Pre-service Teachers' Views on the Use of Digital Materials in Social Studies Courses

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Abstract

Despite the potential of technology to enhance the quality of the instructional process in social studies education, limitations in teacher competencies hinder the effective implementation of technology-supported practices. This situation necessitates an investigation into pre-service teachers' views regarding the use of digital materials. The purpose of this study is to determine pre-service teachers' views on the use of digital materials in social studies courses. The research was designed using the phenomenology pattern, one of the qualitative research methods. The study group consisted of a total of six senior students (3 female, 3 male) enrolled in the Social Studies Teacher Education Program at a faculty of education in a state university in Türkiye. A written opinion form was utilized as the data collection tool, and the data were obtained during the spring semester of the 2024–2025 academic year through the participants' written responses to these forms. The data were analyzed using the content analysis method. The results of the study revealed that pre-service teachers perceive the use of digital materials in social studies courses as a significant factor that enhances the effectiveness of the instructional process. According to the participants' views, digital materials are seen as tools that support the efficient and fluent conduct of lessons, align with the multidisciplinary nature of the course, and facilitate learning. Evaluations highlighting that the use of digital materials increases students' academic achievement, interest, and participation while supporting the permanence of learning came to the fore. Furthermore, it is believed that digital materials contribute to the professional development and technological competencies of pre-service teachers. Conversely, the fact that designing original digital materials is time-consuming was evaluated as a factor limiting the sustainability of digital material use. Consequently, it is suggested that teacher education programs should place more emphasis on digital material design and utilization, high-quality digital material repositories aligned with learning outcomes should be established, and regulations for strengthening the technological infrastructure should be implemented.

Keywords: Digital material, technology, social studies education, pre-service teacher.

Introduction

Technological developments, which have gained momentum worldwide since the early 2000s, have paved the way for the emergence of new applications and approaches in the field of education, as in all other sectors. In line with these developments, new perspectives on the use of technology in educational processes have evolved, bringing the necessity of re-evaluating teaching-learning processes to the fore (Ersoy & Çoklar, 2013). Along with advancing educational technologies, classrooms have transformed from traditional models into active and applied models where students learn by doing and experiencing. Computer and computer-based technologies have contributed to the diversification of instructional materials and teaching activities (Yeşiltaş, 2016). The use of technology in education has increased interaction and cooperation in the teaching-learning process by offering enriched learning environments and has enabled the more widespread use of contemporary student-centered educational approaches thanks to their collaborative structures (Aşıksoy, 2018; Bower, Hedberg & Kuswara, 2010). The changes and developments in information and communication technologies in today's world have necessitated the reshaping of 21st-century teacher and student profiles. In this process, digital competence and digital literacy have emerged as prominent core elements among 21st-century teacher and student competencies (Orhan Göksün & Aşkım Kurt, 2018).

Educational environments are evolving within a continuous process of change and transformation extending from the past to the present and into the future. In this process, it is observed that teachers and students are the core elements that determine the quality of educational environments and are most affected by this change. Erden (1998), Jonassen and Reeves (1996), and Means (1994) associate the quality of educational environments with teacher and student characteristics, highlighting the decisive role of teachers in restructuring educational processes. As the prominence of information and communication technologies in educational environments steadily increases, the effective and purposeful use of these technologies by teachers and students has become a fundamental necessity for increasing productivity in education (Dereli, 2017). This situation necessitates the systematic and conscious utilization of technology to achieve both social and individual goals in education. Considering the importance of information and communication technologies in today's educational settings, it can be stated that the effective reflection of these technologies on the instructional process is possible through qualified teachers. Mishra and Koehler (2006) stated that for technology to be used effectively in the classroom environment, it is not sufficient for teachers to have knowledge about educational technologies; they must also know how to use these technologies by integrating them with pedagogical approaches and content knowledge. Today, rapid developments in technology have made the use of technology mandatory for students as well, moving beyond being limited only to faculty members and teachers. In this regard, the necessity of training teachers who will teach students at the primary and middle school levels to possess the aforementioned technological equipment and skills comes to the fore (Yılmazer, 2024).

The social studies course is regarded as a discipline highly conducive to utilizing digital technologies due to its interdisciplinary nature (Demirezen & Keleş, 2020). This structure facilitates bringing content from various disciplines into the classroom environment and enables the effective use of instructional technologies in teaching numerous concrete and abstract concepts within the scope of the course (Dere & Ateş, 2020). Furthermore, Curry and Cherner (2016) expressed the necessity of incorporating technology into social studies education as a

requirement of the modern era. In this regard, it is of great importance for teachers to comprehend how to use rapidly developing technological tools and applications in the instructional process in the most appropriate manner for the objectives and learning outcomes of the course (Kaya & Yazıcı, 2019). The ability of technology use to make a meaningful contribution to the teaching process depends on its integration with pedagogical approaches and content knowledge. Indeed, Mishra and Koehler (2006) stated that it is not sufficient for teachers to possess only technological knowledge; rather, an integrated use of appropriate pedagogical understanding and specific content knowledge is required for the effective realization of technology-supported instruction. Erdoğan and Şerefli (2021) emphasize that while the social studies course has a structure suitable for the use of instructional technologies, the success of this process is closely related to the professional equipment of social studies teachers and their beliefs regarding their ability to implement these practices.

While the use of technology in social studies education has the potential to enhance the quality of the instructional process, the fact that teacher competencies cannot always develop in parallel with the rapid pace of technological advancements brings about the problem of teachers being unable to effectively utilize technology-supported educational environments (Çelik, 2020a). This situation is considered a significant factor limiting the effective use of technology in social studies education. According to Braun (1999), teachers' knowledge, skills, and implementation competencies play a decisive role in reflecting technology into the instructional process in a meaningful and high-quality manner within social studies courses. Despite the rapid developments in educational technologies today, teachers—as the fundamental element providing meaning, effectiveness, and functionality to the educational process—assume a decisive responsibility in determining the quality of educational services and the success of the educational system (Solak, 2009; Ursavaş, Şahin & McIlroy, 2014; Usta & Korkmaz, 2010). According to Şahin and Arslan Namlı (2018), the effective use of technology in educational processes depends on teachers' adoption of technology and their ability to use it for pedagogical purposes. The widespread use of smart boards and the internet in educational settings increases the need for high-quality digital materials suitable for these tools; this necessitates that pre-service teachers, in particular, be trained with the skills to design and use digital materials (Çelik, 2020b). In this context, determining teachers' views and experiences regarding technology-supported instruction gains importance. The fact that the pre-service teachers whose views were sought in this study have completed the "Teaching Practice I and II" courses, taken their content and professional knowledge courses, and reached the graduation stage allows for their views on the use of digital materials to be evaluated based on both theoretical knowledge and practical experience. The purpose of this study is to determine pre-service teachers' views on the use of digital materials in social studies courses.

Methodology

Research Design

This study was designed using the phenomenology pattern, one of the qualitative research methods. Qualitative research aims to reveal individuals' perceptions and experiences within their natural context in a realistic and holistic manner (Yıldırım & Şimşek, 2018). In this study, the phenomenology pattern was preferred as it allows for an in-depth examination of the meanings that the pre-service teachers in the study group attribute to their thoughts and the ways they express these thoughts. Phenomenology is defined as a research design that aims to explore the structures formed in individuals' minds and the common meanings attributed to

these experiences, based on their experiences related to a specific phenomenon (Christensen et al., 2014; Creswell, 2021).

Study Group

The study group consisted of a total of six senior pre-service teachers (3 female, 3 male) enrolled in the Social Studies Teacher Education Program at a faculty of education in a state university in Türkiye. In determining the study group, the criterion sampling technique, one of the purposeful sampling methods, was employed. Purposeful sampling is based on the selection of information-rich cases that are expected to provide depth to the research (Maxwell, 2018). This approach enables the researcher to obtain more comprehensive and detailed data regarding the phenomenon (Patton, 2018). Criterion sampling, on the other hand, is based on the inclusion of all cases that meet the criteria determined prior to the study (Yıldırım & Şimşek, 2018). In this study, the criteria for including pre-service teachers in the study group were defined as currently taking the "Material Design in Social Studies Education" and "Teaching Practice II" courses. In accordance with ethical principles, the real names of the pre-service teachers in the study group were not included; instead, participants were represented by pseudonyms of their own choosing.

Data Collection Tool

In the research, a written opinion form developed by the researchers was used as the data collection tool. The primary purpose of using written documents as data collection tools is to reveal the meanings that participants attribute to specific concepts or situations in a detailed manner (Bogdan & Biklen, 2007). In this regard, the written opinion form was preferred to enable the pre-service teachers in the study group to express their thoughts more comfortably and to explain their views on the use of digital materials in social studies courses in depth.

Data Collection and Analysis

The research data were obtained during the spring semester of the 2024–2025 academic year, between May 20, 2025, and May 25, 2025, through the completion of written opinion forms by the pre-service teachers in the study group. The data obtained within the scope of the study were analyzed using the content analysis method. According to Yıldırım and Şimşek (2018), content analysis refers to the process of examining data in detail, identifying similarities and differences, and transforming the data into a meaningful structure by creating codes, sub-themes, and themes. Accordingly, codes were generated based on the obtained data, themes were determined by considering the common characteristics of the codes, and the findings were structured.

To ensure reliability, the data analysis process was submitted for expert opinion; the codings performed by the researchers and the field expert were compared. The percentage of agreement between the coders was calculated using Miles and Huberman's (1994) formula, Reliability = Number of Agreements / (Total Number of Agreements + Disagreements) × 100, and was determined to be .95. According to Miles and Huberman (1994), a reliability coefficient above .70 is considered sufficient for the research to be deemed reliable. In the data analysis, the sections where there were disagreements between the researchers and the field expert were re-evaluated, and a consensus was reached. In the final stage of the analysis, the data were presented in tables as codes and themes; direct quotations from the pre-service teachers' statements were included to support the analysis results. LeCompte and Goetz (1982) stated

that presenting the data directly with a descriptive approach is an important measure to increase internal reliability.

Findings

The views of pre-service teachers regarding the use of digital materials in social studies courses are presented in Table 1.

Table 1. Pre-service teachers' views on the use of digital materials in social studies courses

Themes	Codes	f
Contributions to the Conduct of the Lesson	Making lessons more efficient through the use of digital materials	6
	Making lessons more enjoyable through the use of digital materials	6
	Making the lesson fluent and understandable	5
	Facilitating learning through visually enriched lessons with digital materials	4
	Supporting the multidisciplinary nature of the social studies course	2
	Making the instructional delivery easier and more productive	1
Effects on Students	Supporting students' academic achievement through digital activities	5
	The necessity of digital material use due to middle school students' interest in technology	4
	Attracting students' interest through digital materials	4
	Increasing students' engagement in the lesson	3
	Extending students' attention span through the use of digital materials	3
	Preventing students from getting bored during the lesson through the use of technology	2
	Supporting the feeling of liking the teacher through digital activities	1
Professional Gains for Pre-service Teachers	The necessity for teachers to continuously develop their digital material use skills	4
	Development of teachers' technological skills	3
	Digital materials enabling teachers to move away from traditional lecturing	2
	Teachers capable of preparing digital materials creating a more enjoyable learning environment	2
Limitations and Necessities Regarding Use	Living in the digital age necessitating the utilization of technology in social studies courses	2
	Digital materials reducing the cost and workload of the lesson	2
	Preparing digital materials being time-consuming for the teacher	2

As seen in Table 1, the views of pre-service teachers regarding the use of digital materials in social studies courses were evaluated through the themes of contributions to the conduct of the lesson, effects on students, professional gains for pre-service teachers, and limitations and necessities regarding use.

Under the theme of contributions to the conduct of the lesson, all pre-service teachers stated that the use of digital materials makes lessons more efficient and more enjoyable. Additionally, it was expressed that digital materials make the lesson more fluent and understandable, and that lessons visually enriched with these materials facilitate learning. Ahmet explained this situation with the following words: *"Since the social studies course is generally a lecture-based course, the digital material used is very helpful regarding the fluency and understandability of the lesson. ...Generally, if I need to make a comparison, I observed that the lessons I taught using digital materials at the internship school were more efficient and more enjoyable than the lessons based only on narration."* Furthermore, the pre-service teachers emphasized that digital materials support the multidisciplinary nature of the social studies course and make the teacher's lesson presentation easier and more productive. Stating

that the current era is a digital one, Esra expressed this situation by saying, *"We should utilize technology in the social studies course… Since the student will not get bored, they will both learn the social studies lesson and find it enjoyable. From the teacher's perspective, the teacher will not lecture in a traditionalist, boring way and, just like the students, will enjoy conducting the lesson."* Similarly, Ayşe drew attention to the multidisciplinary nature of the social studies course, stating, *"The social studies course, as a field, incorporates many disciplines; a teacher who can prepare digital materials as an alternative while teaching these subjects to our students will have prepared a more enjoyable learning environment for their students."* These findings demonstrate that pre-service teachers perceive digital materials as significant tools that enhance the quality of the instructional process and make the lesson more effective for both students and teachers.

When the theme of effects on students is examined, it is observed that pre-service teachers emphasize how digital activities support students' academic achievement. It was frequently stated by the pre-service teachers that middle school students' interest in technology necessitates the use of digital materials and that these materials attract students' attention. Furthermore, it was expressed that the use of digital materials increases students' engagement in the lesson, extends their attention span, and prevents them from getting bored during the lesson. Ayşe explained this situation with the following words: *"It attracts students' interest. Students' attention spans become longer. Students participate in the lesson more actively. It becomes easier for students to adapt to the lesson. So to speak, today's students are born into technology… I think that digital activities and games to be prepared in social studies courses will be more effective in supporting these children's academic achievement."* Similarly, Ferdi drew attention to the impact of digital materials on the permanence of learning, stating, *"When digital materials are used, learning becomes more effective and permanent because the child uses more sensory organs."* Hatice emphasized the effect of digital materials on student motivation and attitude toward the lesson, reporting: *"Children of the digital age can be productive in a lesson delivery where they are more actively involved… Digital stories and digital subject review games enable them to learn better and be more willing. Complex and abstract topics become more memorable through these methods."* Hatice also stated that lessons conducted with such activities are more enjoyable for students, and students who learn while having fun become more enthusiastic about the lesson and can even develop positive feelings toward the teacher. These findings reveal that digital materials support the learning process by increasing students' attention, participation, and motivation levels, making the social studies course more meaningful, permanent, and engaging for students.

Under the theme of professional gains for pre-service teachers, the participants emphasized that teachers must continuously develop their skills in using digital materials. Within this scope, the development of teachers' technological skills and the fact that the use of digital materials moves the teacher away from traditional lecturing and directs them toward more interactive instructional processes were among the significant gains. Mehmet explained this situation with the words: *"Teachers' use of digital materials contributes to the development of their technological skills."* The pre-service teachers also stated that using digital materials contributes to their adaptation to the requirements of the era by increasing their professional competence. Hatice expressed this view by saying: *"The benefit for the teacher is keeping up with the age. It enables them to reach a proficiency level that can meet the demands of the new generation of students in front of them… Lessons conducted with traditional methods without such applications would be boring and might not be efficient for both the teacher and the*

student." In addition, it was emphasized that digital materials allow teachers to create a more enjoyable and effective learning environment. Esra drew attention to this situation with the following statements: *"We should incorporate digital content into our lessons. Our students are individuals born in the age of technology; therefore, we can attract their interest with digital content.*" These findings demonstrate that the use of digital materials improves pre-service teachers' professional competencies, supports their technological skills, and makes instructional processes more effective.

In the theme of limitations and necessities regarding use, it is observed that pre-service teachers stated that living in the digital age necessitates the utilization of technology in social studies courses. Furthermore, while it was expressed that digital materials can reduce costs and the teacher's workload during the instructional process, it was also emphasized that the process of preparing digital materials can be time-consuming for teachers. Esra voiced this situation with the words: "From the teacher's perspective, although the preparation takes some time, I think it is a system that functions very easily during the learning process." Similarly, Hatice drew attention to the limitations of preparing digital materials, stating: "However, if the teacher is to design everything themselves for every lesson and not use ready-made designs, this situation can be time-consuming." These findings reveal that the use of digital materials is seen as an inevitable necessity in social studies courses; however, it also brings about certain limitations in the implementation process, particularly regarding time management.

Conclusion, Discussion, and Suggestions

In this study, which aimed to determine pre-service teachers' views on the use of digital materials in social studies courses, the participants' perspectives were evaluated through the themes of contributions to the conduct of the lesson, effects on students, professional gains for pre-service teachers, and limitations and necessities regarding use.

Within the scope of the contributions of digital materials to the conduct of the lesson, it was concluded that pre-service teachers regard the use of digital materials as a significant element that enhances the effectiveness of the instructional process in social studies courses. The pre-service teachers expressed that digital materials make lessons more efficient and enjoyable, render instruction more fluent and understandable, and facilitate learning through visually enriched lessons. Furthermore, it was stated that digital materials contribute to a more holistic handling of topics by supporting the multidisciplinary nature of the social studies course and making the teacher's lesson delivery easier and more productive. In parallel with these findings, Yılmazer (2024) reached the conclusion in their research that pre-service teachers evaluate the use of digital materials based on multidimensional contributions such as attracting attention to the lesson, saving time, making the lesson more enjoyable and effective, concretizing abstract topics, facilitating learning, and supporting the attainment of lesson objectives. Similarly, Yıldırım and Şimşek (2023) determined in their study that social studies teachers base the contributions of technology use on reasons such as concretizing the lesson, attracting students' interest, enriching the lesson visually, and ensuring students' active participation. Moreover, Dere and Ateş (2020) observed that social studies teachers stated they used technological tools and materials in their lessons to attract students' interest and attention, ensure participation, and increase motivation. In this regard, it can be stated that pre-service teachers see digital materials among the fundamental instructional tools that improve the quality of the lesson for both students and teachers, making the instructional process more effective and pleasant.

Within the scope of the effects of digital materials on students, it was concluded that pre-service teachers regard digital materials and activities as significant tools that support students' academic achievement, increase their interest in the lesson, and make the learning process more effective. The pre-service teachers expressed that the use of digital materials increases students' engagement in the lesson, extends their attention span, supports the permanence of learning, and prevents students from getting bored during the lesson. Additionally, it was concluded that digital materials provide a learning environment more suitable for the learning needs of students who grow up intertwined with technology, making the social studies course more enjoyable and meaningful, thereby strengthening student motivation and positive attitudes toward the lesson. This finding is consistent with the research of Utkugün, Yıldırım, and Şanlıoğlu (2022), which indicated that middle school students liked social studies lessons conducted with Web 2.0 tools, wanted these lessons to continue, and desired their teachers to use more Web 2.0 tools in class. This result demonstrates that the positive perceptions students gain from lessons conducted with digital materials and Web 2.0 tools can be reflected in the instructional process. In Nesterenko's (2023) study, it was revealed that technology in learning environments increases students' attention and concentration levels, accelerates the learning process, and contributes to the comprehension of information in a shorter time. Şahin and Arslan Namlı (2019) stated that technological tools and educational materials increase students' motivation toward the lesson, develop affective responses, keep interest alive, and provide general instructional advantages by offering learning opportunities based on individual differences. In the research by Kırımlı and Demirezen (2022), it was determined that Web 2.0 technologies used in social studies courses attract students' interest and attention, increase active participation, concretize topics, and make the lesson more enjoyable. Holcomb and Beal (2010) revealed that the use of Web 2.0 tools in social studies education increases students' levels of interest, curiosity, and creativity, while also having positive effects on academic achievement. In a study by Palaigeorgiou and Grammatikopoulou (2016), it was determined that Web 2.0-based learning activities place the student at the center of the learning process and strengthen the trust and interaction between the teacher and the student. In this regard, it can be stated that digital materials are among the fundamental instructional tools that support students' cognitive and affective engagement in social studies courses, making the learning process more effective and motivating.

Within the scope of the professional gains provided by digital materials to pre-service teachers, it was concluded that pre-service teachers regard the use of digital materials as a significant element supporting professional development. The pre-service teachers expressed that the use of digital materials improves teachers' technological skills and contributes to the adoption of more interactive and student-centered approaches by moving away from traditional lecturing in the instructional process. Furthermore, it was emphasized that digital materials enable teachers to adapt to the requirements of the era and create an instructional environment more suitable for the learning needs of new-generation students. In parallel with these findings, Yılmazer's (2024) research, in which pre-service teachers stated that digital materials offer opportunities for self-improvement, facilitate lecturing, provide economic advantages, and increase professional motivation, reveals that the use of digital materials provides multidimensional professional gains. This situation aligns with the findings of Vannatta and Nancy (2014), which show that teachers' individual learning efforts and willingness toward technology are reflected in classroom practices. Utkugün's (2023) research also shows that pre-service teachers produce colorful and enjoyable content such as puzzles, games, and digital

stories using Web 2.0 tools, and in this process, they gain self-confidence by learning new information and shaping their ideas. This suggests that the use of digital materials supports not only technical skills but also learning motivation and creativity in professional development. Additionally, in the study by Nelson and Hawk (2020), it was stated that pre-service teachers' acquisition of an understanding that technology contributes to the instructional process during their undergraduate education prevents them from seeing technology as a tool limited only to PowerPoint presentations, and this approach positively affects their professional development. In this regard, it can be stated that pre-service teachers see the use of digital materials as a significant area of gain that strengthens professional competencies and makes the instructional process more effective and engaging.

Within the scope of the limitations and necessities regarding the use of digital materials, it was concluded that pre-service teachers regard the use of digital materials as an inevitable necessity required by the era in social studies courses. However, the pre-service teachers expressed that while digital materials have the potential to reduce the teacher's workload and costs during the instructional process, the process can be time-consuming, especially when original materials are designed by the teacher. This situation reveals that the difficulties encountered in the use of digital materials depend not only on the implementation process but also on the level of teachers' adaptation to technological developments. Indeed, in Utkugün's (2023) research, it was determined that pre-service teachers experienced difficulties during the content production process due to reasons such as paid options of applications, difficulty of use, lack of computer and technological skills, and insufficient content production ability. According to Venkatesh, Morris, Davis, and Davis (2003), individuals' attitudes toward technology play a decisive role in the acceptance of technology and the formation of usage behaviors. Bolick (2017) emphasized that one of the fundamental challenges faced by social studies teachers is being unable to keep up with the rapid pace of technological developments; the fact that the speed of technological advancements is higher than the rate of technology adoption and use in educational environments causes some teachers to be unable to use technology in accordance with the expectations of the age. In this context, Riley and Stern (2014) stated that exposing teachers to multiple educational software programs during their pre-service education process would facilitate their ability to cope with the obstacles these software programs might create, and this process would contribute to the development of pre-service teachers' problem-solving skills. The role of technology in education is becoming increasingly vital with innovative methods that expand students' access and learning opportunities; therefore, the use of technology in education should not be perceived as an extra burden but rather as an enriching element of education (Karataş et al., 2015). In this regard, it was concluded that the use of digital materials offers significant opportunities in social studies education; however, for effective and sustainable implementation, factors such as time management, diversity of pre-service experience, and supportive conditions for teachers must be taken into account.

Based on the research results, the following suggestions can be made:

- The findings obtained in this study indicate that social studies pre-service teachers generally develop positive views regarding the use of digital materials. In this regard, it is considered beneficial to include more practice-based courses and activities in teacher education programs to support pre-service teachers' skills in designing and utilizing digital materials.

- ♣ Research findings highlight that the process of preparing digital materials is perceived as a time-consuming factor. In this context, it is thought that establishing high-quality digital material repositories that are aligned with learning outcomes and available for use by teachers and pre-service teachers could facilitate the implementation process and contribute to reducing teachers' workload.

- ♣ To effectively utilize digital materials in social studies courses, it is evaluated that strengthening the technological infrastructure in schools and expanding in-service training for teachers is essential. It can be stated that focusing these trainings not only on technical skills but also on the pedagogical dimension could contribute to a more functional integration of digital materials into the instructional process.

- ♣ The fact that this research was conducted with pre-service teachers can be considered a limitation in terms of the generalizability of the findings. In future research, conducting studies that include in-service teachers and utilizing quantitative or mixed-methods approaches could provide a more comprehensive perspective on the subject.

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