

## **CONCEPTUALIZATION OF THE CONSTRUCTIVIST FOUNDATION FOR THE USE OF TECHNOLOGY IN ELEMENTARY SCHOOL SOCIAL STUDIES LEARNING**

**Irman Syarif<sup>1</sup>, Agung Prihatmojo<sup>1</sup>, Tinto Wahyu Kisworo<sup>1</sup>**

<sup>1</sup>Department of Primary Education, Faculty of Education and Psychology,  
Universitas Negeri Yogyakarta, Yogyakarta, Indonesia  
*email: [irmansyarif.2022@student.uny.ac.id](mailto:irmansyarif.2022@student.uny.ac.id),*

**Abstract:** Technology is just a tool, and its success in creating effective learning depends on how it is used. Technology integration must consider the underlying conceptual and philosophical framework. Philosophical and theoretical understanding in the elementary school social studies curriculum can provide deeper direction and meaning to learning. This can help teachers and students understand why certain material is taught, how the context of history, geography, economics, anthropology, and sociology influences current issues, and how students can think critically about the information they encounter. This research uses literature observation with a qualitative approach to analyze articles resulting from studies of social studies learning in elementary schools. One theoretical framework that can be used to explain the relationship between the integration of technology and social sciences is the constructivist approach. In this article, we explore the current relationship between social studies education and technology and outline principles for integrating technology in comprehensive and meaningful elementary school social studies teaching.

**Keywords:** Conceptualization; constructivism; technology; elementary school social studies

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## **INTRODUCTION**

Technology, as a tool capable of changing the learning landscape, has become integral to the educational process, including in Social Sciences (IPS) learning at the elementary school level. However, the fundamental question that often arises is to what extent technology is successful in creating effective and meaningful elementary social studies learning. Several literature reviews show that there are several important findings regarding the use of technology by teachers in elementary schools, especially in the Social Sciences (IPS) curriculum. Qualitative studies, as stated by Nickell, Field, and Roach (2000/2001) in (Franklin & Molebash, 2007), tend to have small sample populations, so the results are often more exploratory and focused on specific cases. according to (Anar et al., 2022) If social studies in elementary schools is provided in an appropriate and effective way, this has the potential to re-establish good values in society. In the current

era, where information technology is developing very rapidly, the role of social studies education is becoming increasingly important. The changes brought about by technological advances not only change our way of life but also the social structure in the global environment. This condition indirectly requires students to have the ability to sort content and information that they obtain via the Internet network (Ginanjar et al., 2019)

Learning is not only about absorbing information but also about conceptual understanding and the relationship of material to the real world. This demands a strong conceptual and philosophical framework for the integration of technology into the curriculum, especially in subjects that study social aspects and human history such as social studies.

Adopting technology in social studies education requires more than just the use of tools; this necessitates a deep philosophical and theoretical understanding. Teachers and students must be aware of the reasons behind teaching certain material, understand how historical and social contexts influence current issues, and how technology can help students think critically about the information they encounter.

In this context, the constructivist approach offers a promising framework. This approach recognizes that learning is an active process in which knowledge is built through experience. This is in accordance with the goals of social studies education, which aims not only to convey facts but also to develop critical thinking and contextual understanding. Thus, this research will examine the philosophical and pedagogical characteristics of constructivism, as well as how these principles can be integrated with technology to create comprehensive and dynamic learning experiences in elementary school social studies curricula.

## **METHOD**

This research uses a literature review with a qualitative approach to analyze articles resulting from studies of social studies learning in elementary schools. Analysis and Synthesis of findings from various relevant qualitative studies in the domain of social studies teaching with a focus on the use of technology. This approach aims to gain a richer and more holistic understanding of how technology is used in the context of social studies teaching in elementary schools, by considering the underlying philosophical and theoretical aspects. Additionally, this article also seeks to integrate these findings within a constructivist framework that creates a deeper understanding of how technology integration can support effective and meaningful social studies learning in elementary schools. Eligibility criteria A manual search of reference lists using Google Scholar was conducted with articles identified during the search process for Search Procedure Eight electronic databases were searched in April 2023 to identify eligible overviews.

## **RESULT AND DISCUSSION**

### **How does the role of technology support the foundation of constructivism in elementary school social studies?**

Technology plays an important role in supporting a constructivist approach in

Social Sciences (IPS) classes in elementary schools. In constructivism, students are considered active learners who construct their own knowledge through experience and interaction. Technology, such as computers, tablets, and the internet, provides access to diverse and interactive learning resources, allowing students to explore social studies topics in greater depth. These digital tools make it easier for students to conduct research, collaborate with classmates, and communicate with people from different parts of the world, enriching their understanding of global society and culture. Technology plays an important role in supporting a constructivist approach in Social Sciences (IPS) classes in elementary schools. In constructivism, students are considered active learners who construct their own knowledge through experience and interaction. Technology, such as computers, tablets, and the internet, provides access to diverse and interactive learning resources, allowing students to explore social studies topics in greater depth.

These digital tools make it easier for students to conduct research, collaborate with classmates, and communicate with people from different parts of the world, enriching their understanding of global society and culture. According to Driscoll (2002:66), In information processing theory, learning is essentially a matter of moving from the outside in. Learners receive information from the environment, change it in various ways, and acquire knowledge, which is then stored in memory. In contrast, in a constructivist approach, learning is more of a problem that proceeds from the inside out. Learners actively impose organization and meaning on the surrounding environment and construct knowledge in the process. To take full advantage of the potential of the Internet, students and teachers need to have skills in information literacy. (Scott & O'sullivan, 2000) This era of information technology offers the possibility to revolutionize the way of teaching and improve the quality of information teachers provide to students.

Constructivism in using technology in social studies learning in elementary schools plays an important role. Virtual Reality and Augmented Reality can be used to create authentic learning experiences. Students explore historical sites and social environments virtually. Educational games offer interactive simulations of social or historical situations. For collaboration, platforms such as online discussion forums and collaborative tools such as Google Docs or Padlet facilitate the exchange of ideas and project collaboration. Adaptive learning platforms and e-portfolios support students in setting and managing their own learning goals. In contrast, blogs or online journals and digital assessment tools support students' reflection on their learning process. The use of this technology supports active and collaborative learning, and helps students reflect on the knowledge they construct in which they learn, (2) providing collaboration and opportunities to engage perspectives on what is being learned; (3) supporting students in determining their own goals according to (Rice & Wilson, 1999) Constructivism encourages active, not passive, learning and the use of group-based cooperative learning activities. Many types of activities are used in social studies classes to incorporate the use of technology to promote constructivist learning, such as exploring cultures, developing databases, virtual visits and student exchanges.

### **Current Relationships Between Elementary School Social Studies Education and Technology**

Technology integration in education has become a necessity, no longer just an option. Technology provides a richer context and a more interactive learning experience.

Social studies in elementary schools, as a subject that discusses aspects of geography, history, economics, sociology and citizenship, requires a dynamic and contextual approach to ensure that the concepts taught are not only understood but can also be applied in students' daily lives. According to (Smadi et al., 2020) integrating Information Technology (IT) in elementary schools can enrich students' learning experiences in understanding their own culture and other cultures to make learning more interactive, interesting, and relevant to students' daily lives.

Given recent developments indicating that students with exposure to technological learning tools tend to show improvements in motivation and learning outcomes, it is important to examine in more depth how these tools can be implemented effectively. So far, existing studies have often focused on the use of technology in mathematics and science, while its application in social studies has not been widely explored, creating a significant knowledge gap.

The relevance of technology in social studies learning lies in its ability to make lesson material more interactive and interesting, as well as supporting student-centered learning. With technology, previously abstract concepts can be illustrated through detailed simulations and immersive virtual reality, allowing students to take virtual trips to historical places or observe social phenomena in a variety of simulated scenarios. Rich online resources expand the reach of student learning far beyond the walls of the classroom, providing broader context and sharpening students' analytical and critical reasoning skills. In an increasingly digitalized era, the integration of technology in the teaching and learning process has become inevitable and important to prepare students with 21st century skills.

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### **Social studies teaching in a constructivist framework**

Social Studies (IPS) subject matter in elementary schools covers a broad and varied spectrum, including geography, history, economics, sociology, and civics education, each offering significant potential to be enriched by the use of technology. Martella (1997) and Kenway (1998) in (Scott & O'sullivan, 2000) say that social sciences can play an important role in expanding the analytical framework of information literacy by examining technology and its impact on society. The introduction of technology in geography, for example, through digital map applications and geographic information systems, can help students explore and understand the concepts of space and place in interactive and engaging ways, giving them a powerful visual perspective on the physical world and political boundaries.

In a historical context, technology can be used to bring the past to life today; Digital chronologies and virtual tours of museums allow students to travel through time, deepening their understanding of historical events and their impact on the modern world.

Apart from that, augmented reality (AR) and virtual reality (Virtual Reality - VR) technology can enrich learning by bringing history to life through 3D reconstructions of historical events, archaeological sites and artifacts that allow students to carry out interactive 'explorations'.

Economics, explained through market simulations and games that teach basic economic principles, motivates students to apply theory in practical scenarios. Economic simulation games can be used to illustrate concepts such as supply and demand, as well as practice resource management skills. Thus multimedia and interactive learning applications that focus on environmental issues and sustainable development provide opportunities for students to learn about conservation and management of natural resources while sociology can utilize social media and online discussion platforms to analyze and discuss social structures, cultural diversity, and human relations.

Technology also plays an important role in civics learning, by utilizing interactive media to depict democratic and decision-making processes, as well as using VR to provide cultural and ethnographic immersive experiences that support respect for diversity. On the other hand, applications designed for environmental learning can bring sustainable development concepts into the classroom, providing a platform for students to learn the importance of conservation and human resource management.

The integration of technology into elementary school social studies can also be done using a modeling approach. Can be integrated into technology in various ways. Teachers can use interactive multimedia to visualize complex social studies concepts with interesting images, videos or animations. Additionally, technology allows teachers to create virtual simulations that allow students to experience historical situations or events interactively. The use of special educational software can also facilitate the modeling of social studies concepts.

Students can participate in technology-based learning projects that involve modeling social studies concepts, and they can access online learning resources that use a modeling approach in delivering learning material. Explicit modeling approaches as an approach in teaching social studies, by providing examples and role models openly, and asked prospective teachers to critique the lessons as future teachers. Elementary school teachers must be prepared to become strong social studies instructional leaders, who can guide their students in understanding the complex and diverse world around them (Ritter, 2012). Teachers can use interactive multimedia to visualize complex social studies concepts with interesting images, videos or animations. Additionally, teachers can create virtual simulations that allow students to experience situations or events interactively. Thus, students can participate in technology-based learning projects that involve modeling social studies concepts, and they can access online learning resources that use a modeling approach in delivering learning material.

Through the integration of this technology, social studies material not only becomes more relevant and engaging for elementary school students, but also supports deeper and more contextual learning, giving them the tools to become informed and responsible global citizens. This technology not only makes material more engaging and accessible for students, but also supports creative and critical learning, connects classroom concepts to the real world, and enriches their overall educational experience.

Although we recognize the great potential of technology in teaching methods, curriculum development, and student learning, we believe that the Internet has important

limitations that need to be recognized by teachers and students in Social Studies (IPS) subjects in elementary schools to realize the goals of social studies in elementary schools.

The integration of technology in Social Sciences (IPS) learning must be based on a philosophical and theoretical foundation that understands that constructivism is a multidimensional concept developed within a philosophical framework. According to Berger and Luckmann (2017), intense face-to-face social interactions form the basis of human experience and form typifications of behavior and thinking, which then crystallize into social norms and rules. When a teacher creates a work of art or conceptual framework, he or she not only expresses personal experiences, but also creates an artifact that students can interpret and appreciate. Thus, social interaction in the learning process includes a system of values, norms and institutions that shape social behavior and expectations. Berger and Luckmann (1991) argue that conversation is the most important way to maintain, modify and reconstruct subjective reality.

In elementary school classrooms, social studies teaching can bring the concept of typification and dynamic social structure into concrete learning experiences. For example, a social studies teacher instructed his students to create a 'Mini Museum of Culture' project in class. Each student or group of students is tasked with collecting, categorizing and presenting artifacts from various cultures in Indonesia, such as traditional musical instruments, traditional clothing or traditional house models.

During this process, students learn and demonstrate typification—they identify patterns that exist in the culture such as ways of dressing or different types of housing that relate to the climate and environment of the area. They then share this understanding with the class, explaining how these typifications reflect the values, norms, and social institutions of various cultural communities in Indonesia. In this activity, the cultural artefacts they collect become symbols of objectification, reflecting the collective expression of the society that created them, and when presented in class, become part of a 'shared world' that can be understood and appreciated by all students.

Integrating technology into the 'Mini Museum of Culture' project can provide a new dimension to learning and make the experience more interactive. Students can use tablets or computers in class to do research on various cultures in Indonesia. They can access online resources, such as articles, video documentaries and interactive databases to gather information about the artifacts they will display in the 'Mini Museum of Culture'. The framework emphasizes the importance of technology in project-based learning by using the internet to access information, conduct research, analysis and share information. Equipping students with the skills to use ICT to quickly access the ideas and experiences of people from various communities and cultures (Öztoğ & Özdener, 2007)

## **CONCLUSION**

Integrating technology into social sciences, which if followed mechanically will produce optimal learning. Rather, this framework provides a rationale for not limiting ourselves to fixed pedagogical approaches and encourages the use of technology tailored to specific contexts, content, and audiences. According to (Delgado, 2019) Teachers' reluctance to integrate technology into teaching is not solely caused by their negative attitude towards technology.

Instead, the main factor influencing their decisions is how they understand the needs and abilities of the students in their classes. This suggests that teachers tend to adjust technology use based on the specific characteristics of their class, which includes how students interact and react to technology. The integration of technology in education is not just about the application of technological tools themselves, but is rather a form of "art" that involves creative ways of using them. Additionally, it is important to continue to develop a design-oriented way of thinking, regardless of how much or how little technology is available in the environment. (Tsai & Chai, 2012)

Technology integration strategies cannot be categorized as constructivist or non-constructivist, and that the same approach can be used in accordance with the philosophical, theoretical, and pedagogical principles explored in this article. In other words, the strategy used must follow a constructivist basis.

The importance of teachers as creative mediators in applying this framework, teachers must be able to connect these concepts back to learning theories and project the implications of using these techniques on their students. The use of technology in education must go beyond simply replacing existing teaching methods, and how technology can be used to build better communities and support student development. Research results (Caldwell, 2022) To successfully integrate technology in education, it is important to invest in the professional development and technology capabilities of teachers. Given the important role of technology in education, it is crucial not to simply view technology as a replacement for traditional teaching methods. Instead, the focus should be on how technology can be used as a tool to enhance and complement existing educational approaches. Thus, the main goal is not just the use of technology for its own sake, but rather how technology can be strategically applied to achieve broader and deeper educational goals.

In particular, the use of technology in social science contexts must be placed on a solid foundation of philosophy, theory, and pedagogy. The framework that underlies the application of technology in social science learning is needed to build elementary school social studies concepts not just from memorizing, but turning information into a process of active inquiry, perspective taking, and forming a deep understanding. This article argues that one approach to integrating technology to enhance social studies learning is to apply aligned constructivist philosophy, theory and pedagogy, with the goal of facilitating the development of global citizens capable of critical thinking.

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