

DEEP LEARNING-BASED SOCIAL STUDIES CURRICULUM ANALYSIS IN PREPARING STUDENTS IN THE INDUSTRIAL ERA 5.0

Erni Sulistiawati^{1a*}, Hasan Triyakfi^{2b}, Tutuk Ningsih^{3c}, and Siswadi^{4d}

^{1,2,3,4} Universitas Islam Negeri (UIN) Prof. K. H. Saifuddin Zuhri Purwokerto, Jawa Tengah, Indonesia

^aE-mail: 254120300004@mhs.uinsaizu.ac.id

^bE-mail: 254120300019@mhs.uinsaizu.ac.id

^cE-mail: tutuk@uinsaizu.ac.id

^dE-mail: siswadi@uinsaizu.ac.id

(*) Corresponding Author

254120300004@mhs.uinsaizu.ac.id

ARTICLE HISTORY

Received : 20-01-2026

Revised : 07-02-2026

Accepted : 28-03-2026

KEYWORDS

Deep Learning;

Social Studies Curriculum;

Industry 5.0;

21st Century Skills;

Meaningful Learning;

ABSTRACT

This study aims to analyze the relevance of a Social Studies curriculum based on deep learning in preparing students to face the challenges of the Industry 5.0 era. The study employs a qualitative research design based on a literature review by examining recent scholarly works on deep learning pedagogy, Social Studies curriculum development, and competencies required in the Industry 5.0 era. Data were collected from academic journals, books, and policy reports published within the last five years and were subsequently analyzed using content analysis to identify key themes related to curriculum innovation, student competencies, and instructional strategies. The findings indicate that the integration of deep learning in Social Studies learning can enhance students' critical literacy, collaboration skills, digital awareness, and social responsibility. Project-based learning, inquiry-based activities, and technology-supported instruction provide meaningful and contextual learning experiences by connecting social knowledge with real-life issues. However, this study also identifies several challenges in implementation, including limited teacher readiness, unequal access to digital infrastructure, and the need for systematic professional development. In conclusion, a deep learning-based Social Studies curriculum is highly relevant for preparing students to become adaptive, ethical, and socially responsible citizens in the Industry 5.0 era, although its successful implementation requires curriculum redesign, enhancement of teacher capacity, and adequate educational policy support to ensure an equitable and sustainable transformation of Social Studies education.

This is an open access article under the CC-BY-SA license.



INTRODUCTION

The rapid advancement of technology in the Industry 5.0 era requires education systems to equip students not only with knowledge but also with critical thinking skills, creativity, collaboration, digital literacy, and social

responsibility. Industry 5.0 emphasizes human-centered collaboration between humans and intelligent technologies to address complex social problems (Kamila & Astuti, 2025). In this context, Social Studies learning plays a strategic role as it fosters civic competencies, social awareness, and problem-solving skills required in contemporary society (Komariyah, 2025). However, the Social Studies curriculum in many schools is still dominated by rote-based learning and has not yet fully supported the meaningful learning required in the Industry 5.0 era.

Previous studies have highlighted the importance of curriculum transformation that supports meaningful and inquiry-based learning. Research on deep learning indicates that reflective and integrative instructional strategies can enhance higher-order thinking skills and student engagement (Waruwu & Tarto, 2025). Studies published in Indonesian education journals also show that the deep learning approach can improve literacy, numeracy, and critical thinking skills when integrated into contextual learning activities (Rida & Others, 2025; Widyanti & Others, 2025). In addition, research on Social Studies curriculum development emphasizes the importance of contextual, project-based, and technology-integrated learning to prepare students for the challenges of Society 5.0 (Kamil & Pramudya, 2020; Khasanah & Others, 2025). These findings suggest that the integration of deep learning into Social Studies curriculum design has a strong theoretical foundation; however, comprehensive analyses related to readiness for the Industry 5.0 era remain limited.

Despite this, studies that specifically analyze the design of Social Studies curricula using a deep learning framework to prepare student competencies for the Industry 5.0 era are still scarce, particularly in the Indonesian context. Therefore, this article offers a novel perspective by analyzing the components of the Social Studies curriculum through deep learning principles to identify their relevance in preparing students' future competencies.

The main research questions of this study are: (1) What are the characteristics of the Social Studies curriculum in relation to deep learning principles? (2) To what extent does the Social Studies curriculum support competencies required in the Industry 5.0 era? (3) What curriculum development strategies can strengthen Social Studies learning through a deep learning approach? The hypothesis of this study is that a Social Studies curriculum integrating deep learning principles can be more effective in developing students' critical thinking skills, social literacy, and adaptive competencies required in the Industry 5.0 era. The objective of this article is to analyze the components of the Social Studies curriculum from a deep learning perspective and to formulate curriculum development recommendations relevant to the educational demands of the Industry 5.0 era. This study is expected to contribute theoretically to curriculum development studies as well as practically to improving the design of Social Studies learning in schools.

METHOD

This study employs a qualitative approach with a literature review design. The literature review was selected because this study aims to analyze concepts, theories, and curriculum frameworks related to deep learning, the Social Studies (IPS) curriculum, and competencies required in the Industry 5.0 era without conducting field observations. This design allows for a systematic examination of scholarly works and curriculum documents in order to construct a comprehensive analytical framework.

The data used in this study consist of secondary data obtained from academic sources, including reputable journal articles, books, conference proceedings, and official curriculum documents. These sources were selected based on their relevance, credibility, and recency to ensure alignment with current educational discourse on deep learning and Industry 5.0. Priority was given to indexed national and international journals discussing curriculum development, Social Studies education, and human-centered technological transformation.

The main instrument of this study is a document analysis guide developed by the researcher. This guide serves as an analytical framework containing key indicators derived from deep learning principles, such as critical thinking, reflective inquiry, problem-solving, collaboration, contextual learning, and knowledge transfer, as well as Industry 5.0 competency indicators, including digital literacy, creativity, adaptability, and social responsibility. These indicators are used to systematically examine and categorize the literature and curriculum components.

Data analysis was conducted using qualitative content analysis techniques. The analysis process consisted of several stages: (1) data reduction by selecting and organizing relevant literature; (2) data display by classifying

findings into thematic categories; and (3) conclusion drawing through interpretative analysis to identify patterns, gaps, and conceptual relationships between deep learning principles and Social Studies curriculum design. The analysis focused on identifying the extent to which current Social Studies curriculum frameworks align with competencies required in the Industry 5.0 era, as well as formulating strategic recommendations for curriculum development. Through this systematic analytical process, the study aims to produce a conceptual framework that integrates deep learning principles into Social Studies curriculum design in order to better prepare students to face the challenges of the Industry 5.0 era.

RESULT AND DISCUSSION

Result

This section presents the findings obtained from a systematic analysis of the literature on deep learning, the Social Studies (IPS) curriculum, and the competencies required in the Industry 5.0 era. The findings are organized based on the research questions: (1) the characteristics of the Social Studies curriculum in relation to deep learning principles, (2) the alignment of the Social Studies curriculum with Industry 5.0 competencies, and (3) the strategic directions for developing a deep learning-based Social Studies curriculum. The data were derived from recent scholarly publications, curriculum documents, and educational policy reports published between 2020 and 2025.

Characteristics of the Social Studies Curriculum in Relation to Deep Learning

The first finding indicates that the implementation of the Social Studies curriculum still tends to emphasize content mastery rather than conceptual understanding. In many schools, Social Studies learning is still dominated by lectures, textbook summaries, and short-term assessment practices. This finding is consistent with previous research showing that traditional Social Studies instruction places greater emphasis on factual knowledge than on analytical reasoning and contextual understanding (Santoso & Lestari, 2022).

Deep learning theory emphasizes meaningful learning, in which students connect concepts across contexts and reflect on real-world problems. Research on the implementation of deep learning in secondary education indicates that inquiry-based activities significantly enhance students' conceptual understanding and engagement (Rahman, 2023). However, an analysis of Social Studies curriculum documents shows that although competencies such as critical thinking are explicitly stated, they are rarely operationalized in the form of structured inquiry activities or reflective instructional strategies.

Another important finding is the limited integration of authentic assessment. Deep learning requires evaluation methods that measure processes, reflection, and collaboration; however, Social Studies assessment is still dominated by objective tests. Studies on authentic assessment in Social Studies indicate that project portfolios and community-based investigations lead to deeper understanding and longer retention of knowledge (Utami & Nurhadi, 2024).

The analysis also indicates that the Social Studies curriculum lacks interdisciplinary integration. Deep learning requires the integration of historical, economic, geographical, and sociological perspectives to understand complex social issues; however, Social Studies content is often taught in isolation. Research on interdisciplinary Social Studies learning shows that thematic instruction enhances students' ability to analyze social problems from multiple perspectives (Putri & Wibowo, 2021).

In addition, patterns of student participation indicate that the learning environment remains largely teacher-centered. A deep learning environment encourages discussion, debate, and collaborative inquiry. Classroom observation studies show that student-centered learning in Social Studies enhances engagement and critical thinking; however, its implementation remains limited due to curriculum rigidity and teachers' workload (W. Sari & Wibowo, 2023).

Overall, the findings indicate that the Social Studies curriculum still reflects the characteristics of surface learning. Although the curriculum objectives emphasize higher-order thinking skills, the implementation guidelines, assessment systems, and learning resources do not yet fully support deep learning practices.

Alignment of the Social Studies Curriculum with Industry 5.0 Competencies

The second finding relates to the relevance of the curriculum to Industry 5.0 competencies, which emphasize human-centered innovation, collaboration with intelligent technologies, creativity, and ethical awareness. Education needs to integrate digital literacy, adaptability, and social responsibility into learning experiences.

The literature analysis indicates that the Social Studies curriculum has incorporated civic values and social awareness; however, these are often delivered in abstract terms rather than through authentic experiences. Studies on community-based Social Studies learning show that service-learning activities are more effective in enhancing empathy, collaboration, and civic responsibility than lecture-based instruction (Nugraha & Dewi, 2022).

The integration of digital literacy also emerges as a critical issue. Research indicates that students who utilize digital mapping tools, social data analysis, and online collaborative platforms demonstrate stronger analytical skills and greater technological awareness (Prasetyo, 2024). However, Social Studies curriculum guidelines rarely explicitly include digital investigation competencies. The use of technology in Social Studies classrooms is often limited to presentation media rather than as an analytical tool.

Another gap relates to creativity and adaptability. Industry 5.0 requires students to generate innovative solutions to social problems. A deep learning approach supports creativity through open inquiry and real-world projects. Research on project-based Social Studies learning shows that students involved in real-world projects demonstrate stronger problem-solving and innovation skills (Kurniawan & Hidayati, 2023). However, time constraints within the curriculum often hinder its implementation.

Metacognitive skills are also essential for lifelong learning in the Industry 5.0 era. Deep learning pedagogy promotes reflection and self-regulation; however, Social Studies assessment systems rarely evaluate reflective thinking or independent inquiry. Research shows that students who engage in reflective journaling demonstrate better conceptual understanding and adaptive abilities (Aminah, 2021).

These findings indicate that the Social Studies curriculum demonstrates partial alignment with Industry 5.0 competencies; however, it has not yet systematically integrated digital literacy, creativity, experiential learning, and reflective practices.

Strategic Directions for Developing a Deep Learning–Based Social Studies Curriculum

The third finding identifies strategic directions for developing a deep learning–based Social Studies curriculum.

First, the integration of project-based social inquiry is essential, as it has been shown to enhance critical thinking, collaboration, and civic competencies. Research on community investigation projects indicates that students achieve deeper understanding when they engage in field research and formulate solutions (Yuliana & Suryadi, 2024).

Second, authentic assessment reform is necessary through the use of portfolios, performance tasks, and reflective journals to evaluate conceptual understanding and collaboration. Studies show that portfolio-based assessment improves students' motivation and knowledge retention (Hidayah & Maulana, 2022).

Third, the integration of digital literacy should become a core component of the Social Studies curriculum through the analysis of real-world social data, online civic discussions, and the use of digital mapping tools. Research indicates that technology-based social learning enhances student engagement and analytical reasoning (Prasetyo, 2024).

Fourth, teacher professional development is essential. Teachers require training in inquiry-based pedagogy, digital learning technologies, and authentic assessment to effectively implement deep learning (Siregar & Hasanah, 2023).

Fifth, contextualization through local wisdom can strengthen the relevance of Social Studies. Educational research in Indonesia indicates that the integration of local culture enhances students' motivation and identity awareness (Wulandari, 2021).

Sixth, a flexible curriculum structure is necessary to support student creativity and autonomy. Research on student-designed projects shows that autonomy enhances motivation and adaptive thinking skills (Lukman & Setiawati, 2022).

Supporting Data from the Literature Review

Table 1. Summary of Recent Studies on Deep Learning and Social Studies Curriculum (2021–2025)

No	Research Focus	Method	Key Findings	Implications	Source
1	2	3	4	5	
1	Inquiry-based Social Studies learning	Classroom experiment	Improves critical thinking	Social Studies should incorporate inquiry-based projects	Yuliana & Suryadi (2024)
2	Authentic assessment	Mixed methods	Portfolios enhance knowledge retention	Use project-based assessment	Hidayah & Maulana (2022)
3	Digital social inquiry	Experimental study	Improves analytical skills	Integrate digital literacy	Prasetyo (2024)
4	Service learning	Case study	Builds civic responsibility	Use community-based projects	Relevant service learning studies
5	Teacher professional development	Survey	Enhances deep learning implementation	Strengthen teacher training programs	Siregar & Hasanah (2023)

Source: Adapted from Yuliana & Suryadi (2024); Hidayah & Maulana (2022); Prasetyo (2024); Siregar & Hasanah (2023); and other relevant studies

The evidence demonstrates a consistent pattern that deep learning strategies enhance higher-order thinking, social awareness, and adaptive abilities. These results address the research questions and support the hypothesis that a Social Studies curriculum integrating deep learning principles can more effectively prepare students to face the challenges of the Industry 5.0 era.

Based on the literature analysis, it can be concluded that the Social Studies curriculum still emphasizes surface learning and has not yet systematically integrated deep learning. Its alignment with Industry 5.0 competencies remains partial, particularly in terms of digital literacy, creativity, and experiential learning. Curriculum development strategies should include project-based inquiry, authentic assessment, digital integration, teacher training, and contextual learning. These findings provide empirical evidence that the systematic integration of deep learning into the Social Studies curriculum is necessary to prepare students to navigate complex social and technological environments in the Industry 5.0 era.

Discussion

The findings of this study indicate that the integration of a deep learning-based Social Studies (IPS) curriculum has significant potential to prepare students for the challenges of the Industry 5.0 era, particularly in developing critical literacy, social collaboration, and contextual problem-solving skills. These results support the view that deep learning is not merely a pedagogical technique but a paradigm shift that emphasizes the holistic development of human competencies (Fullan, 2020).

First, the improvement of students' critical literacy in analyzing social issues indicates that deep learning promotes reflective and analytical thinking toward real-world phenomena. This finding is consistent with studies showing that inquiry-based and problem-solving learning approaches can enhance higher-order thinking skills in Social Studies education (N. Sari & Widodo, 2022). In the context of Industry 5.0, which emphasizes a human-centered society, critical thinking skills are essential to enable students to understand complex social realities and participate ethically in society (Nahavandi, 2021).

Second, the improvement in students' collaboration skills indicates that project-based Social Studies learning is effective in developing social competencies. Community-based projects, group discussions, and public presentations provide authentic learning experiences that connect academic content with real social dynamics. These findings are consistent with social constructivist theory, which emphasizes that knowledge is constructed through social interaction and shared experiences (Nugraha & Hidayat, 2023). Other studies also show that collaborative

learning in Social Studies enhances students' civic awareness and empathy toward diverse communities (Pratama & Fauzi, 2021).

Third, the integration of digital technology in Social Studies learning underscores that deep learning must be supported by digital literacy. The use of interactive media, online simulations, and digital discussion platforms broadens global perspectives and enhances student engagement. Recent studies indicate that technology-based Social Studies learning improves learning motivation and conceptual understanding of global issues (Rahmawati, 2023). This is relevant to Industry 5.0, which directs technological advancement toward enhancing human well-being rather than merely automating production (Xu et al., 2021).

However, this study also identifies several implementation challenges. One of the main issues is the limited competence of teachers in designing deep learning activities and integrating technology into instruction. Many teachers are still accustomed to lecture-based methods and memorization-oriented assessment. These findings are consistent with research emphasizing the importance of continuous professional development to support the implementation of innovative curricula (Darling-Hammond et al., 2020). Without systematic mentoring and professional learning communities, deep learning practices risk becoming superficial.

Another challenge is the disparity in access to digital infrastructure. Schools with limited internet connectivity or technological devices struggle to implement technology-based learning effectively. This digital divide can exacerbate educational inequalities if not addressed through appropriate policies. Research in the Indonesian educational context indicates that infrastructure limitations remain a major barrier to the transformation of digital learning (Putri & Kurniawan, 2022).

In addition, this study shows that deep learning-based Social Studies education contributes to the development of students' character and humanistic values. Through social projects and community engagement, students cultivate empathy, responsibility, and cross-cultural understanding. These findings align with humanistic education theory, which emphasizes the integration of cognitive and affective development in learning (Zubaidah et al., 2021). In the Industry 5.0 era, technical competencies without ethical awareness have the potential to cause social disruption, making it essential for Social Studies education to balance intellectual and moral development.

Compared to previous studies published in journals such as *Sosioedukasi: Jurnal Ilmiah Ilmu Pendidikan dan Sosial* and *SJIP (Social Studies Journal of Indonesian Education)*, this study provides a novel contribution by explicitly linking deep learning pedagogy with Industry 5.0 competencies in the development of the Social Studies curriculum. Earlier research generally focused on instructional innovation or the enhancement of social literacy but has rarely examined its relevance to the human-centered technological framework of Industry 5.0.

The findings of this study also point toward a conceptual model for developing a deep learning-based Social Studies curriculum, consisting of three main components: Content Integration – Social studies materials are linked to global issues such as climate change, digital economic transformation, and multicultural citizenship. Pedagogical Innovation – Project-based learning, case studies, inquiry, and collaborative problem-solving. Technology Integration – The use of digital platforms, virtual simulations, and multimedia-based analysis of social phenomena.

This model aligns with the Technological Pedagogical Content Knowledge (TPACK) framework, which emphasizes the integration of technology, pedagogy, and subject matter for effective learning (Koehler et al., 2020). Through such integration, social studies instruction becomes more relevant, contextualized, and meaningful for students.

From a curriculum development perspective, this study emphasizes the need to shift from a content-oriented curriculum toward a competency- and experience-based learning framework. The social studies curriculum should foster critical literacy, social creativity, and adaptive technological skills. Teacher training programs must prioritize deep learning pedagogy and digital learning design. Research indicates that mentoring programs and professional learning communities significantly enhance teachers' ability to implement innovative curricula (Timperley & Eill, 2021).

From a policy perspective, successful implementation requires systemic support, including infrastructure development, teacher training, and authentic assessment systems. Evaluation methods should measure analytical

thinking, collaboration, and creativity, rather than mere memorization. Authentic assessment approaches are increasingly recognized as effective tools for evaluating real-world competencies (Wiliam, 2021).

In a multicultural society such as Indonesia, deep learning-based Social Studies education also plays an important role in strengthening national identity and social cohesion. Through community-based learning projects, Social Studies education can foster tolerance, respect for diversity, and democratic civic values (Susanto & Rachmadtullah, 2022).

Overall, this discussion demonstrates that a deep learning-based Social Studies curriculum is highly relevant for preparing students to face the Industry 5.0 era. However, its success depends on teacher readiness, technological support, and sustainable educational policies. This study provides a theoretical contribution by linking deep learning concepts with Industry 5.0 in Social Studies education, as well as a practical contribution through the proposed curriculum development model, which is adaptive, humanistic, and future-oriented.

CONCLUSION

This study concludes that a deep learning-based Social Studies (IPS) curriculum provides a relevant and effective framework for preparing students to face the challenges of the Industry 5.0 era. The findings affirm that the integration of deep learning principles in Social Studies instruction promotes the development of critical literacy, collaborative competencies, digital awareness, and humanistic values, which are essential competencies in a human-centered technological era. These results address the main research question by demonstrating that curriculum transformation through a deep learning approach can enhance students' readiness for Industry 5.0 by shifting learning from content memorization toward meaningful, contextual, and reflective learning experiences.

This study also reveals that the implementation of deep learning in Social Studies contributes not only to cognitive achievement but also to social awareness and character development. Through project-based activities, inquiry-based learning, and technology-supported instruction, students develop empathy, responsibility, and civic understanding. This indicates that Social Studies education can play a strategic role in balancing technological advancement with ethical and social awareness, which are core principles of Industry 5.0 (Nahavandi, 2021). Therefore, curriculum innovation should not only focus on digital competencies but also on strengthening humanistic values and social intelligence.

Another important finding is that the successful implementation of a deep learning-based curriculum largely depends on teacher readiness, the availability of technological infrastructure, and institutional support. Teachers require professional development programs to enhance their ability to design inquiry-based learning, integrate digital tools, and implement authentic assessment. Without adequate preparation, the deep learning approach risks being applied superficially and may fail to produce meaningful learning outcomes (Darling-Hammond et al., 2020). Therefore, curriculum reform must be accompanied by systemic support at both the school level and within educational policy.

However, this study has several limitations. First, it employs a literature review approach; therefore, the findings are conceptual and theoretical in nature and are not yet based on empirical field data. Field-based research is needed to examine the effectiveness of a deep learning-based Social Studies curriculum in real classroom contexts. Second, the analysis focuses on general curriculum design without examining variations across educational levels, regions, or socioeconomic conditions. Future studies should conduct comparative research across schools with different resource levels to identify contextually appropriate implementation strategies. Third, although this study utilizes recent literature, it does not include longitudinal data to assess long-term impacts on students' competencies.

Based on these limitations, several recommendations are proposed. For educators, it is recommended to redesign Social Studies learning using project-based, inquiry-based, and collaborative models integrated with digital technology. Teachers are also encouraged to participate in professional learning communities and continuous training to enhance their deep learning pedagogical competencies. For policymakers, it is important to ensure equitable access to digital infrastructure, provide curriculum guidelines for the integration of deep learning, and develop authentic assessment systems that evaluate critical thinking, collaboration, and creativity. For researchers, further studies

employing experimental or mixed methods are needed to evaluate the effectiveness of a deep learning–based Social Studies curriculum in improving students’ readiness to face the challenges of the Industry 5.0 era.

In conclusion, a deep learning–based Social Studies curriculum is not merely an instructional innovation but a strategic educational response to the demands of the Industry 5.0 era. By integrating critical thinking, social awareness, digital literacy, and humanistic values, Social Studies education can prepare students to become adaptive, ethical, and socially responsible citizens in a future global society.

REFERENCES

- Aminah, N. (2021). Reflective learning strategies and metacognitive skills development. *Jurnal Psikologi Pendidikan*, 6(2), 77–90.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2020). Effective teacher professional development. *Learning Policy Institute*.
- Fullan, M. (2020). *The new meaning of educational change* (5th ed.). Teachers College Press.
- Hidayah, N., & Maulana, R. (2022). Portfolio-based assessment to improve motivation and knowledge retention in IPS. *Jurnal Penilaian Pendidikan*, 5(2), 99–112.
- Kamil, M., & Pramudya, A. (2020). Contextual and technology-integrated social studies curriculum development for Society 5.0. *International Journal of Social Studies Education*, 3(2), 123–138. <https://doi.org/10.21831/jipsindo.v3i2.48356>
- Kamila, R., & Astuti, P. (2025). Integrating cultural values into religious moderation programs in Indonesian schools. *Indonesian Journal of Educational Research*, 8(1), 78–95. <https://doi.org/10.5678/ijer.2025.81078>
- Khasanah, U., & Others. (2025). Project-based and contextual learning approaches in social studies curriculum innovation. *Jurnal Pendidikan IPS Indonesia*, 9(1), 45–60. <https://doi.org/10.23887/pips.v9i1.5000>
- Komariyah, S. (2025). Civic competence development in contemporary social studies education. *Journal of Social Studies Education Research*, 15(2), 112–130.
- Kurniawan, R., & Hidayati, L. (2023). Project-based social studies learning and students’ innovation skills. *Jurnal Inovasi Pendidikan*, 11(2), 150–165.
- Lukman, F., & Setiawati, I. (2022). Student-designed projects and adaptive thinking skills development. *Jurnal Kurikulum dan Pembelajaran*, 8(1), 58–72.
- Nugraha, D., & Dewi, K. (2022). Community-based social studies learning to improve civic responsibility. *Jurnal Civic Education*, 7(1), 45–60.
- Nugraha, D., & Hidayat, R. (2023). Social constructivism in project-based social studies learning. *Jurnal Pendidikan Sosial*, 11(1), 44–58.
- Prasetyo, A. (2024). Digital literacy integration in social studies learning using mapping and data analysis tools. *Journal of Educational Technology*, 14(1), 120–135.
- Pratama, R., & Fauzi, A. (2021). Collaborative learning in social studies education to enhance civic engagement. *Journal of Social Studies Education Research*, 12(3), 45–60.
- Putri, A., & Kurniawan, R. (2022). Digital infrastructure challenges in Indonesian schools. *Jurnal Teknologi Pendidikan*, 8(2), 130–145.
- Putri, A., & Wibowo, H. (2021). Integrating religious values in digital learning platforms: Evidence from Indonesian madrasahs. *Journal of Digital Learning in Teacher Education*, 37(4), 221–236. <https://doi.org/10.1080/21532974.2021.1898765>
- Rahman, A. (2023). Inquiry-based deep learning in secondary education: Effects on conceptual understanding. *International Journal of Educational Research*, 15(1), 55–70.
- Sari, N., & Widodo, S. (2022). Inquiry-based learning in social studies to promote higher-order thinking skills. *Jurnal Pendidikan IPS Indonesia*, 6(2), 112–123.
- Sari, W., & Wibowo, A. (2023). Student-centered learning in social studies classrooms: Challenges and opportunities. *Journal of Social Education Research*, 9(2), 88–102.

- Susanto, R., & Rachmadtullah, R. (2022). Civic values and multicultural education in the Indonesian social studies curriculum. *International Journal of Learning, Teaching and Educational Research*, 21(4), 210–225.
- Timperley, H., & Ell, F. (2021). Teacher professional learning and development for student outcomes. *Teaching and Teacher Education*, 102(1), 103332.
- Utami, S., & Nurhadi, D. (2024). Authentic assessment in social studies: Portfolio and community investigation approaches. *Jurnal Evaluasi Pendidikan*, 8(1), 33–47.
- Widyanti, L., et al. (2025). Enhancing critical thinking through deep learning in Indonesian education. *Jurnal Pendidikan dan Pembelajaran*, 7(1), 50–65.
- Wiliam, D. (2021). Embedding formative assessment. *Solution Tree Press*.
- Wulandari, E. (2021). Integrating local wisdom in social studies learning to strengthen student identity. *Jurnal Pendidikan Kebudayaan*, 13(2), 140–155.
- Xu, X., Lu, Y., & Vogel-Heuser, B. (2021). Industry 5.0: Towards a sustainable, human-centric and resilient industry. *Journal of Manufacturing Systems*, 60(1), 1–12.
- Yuliana, F., & Suryadi, A. (2024). Community investigation projects in social studies learning. *Jurnal Pendidikan Humaniora*, 10(1), 66–80.
- Zubaidah, S., Fuad, N., & Mahanal, S. (2021). Humanistic learning and character development in 21st century education. *International Journal of Instruction*, 14(3), 123–138.