

Enhancing Students' Learning Outcomes in Fundamental Social Studies Concepts through Virtual Learning on Historical Content

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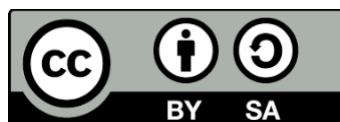
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Abstract

The development of information and communication technology (ICT) has transformed education through the implementation of online learning, particularly with Virtual Classrooms. This study aims to evaluate the effectiveness of Virtual Classroom use in the Basic Concepts of Social Studies course for students of STKIP Kusumanegara. The research involved 30 students who participated in online lectures via a digital platform equipped with features such as learning materials, discussion forums, quizzes, and online assignments. A descriptive qualitative approach was employed to analyze students' conceptual understanding, engagement, and competence achievement. The findings reveal that Virtual Classrooms provide learning flexibility, broaden access to resources, and foster student independence. However, several challenges were identified, including limited internet access, inadequate devices, and low participation in online discussions. These constraints influenced conceptual comprehension and lecturer–student interaction. Despite these obstacles, the use of Virtual Classrooms remains effective as an alternative as well as a complementary medium to face-to-face learning, especially when supported by active and collaborative learning strategies. The study concludes that Virtual Classrooms hold significant potential for improving the quality of teaching the Basic Concepts of Social Studies, though further development of innovative methods and approaches is necessary. These findings are expected to serve as a foundation for enhancing technology-based learning in higher education, particularly in teacher education programs.

Keywords: Basic Concepts of Social Studies, Online Learning, Virtual Classroom



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INTRODUCTION

Social change and the global demand for continuing education have driven a major transformation in leadership practices in the education sector (Afriani, 2025). Nowadays, information is getting faster and can have a huge impact on all aspects of human life, one of which is education (Sari, 2025). As time goes by, technological developments in the 21st century are very rapid and have a positive influence on the development of the world of formal and non-formal education. Technology can be used to support the learning process during the current pandemic. (Thesalonika, 2021). The rapid development of information and communication technology (ICT) has profoundly influenced various aspects of human life, including the field of education. Higher education, in particular, is currently undergoing a digital transformation that reshapes how lecturers deliver material, interact with students, and conduct assessment processes. One of the most prominent innovations in this digital transformation is the use of Virtual Classroom as an online learning medium. Virtual Classroom refers to a digital learning system that enables teaching and learning processes to be conducted online through platforms that support material delivery, discussions, assignments, and evaluations in virtual environments (Means, 2014). This approach has become increasingly relevant in the post-COVID-19 era, where educational institutions are compelled to adopt remote learning strategies. Even though face-to-face learning is gradually being reintroduced, the continued implementation of Virtual Classroom demonstrates its ability to enhance flexibility, efficiency, and accessibility in higher education (Hodges, 2020).

Education is the main pillar in forming quality and characterful human resources. (Palawa, 2025). Elementary school teacher education (PGSD) plays a strategic role in producing competent and professional teachers for elementary school teaching. As prospective teachers, PGSD students are required to master the knowledge and skills necessary to teach various subjects effectively. One of the five subject areas in elementary school is social studies (Novitasari, 2024) Education 4.0 refers to the evolution of the education system which is directed by developments in digital technology and overall digital transformation. In the context of Education 4.0, it is deeply integrated into the learning process (Idawati. Rahman, 2025).

In higher education institutions, Virtual Classroom is no longer regarded as a temporary alternative but as an integrated complement to conventional instruction. Its use is particularly relevant in teacher education programs, where digital literacy and innovative pedagogical practices are essential competencies for future educators (Garrison, 2017). At STKIP Kusumanegara, for instance, the course Fundamental Concepts of Social Studies (IPS) was delivered to 30 students through a Virtual Classroom, This course is crucial in preparing prospective elementary school teachers, as it provides them with essential knowledge of history, geography, economics, sociology, and anthropology, alongside integrative pedagogical approaches to teaching social studies at the elementary level (Sapriya., 2017). Mastery of this course is therefore a key indicator of student readiness for professional practice as future teachers.

The integration of Virtual Classroom in this context offered various features, such as video lectures, digital documents, online discussion forums, quizzes, and electronic assignment submissions. These affordances were expected to encourage active participation, foster independent learning, and support flexible engagement with course materials (Sun, 2008). However, its implementation was not without challenges. Several students experienced difficulties in accessing materials due to unstable internet connections or inadequate devices, while limited direct interaction between lecturers and students sometimes hindered the understanding of abstract or conceptual content. Moreover, student participation in online discussions was not always optimal, often constrained by low motivation or limited

technological competence. These issues reflect findings from previous studies which suggest that the effectiveness of online learning is strongly influenced by student readiness, digital literacy, and the instructional strategies employed by instructors (Moore, 2011).

The development of technology requires people to align their daily lives, especially in the field of education. (Diantari, 2024) The use of technology can also be an effective tool in conveying abstract material so that it is easier for students to understand. (Syah, 2024) Despite these obstacles, Virtual Classroom also presents significant opportunities for improving the quality of instruction when implemented strategically. With appropriate pedagogical methods, instructors can design active and collaborative learning environments even in online contexts. Students, on the other hand, gain broader access to diverse learning resources and are able to organize their learning according to individual needs. Virtual learning environments also support the development of critical 21st-century skills, such as digital literacy, problem-solving, and collaborative communication (Voogt, 2012). Therefore, it becomes essential to systematically evaluate student learning outcomes within this digital learning framework, especially in courses that serve as the foundation for future professional roles such as social studies education.

In light of this background, evaluating the use of Virtual Classroom in teaching Fundamental Concepts of Social Studies to students at STKIP Kusumanegara. Mahasiswa yang diteliti berasal dari Program studi guru sekolah dasar, Elementary education plays a crucial role in shaping students' intellectual, emotional, and social foundations. Teachers, as the spearhead of education, have a significant responsibility to ensure that the learning they deliver meets the learning needs of all students. (Intan, 2025). Social studies instruction for lower elementary school students often faces challenges related to the abstraction of material and a lack of active student engagement. Social studies, which should provide social knowledge through life experiences, is often taught verbally and without context. This results in students' poor understanding of concepts. (Faizuddin, 2025) This study seeks to investigate the extent to which Virtual Classroom improves students' conceptual understanding, active participation, and achievement of expected competencies. Findings from this research are expected to contribute to the development of technology-enhanced pedagogy in higher education, particularly in teacher training institutions, and provide practical recommendations for improving instructional quality in the digital era.

RESEARCH METHODS

This study employed a Classroom Action Research (CAR) design, which is intended to improve the quality of teaching and learning systematically and reflectively. The CAR approach was selected to address the research objective of enhancing both the learning process and outcomes in the Fundamental Concepts of Social Studies course through the application of a Virtual Classroom. The research consisted of two cycles, each comprising four stages: planning, action, observation, and reflection. The reflection at the end of each cycle served as the basis for refining the subsequent cycle.

The study was conducted at STKIP Kusumanegara. The participants were 30 undergraduate students enrolled in the Fundamental Concepts of Social Studies course. All participants were actively engaged in Virtual Classroom-based learning activities throughout the research. Multiple data collection techniques were employed: Achievement tests to measure students' conceptual understanding after the implementation of Virtual Classroom learning. Observation to monitor student participation, including engagement in discussions, submission of assignments, and interactions in online forums. Interviews (structured and semi-structured) to capture students' perceptions and experiences regarding Virtual Classroom use.

Documentation consisting of recorded learning activities, student assignments, and attendance logs in the virtual environment.

The following instruments were utilized: Observation sheets for student participation and formative test items to assess learning outcomes. Interview protocols: Assessment rubrics for assignments and reflective notes from the lecturer. Both quantitative and qualitative approaches were applied. Quantitative data from test results were analyzed using descriptive statistics (mean, percentage, and improvement across cycles). Qualitative data from observations and interviews were analyzed through data reduction, data display, and conclusion drawing. The action was deemed successful if the following conditions were met: Improvement in students' learning outcomes from cycle to cycle; Increased active participation and engagement during learning activities; and Enhanced student comprehension of the Fundamental Concepts of Social Studies.

RESULT AND DISCUSSION

Mahasiswa PGSD hadir dengan latar belakang yang beragam, mulai dari pengalaman pribadi (Rezki, 2024) The implementation of Virtual Classroom in the Fundamental Concepts of Social Studies course produced positive outcomes across two cycles of Classroom Action Research.

Table1. Summary of Learning Outcomes and Student Participation

Indicator	Pre-Cycle	Cycle I	Cycle II
Average test score	62.5	72.3	82.7
Percentage of students achieving mastery (≥ 70)	40%	70%	90%
Student participation in discussions	Low	Moderate	High
Task submission rate	55%	75%	95%
Attendance in Virtual Classroom	70%	85%	95%

Cycle I results showed a moderate improvement in students' learning outcomes compared to the pre-cycle phase. The average test score increased, with 70% of students achieving the minimum mastery criteria. Observation data indicated that students were beginning to adapt to the Virtual Classroom platform, although participation in discussions and timely submission of assignments remained inconsistent. Interview responses revealed that several students experienced difficulties with internet connectivity and navigation of the platform.

Cycle II demonstrated significant progress. The average test score increased further, with 90% of students achieving or exceeding the minimum mastery criteria. Student participation also improved, as reflected in more active engagement in online discussions, consistent task submission, and greater interaction within the virtual forum. Documentation confirmed a higher attendance rate and more comprehensive completion of assignments. Qualitative data from interviews suggested that students felt more comfortable with the platform and perceived Virtual Classroom as beneficial for their understanding of social studies concepts.

Overall, the results indicated that the application of Virtual Classroom not only enhanced students' academic performance but also fostered more active and collaborative participation during the learning process.

The findings of this study confirm the effectiveness of Virtual Classroom as a medium to improve learning processes and outcomes in higher education settings. The gradual increase in test scores from Cycle I to Cycle II illustrates that systematic action planning and reflection in Classroom Action Research can address learning barriers and foster academic improvement.

These results align with research conducted in 2024. Throughout the implementation of collaborative online learning, students have become skilled at accessing and using all digital tools, including Zoom, online quizzes, and the Learning Management System (LMS). Students are already very familiar with how to use each of these applications, including always ensuring security when using these digital devices. (Ismuwardani, 2024). The implementation of virtual learning has proven to be effective in improving student achievement in the fundamental concepts of social studies. This effectiveness is reflected in the significant increase in both the average test scores and the percentage of students achieving mastery from the pre-cycle to Cycle II. These findings indicate that the use of virtual learning media can provide a more meaningful learning experience compared to conventional methods. Through the integration of technology, students are able to access learning materials more flexibly, utilize interactive features, and engage in a wider variety of learning activities. In addition to cognitive gains, virtual learning also enhances affective aspects such as interest, motivation, and active participation in the learning process. Students are more encouraged to engage actively due to the innovative, interactive atmosphere that aligns with the learning styles of the digital generation. Thus, virtual learning not only contributes to the improvement of academic achievement but also fosters positive attitudes toward learning, ultimately supporting the achievement of educational goals in a more comprehensive manner.

The improvement in student participation aligns with prior studies emphasizing that digital learning platforms encourage active engagement and collaborative learning when integrated with proper instructional design. The initial challenges observed in Cycle I, such as limited digital literacy and technical issues, were mitigated through targeted interventions, including clearer guidance and technical support. By Cycle II, these adjustments contributed to higher student confidence and more consistent participation.

Furthermore, the integration of Virtual Classroom supported independent learning and critical thinking, as students were required to interact not only with the course content but also with peers and instructors in a digital environment. This indicates that Virtual Classroom has the potential to enhance both cognitive and social dimensions of learning.

In addition, virtual learning promotes inclusivity by breaking down geographical and temporal barriers that often limit traditional classroom instruction. Students can participate in classes regardless of location, and the flexibility of virtual platforms accommodates different personal circumstances. This inclusivity enhances opportunities for equal access to education, particularly in higher education, where diverse student populations often face challenges related to time management, commuting, or balancing academic and professional commitments.

Taken together, the findings highlight that the implementation of virtual learning goes beyond improving test scores; it also transforms the nature of learning itself. By supporting cognitive, affective, social, and digital competencies, virtual learning provides a holistic educational experience that prepares students not only for academic success but also for lifelong learning in a rapidly evolving digital society.

Thus, the results of this research strengthen the argument that Virtual Classroom, when implemented through a reflective and iterative process such as Classroom Action Research, can be an effective pedagogical strategy for improving learning quality in higher education.

DISCUSSION

Elementary School Teacher Education (PGSD) plays a crucial role in establishing the foundation of learning for children at the elementary level. As prospective elementary school teachers, PGSD students need to be equipped with sufficient knowledge and skills to teach various subjects effectively. (Permata, 2024). The findings of this study strongly confirm the

effectiveness of Virtual Classroom as a medium to improve both the learning process and learning outcomes in higher education contexts. The progressive increase in student achievement, as reflected in the test scores from Cycle I to Cycle II, demonstrates that systematic planning, implementation, and reflection inherent in Classroom Action Research (CAR) can effectively address existing learning barriers. This gradual improvement also highlights that teaching and learning processes are not static; rather, they evolve as interventions are continuously refined to respond to students' needs. The use of CAR in this study not only provided a structured framework for improvement but also ensured that each cycle became a foundation for better instructional strategies in subsequent stages.

In addition to improving cognitive aspects, this study also revealed a significant increase in student participation levels during the learning process. This finding aligns with previous research confirming that the use of digital learning platforms, when supported by well-planned instructional design, can stimulate active student engagement, strengthen collaborative learning, and encourage meaningful interactions among study group members.

In Cycle I, various challenges emerged that impacted the effectiveness of digital learning implementation. Key obstacles included low levels of digital literacy among students, hesitation and lack of confidence in using online tools, and technical issues such as unstable internet connections and difficulty accessing certain features on the learning platform. These obstacles limited student engagement in virtual discussions and collaborative assignments, thus preventing the full achievement of learning objectives.

In response to these challenges, researchers and implementing teachers implemented adaptive interventions oriented toward student needs. These interventions included providing more structured guidance on using the Virtual Classroom platform, providing step-by-step tutorials in text and video formats, and establishing a readily accessible technical support system when students encountered difficulties. This effort not only helped students understand how the platform works, but also built their confidence and reduced their anxiety about interacting online.

The results of this intervention were evident in Cycle II, where students demonstrated more consistent and enthusiastic participation. They were more active in discussion forums, more confident in expressing their opinions, and demonstrated improved collaborative skills in both synchronous (live) and asynchronous (delayed) activities. Furthermore, students' increased comfort and readiness in navigating digital platforms indicated positive developments in their digital literacy competencies, which indirectly contributed to strengthening the overall effectiveness of learning. Moreover, the Virtual Classroom environment proved to be more than just a platform for delivering content; it actively supported independent learning and the cultivation of critical thinking skills. Students were encouraged to interact not only with the course materials but also with their peers and instructors in ways that demanded active inquiry, problem-solving, and reflective dialogue. This form of digital interaction fostered a learning culture where students were not passive recipients of information but rather active participants in knowledge construction. The collaborative nature of online learning also nurtured social presence, helping students to build a sense of academic community despite the physical separation.

Taken together, the findings of this research emphasize that the integration of Virtual Classroom, when implemented through a reflective and iterative process such as Classroom Action Research, is highly effective in improving learning quality in higher education. The gradual but steady improvements in cognitive, affective, and social aspects of learning indicate that Virtual Classroom has the potential to serve not only as a substitute for traditional learning modes but also as a transformative pedagogical strategy. Thus, this study contributes to the

growing body of evidence that digital learning environments, when carefully planned and continuously evaluated, can play a central role in advancing higher education in the digital era.

CONCLUSIONS

Furthermore, the results of this study emphasize that virtual learning creates an environment that promotes learner autonomy, critical thinking, and collaborative engagement. By shifting from a teacher-centered to a learner-centered model, students are given greater responsibility for their own learning process. This transformation encourages them to take initiative, manage their study schedules independently, and engage with content beyond what is provided by the instructor. The availability of asynchronous resources, such as recorded lectures and digital reading materials, also ensures that students can revisit lessons at their own pace, thereby supporting differentiated learning and accommodating diverse learning needs. Another significant advantage observed in this research is the ability of virtual learning to cultivate digital literacy skills that are essential in the 21st century. Students not only learn subject matter content but also become familiar with navigating digital platforms, managing online communication, and solving technical challenges that arise in the virtual classroom. These competencies are transferable and valuable in both academic and professional contexts, making virtual learning a medium that contributes to broader educational outcomes.

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