

Systematic Literature Review: Challenges Using Technology of Social Study Learning in Elementary School

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Keywords

Social Studies
Technology
Elementary School

Abstract

This study examines the effectiveness of using technology in social studies learning, focusing on its impact on student engagement, comprehension, and critical thinking skills. The review synthesizes findings from multiple peer-reviewed studies conducted over the past decade, assessing how various technological tools such as educational videos, virtual simulations, interactive maps, and online collaborative platforms enhance the learning experience. The research design is a systematic literature review (SLR). The stages of conducting a review consist of three major parts: planning, conducting, and reporting. Results indicate that technology, when properly integrated, improves student motivation, allows for deeper exploration of historical events and social concepts, and promotes interactive learning. However, challenges such as unequal access to technology, teacher readiness, and the need for appropriate pedagogical strategies are also highlighted. The review concludes by identifying best practices for educators and suggesting areas for further research, particularly in the context of diverse learning environments.

1. Introduction

The development of information and communication technology (ICT) has brought significant changes to the world of education. It is vital to include specific training in ICT in the initial training of future teachers, regardless of the learning format chosen, in order to promote and guarantee the development of their digital competence beyond everyday use (Rodríguez, E.C & Murgiondo, J.E., 2024). Education in the modern world is aimed at technological learning and increasing the usability of new learning tools (Shvardak, M, et. Al.,2024). In this digital era, technology has become an essential tool in supporting the teaching and learning process, especially at the elementary school level. At the elementary school level, where students are at a formative stage of cognitive and social development, technology offers the potential to make learning more engaging and accessible. It can enhance students' understanding of complex social concepts by allowing them to visualize historical events, interact with maps, and participate in collaborative learning environments. However, despite the potential benefits, the implementation of technology in Social Studies education at the elementary level poses several challenges.

The use of digital tools and teaching methods is important to teach primary school teachers to be flexible and adaptable to changes. The ability to use digital tools will help them better adapt to new technologies and pedagogical approaches. When it comes to the professional training of future primary school teachers, it should be understood that at least 2-3 years will pass from the time of education of current students to the beginning of their pedagogical activities (Shvardak, M, et. al., 2024). However, the effectiveness of applying technology in social studies learning at the elementary school level remains a subject of debate among educators and researchers. Although much research has discussed the benefits of using technology in education, there are still limitations in understanding its specific impact on social studies learning, particularly at the elementary level. Some teachers see technology as a tool that enhances student engagement and broadens their understanding of the social world, while others face challenges in its implementation, such as limited access, teacher readiness, and a lack of clear pedagogical guidance.

Therefore, this study aims to conduct a systematic literature review to evaluate whether the use of technology in social studies learning at the elementary school level is truly effective. This article will review various related studies, analyze how technology affects student learning outcomes, and identify the benefits and challenges faced in its implementation. Through this review, it is hoped that clearer insights will be found regarding the role of technology in improving the quality of social

studies education in elementary schools, and provide recommendations for teachers and policymakers in designing more effective learning strategies.

2. Method

This research uses the Literature Review method. SLR research is carried out for various purposes, including identifying, reviewing, and interpreting all available research on interesting topical phenomena with specific relevant research questions (Y. Xiao and M. Watson, 2019). SLR research provides a summary of evidence for clinicians and decision-makers who don't have much time to go through a large amount of primary evidence and review them one by one because SLR can build on evidence from previous research and represents information from the various research questions available in this research (A. Wahdan, 2019; G. Lame, 2019).

In general, the stages of conducting a review consist of three main parts: planning, conducting, and reporting (M. Zhu, et al., 2018). In the planning stage, the researcher writes the review by considering the questions to be used, including the development of the protocol that serves as a framework for preparing the review. In the conducting stage, the researcher must pay attention to the relevance of the literature, the selection process, data extraction, conducting the review, in-depth analysis, and synthesis to produce a well-structured and relevant review article. In the reporting stage, the results of the systematic writing must be presented in written form. The systematic review procedure is shown in Figure 1.

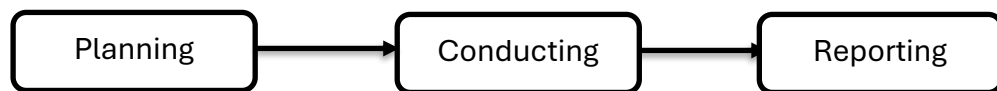


Figure 1. The Procedure of systematic review

3. Results and Discussion

The integration of digital technologies into the learning process contributes to the improvement of students' academic performance, especially in operational and medium-term planning. This emphasizes the importance of the development of digital education for improving the quality of education and preparing students for modern challenges.

3.1. Student's Participation in Social studies learning by using Technology

The use of technology, such as interactive digital maps and virtual simulations, is highly effective in helping students concretely grasp geographical and social concepts. Students can visually explore the world and experience historical events or social concepts in a more direct and immersive way (Fitriana, S. D. A., & Setyasto, N, 2023). Several studies have noted that the use of visual aids enhances students' comprehension of complex topics, such as social structures, historical events, and geographical dynamics.

Technology also plays a crucial role in promoting critical thinking and collaboration skills among students (Evariani & Haris, 2017). Technology-based learning models can be implemented by teachers in instruction, such as using online modes through the flipped classroom approach (Pratiwi, 2022). Project-based learning platforms that incorporate technology allow students to work together to solve real-world problems, analyze social situations, and develop solutions. This is highly relevant to the goals of social studies education, which aims to shape students into critical thinkers who can understand and address social issues in the real world. Many studies suggest that collaboration through technology can enhance critical thinking, problem-solving abilities, and active participation in group discussions (Heryani, A., et al., 2022).

3.2. Challenges of Using Technology for Social Studies Learning in Elementary School

This study aims to identify and analyze the main challenges in the use of technology in Social Studies learning in elementary schools through a systematic literature review. Based on the analysis of the reviewed literature, several significant challenges were identified in integrating technology into Social Studies learning at the elementary level. These findings are categorized into several main areas, including technological infrastructure, teacher readiness, student engagement, and the development of digital teaching materials (Aisyah, et.al., 2024).

One of the biggest challenges found is the limitation of technological infrastructure in elementary schools, especially in remote areas or those with limited economic resources. Several studies indicate that many schools still lack adequate access to hardware and a stable internet connection. This lack of infrastructure hinders the effective use of technology in education, including in Social Studies learning. Without strong infrastructure support, both teachers and students struggle to access digital learning tools that could enhance the quality of instruction. Teacher readiness to adopt technology in teaching is also a significant challenge. Many elementary school teachers still feel undertrained in using technology effectively in the classroom. Despite the availability of various technological tools, without sufficient training, teachers struggle to integrate them into Social Studies learning. Several pieces of literature highlight that many teachers lack the technical skills or pedagogical understanding needed to maximize the use of technology in supporting Social Studies education.

While technology has great potential to enhance student engagement in Social Studies learning, some literature points out that not all forms of technology are successful in capturing students' attention (Syarifuddin, et. al., 2022). This challenge relates to how technology is used and whether its application is relevant to the learning objectives. Some studies show that poorly planned use of technology can distract students from the learning material instead of enriching their learning experience. Therefore, a more strategic approach is needed in integrating technology to truly enhance student motivation and engagement. Another challenge is the development and availability of digital teaching materials that are relevant to the Social Studies curriculum in elementary schools. Some studies find that many of the digital tools or resources currently available are not fully aligned with the needs of Social Studies learning. Digital resources are often generic and not specifically tailored to the context of social learning, meaning that teachers need to adapt them to fit their learning objectives. The lack of teaching materials that are tailored to the local context and relevant to the curriculum also hinders the effective use of technology in Social Studies learning.

Socio-cultural factors also play an important role in the use of technology in Social Studies learning. Some research indicates that the acceptance and adoption of technology by students and teachers are influenced by their social and cultural backgrounds (Widodo, et. al., 2020). In some communities, technology is still seen as foreign or even unnecessary in the learning process. This challenge makes the integration of technology in Social Studies learning more complex, as there are cultural barriers to overcome, especially in environments where digital technology has not yet become part of everyday life. In addition to the challenges of implementation, the difficulty in measuring the effectiveness of technology in improving student learning outcomes is also an important issue. Many studies report that it is not easy to determine whether the use of technology directly impacts students' understanding of Social Studies concepts. Most studies suggest that learning outcomes measured with technology require more sophisticated and specific evaluation instruments that can capture changes in critical thinking skills and understanding of social concepts.

3.3. Conclusion

This study aims to identify and analyze the main challenges in the use of technology in Social Studies learning in elementary schools through a systematic literature review. Based on the analysis of the reviewed literature, several significant challenges were identified in integrating technology into Social Studies learning at the elementary level. These findings are categorized into several main areas, including technological infrastructure, teacher readiness, student engagement, and the development of digital teaching materials.

Author Contributions

Unga Utari: Conceptualization, methodology, analysis, supervision. Alma Damaya Qoir,: Data collection, writing-draft preparation. Desi Lasiana Sari: Visualization, design. Muhammad Feri Dimiyati: Writing, analysis. Runik Nilna Habibah: Analysis, validation. Rosita Rezalia Oliviasari: Writing - reviewing and editing. All authors have equal contributions to the paper. All the authors have read and approved the final manuscript.

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Funding

No funding support was received.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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