin öğretim teknolojileri ve materyalleri kullanma düzeyleri ve kullanamama sebepleri." *Amasya Üniversitesi Eğitim Fakültesi Dergisi* 2(1), 194-213.
 - 20) Çoklar, A. N., & Tercan, İ. 2014 "Akıllı tahta kullanan öğretmenlerin akıllı tahta kullanımına yönelik görüşleri." *İlköğretim Online*, 13(1), 48-61.
 - 21) Demir, O. 2015 "Okul öncesi öğretmenlerin bilişim teknolojilerini kullanma durumları ve bunun öğretime etkisi (Nitel bir çalışma)." *Uluslararası Eğitim Bilimleri Dergisi*, 4, 466-479.
 - 22) Dere, İ. 2019 "Sosyal bilgiler öğretmen adaylarının öğretim materyali geliştirme ve kullanımı hakkındaki görüşleri." *Balıkesir Üniversitesi Sosyal Bilimler Dergisi*, 22(41), 89-112.
 - 23) Dere, İ., & Dinç, E. 2017 "Sosyal bilgiler derslerinden kalanlar: 1960'dan günümüze kadar sosyal bilgiler dersini alanların hatıraları." *Diyalektolog Ulusal Sosyal Bilimler Dergisi*, 16, 21-39.
 - 24) Doğru, E., & Aydın, F. 2018 "Coğrafya öğretmenlerinin teknolojik pedagojik alan bilgisi (TPAB) hakkındaki düşünceleri ve bunu kullanma durumları." *Eğitim Kuram ve Uygulama Araştırmaları Dergisi*, 4(2), 88-100.
 - 25) Duhaney, D. C. 2000 "Technology and the educational process: Transforming classroom activities." *International Journal of Instructional Media*, 27(1), 67-72.
 - 26) Erdem, A., Uzal, G., & Saka, M. 2018 "High school students' proficiency perceptions to the usage of technology products at physics lessons." *Turkish Online Journal of Educational Technology-TOJET*, 17(2), 55-67.
 - 27) Green, J. J. 2019 *The Effects of Today's Technology On Student Learning İn Higher Education*, Unpublished Doctoral Dissertation, Baker College, Michigan.
 - 28) Güler, Ç. & Bilici, S. 2016 "Ortaöğretim öğretmenlerinin TPAB düzeylerinin öğretim teknolojilerini kullanma durumlarına göre incelenmesi." *İlköğretim Online*, 15 (3) , 0-0 . DOI: 10.17051/io.2016.05210
 - 29) Hancock, D. R., & Algozzine, B. 2017 *Doing Case Study Research: A Practicalguide For Beginning Researchers* (3rd

Social Studies Teachers' Design and Use of Technological Materials

- Edition). New York: Teachers College Press.
- 30) Harrell, M.C. and Bradley, M.A. 2009 Data Collection Methods: Semi-Structured Interview and Focus Groups. RAND National Defense Research Institute, Santa Monica.
- 31) Heafner, T. 2004 "Using technology to motivate students to learn social studies." *Contemporary Issues in Technology and Teacher Education*, 4(1), 42-53.
- 32) İneç, Z. F. 2017 "Sosyal bilgiler dersinde geo-medya destekli otantik öğrenme ortamının öğrenmeye etkisi." Yayınlanmamış doktora tezi, Erzincan Üniversitesi, Erzincan.
- 33) İneç, Z. F., & Akpınar, E. 2017 "Sosyal bilgilerin otantik öğretiminde yeni yaklaşımlar." *Uluslararası Sosyal Alan Araştırmaları Dergisi*, 6(2), 46-65.
- 34) İnel, Y., & Çetin, T. 2017 "Sosyal bilgiler öğretiminde kullanılan bilgisayar temelli materyallerin 6. sınıf öğrencilerinin dikkat düzeylerine etkisinin elektroensefalografi cihazı aracılığıyla tespiti." *Journal of History Culture and Art Research*, 6(4), 831-848.
- 35) Karakuş, İ., & Karakuş, S. 2017 "Akıllı tahta kullanımına yönelik ortaöğretim öğretmenlerinin görüşlerinin incelenmesi." *Turkish Journal of Educational Studies*, 4(2), 1-37.
- 36) Kaya, B. 2008 "Sosyal bilgiler dersinde teknoloji kullanımı." *GÜ Gazi Eğitim Fakültesi Dergisi*, 28(3), 189-205.
- 37) Kaya, H., & Aydın, F. 2011 "Sosyal bilgiler dersindeki coğrafya konularının öğretiminde akıllı tahta uygulamalarına ilişkin öğrenci görüşleri." *Zeitschrift Für Die Welt Der Türken, Journal of World of Turks, ZfWT*, 3(1), 179-189.
- 38) Kaya, Z. 2006 *Öğretim Teknolojileri ve Materyal Geliştirme* (2. Baskı). Ankara: Pegem Akademi.
- 39) Kayabaşı, Y. 2005 "Sanal gerçeklik ve eğitim amaçlı kullanılması." *TOJET: The Turkish Online Journal of Educational Technology*, 4(3), 151-158.
- 40) Kazu, H., & Yeşilyurt, E. 2008. "Öğretmenlerin öğretim araç-gereçlerini kullanım amaçları." *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 18(2), 175-188.
- 41) Keleş, E., Öksüz, B. D., & Bahçekapılı, T. 2013 "Teknolojinin eğitimde kullanılmasına ilişkin öğretmen görüşleri: Fatih projesi örneği." *Gaziantep University Journal of Social Sciences*, 12(2), 353-366.
- 42) Koçoğlu, E., Akkuş, İ., & Özkan, U. 2018 Yeni bir öğrenme ortamı olarak artırılmış gerçeklik uygulamalarıyla sosyal bilgiler öğretimi. R. Sever, M. Aydın & E. Koçoğlu. (Ed.), *Alternatif Yaklaşımlarla Sosyal Bilgiler Eğitimi İçinde* (ss. 313-340). Ankara: Pegem Akademi.
- 43) Kuloğlu, A. 2019 "Öğretmen adaylarına göre öğretim teknolojileri ve materyal tasarım dersi." *Turkish Journal of Educational Studies*, 6(1), 33-44.
- 44) Kurtdede-Fidan, N. 2008 "İlköğretimde araç gereç kullanımına ilişkin öğretmen görüşleri." *Kuramsal Eğitimbilim Dergisi*, 1(1), 48-61.
- 45) Lin, C. P., Wong, L. H., & Shao, Y. J. 2012 "Comparison of 1: 1 and 1: m CSCL environment for collaborative concept mapping." *Journal of Computer Assisted Learning*, 28(2), 99-113.
- 46) Manfra, M. M., & Hammond, T. C. 2008 "Teachers' instructional choices with student-created digital documentaries: Case studies". *Journal of Research on technology in Education*, 41 (2), 223-245.
- 47) Nalçacı, A., & Ercoşkun, M. H. 2005 İlköğretim sosyal bilgiler derslerinde kullanılan materyaller. *Kazım Karabekir Eğitim Fakültesi Dergisi*, 11, 141-154.
- 48) Özel, E. 2012 "Sosyal bilgiler öğretmenlerinin öğretim teknolojilerine yönelik tutum ve davranışları." *Doğu Coğrafya Dergisi* 19(31), 129-144.
- 49) Öztürk, E., & Can, İ. 2010 "İlköğretim 5. sınıf öğrencilerinin elektronik kitap okumaya ilişkin görüşleri." *Türkiye Sosyal Araştırmalar Dergisi*, 171 (171), 137-153.
- 50) Preston, J. P., Wiebe, S., Gabriel, M., McAuley, A., Campbell, B., & MacDonald, R. 2015 "Benefits and challenges of technology in high schools: A voice from educational leaders with a Freire echo." *Interchange*, 46 (2), 169-185.
- 51) Reinders, H. ve White, C. 2011 "Learner autonomy and new learning environments." *Language Learning and Technology*, 15(3), 1-3.
- 52) Riasati, M. J., Allahyar, N., & Tan, K. E. 2012 "Technology in language education: Benefits and barriers." *Journal of Education and Practice*, 3(5), 25-30.
- 53) Soydan, E. 2012 "E-kitap teknolojisi ve basılı kitabın geleceği." *Batman Üniversitesi Yaşam Bilimleri Dergisi*, 1 (1), 389-399.
- 54) Spaulding, M. 2013 "Preservice and in-service teachers' perceptions toward technology benefits and integration." *Journal of Learning in Higher Education*, 9(1), 67-78.
- 55) Şahin, İ. F., & Taşyürek, Z. 2014 "Sosyal bilgiler öğretmenlerinin derslerde kullanmış oldukları araç-gereçler hakkındaki

Social Studies Teachers' Design and Use of Technological Materials

- görüşleri (Erzurum örneği)." *Doğu Coğrafya Dergisi*, 36, 29-42.
- 56) Şahin, M. 2015 "Öğretim materyallerinin öğrenme-öğretme sürecindeki işlevine ilişkin öğretmen görüşlerinin analizi." *Kastamonu Eğitim Dergisi*, 23(3), 995-1012.
- 57) Toroğlu, A., & İçingür, Y. 2007 "Üç boyutlu bir animasyon sisteminin tasarımı ve teknoloji eğitiminde kullanılması." *Politeknik Dergisi*, 10 (3), 247-252.
- 58) Ulusoy, K., & Gülüm, K. 2009 "Sosyal bilgiler dersinde tarih ve coğrafya konuları işlenirken öğretmenlerin materyal kullanma durumları." *Journal of Kirsehir Education Faculty*, 10(2), 85-99.
- 59) Yaylak, E. 2019 "The attitudes and opinions of prospective teachers towards the use of technology in education." *IJETSAR (International Journal of Education Technology and Scientific Researches)*, 4(9), 149-175.
- 60) Yaylak, E., & İnan, S. 2018 "Sosyal bilgiler öğretmenlerinin eğitimde sosyal medyanın kullanılmasına yönelik görüşlerinin incelenmesi." *Türkiye Bilimsel Araştırmalar Dergisi*, 3(1), 1-32.
- 61) Yeşiltaş, E. 2014 Sosyal bilgiler öğretiminde öğretim materyalleri ve teknolojileri. M. Safran. (Ed.), *Sosyal Bilgiler Öğretimi İçinde* (ss. 225-241). Ankara: Pegem Akademi.
- 62) Yılmaz, K., & Ayaydın, Y. 2015 "Sosyal bilgiler öğretmenlerinin öğretim teknolojileri kullanımına ilişkin alt yapılarının ve yeterlilik algılarının incelenmesi: Nitel bir çalışma." *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 15(USBES Özel Sayısı I), 87-107.
- 63) Yılmaz, K., & Naci, S. 2017 "Eğitimde tablet bilgisayar ve akıllı tahta kullanımına ilişkin öğretmen görüşleri." *International Journal of Innovative Research in Education*, 4(1), 17-27.



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