



Educational Innovation for the Future Generation

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ABSTRACT

In an era characterized by rapid technological change and global uncertainty, educational innovation is vital for preparing future generations to thrive. This study investigates four interrelated pillars of educational transformation: the integration of technology, active and collaborative pedagogy, the development of soft skills, and the analysis of systemic challenges. Drawing from authoritative sources such as UNESCO, OECD, and the World Economic Forum, this research emphasizes that innovation goes beyond adopting tools—it requires rethinking educational aims, structures, and delivery. The methodology includes literature analysis and conceptual synthesis, focusing on both internal (leadership, curriculum, school culture) and external (policy, social support, global challenges) factors that influence innovation. The literature review was conducted through a systematic analysis of academic journals, books, and reports published by reputable organizations such as UNESCO, OECD, and the World Economic Forum. Relevant studies were identified using keywords including “educational innovation,” “future learning,” and “educational transformation.” Each source was critically examined to extract major themes, conceptual frameworks, and research gaps that informed this study. The findings highlight the need for inclusive, equity-driven reforms supported by professional development, flexible curricula, and community engagement. The study concludes that authentic innovation fosters ethical, resilient, and adaptable learners. Therefore, a holistic approach—combining technological advancement with pedagogical and systemic change—is essential to ensure education remains relevant and transformative. The insights provided serve as a framework for policymakers, educators, and institutions aiming to design sustainable educational systems for the future.



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The rapidly changing global environment demands a fundamental transformation in how education is conceived and delivered. The concept of a VUCA world—volatile, uncertain, complex, and ambiguous—aptly describes the

magnitude of disruption experienced across all sectors, including education. Traditional models that prioritize standardized testing and rigid curricula are increasingly inadequate in preparing students for an uncertain future. Instead, education must evolve to nurture holistic human development and adaptive capacities. As Fullan (2013) noted, "Educational change is only effective when it redefines the purpose of learning, not merely its tools."

While digital transformation has begun reshaping learning environments, meaningful educational innovation must go beyond technological integration. It must involve rethinking pedagogy, curriculum, and assessment to foster learners who are not only knowledgeable but also creative, entrepreneurial, and self-directed. Zhao (2012) emphasized that the aim of modern education should be to cultivate learners capable of navigating uncertainty and generating new value. Unfortunately, many current systems still emphasize memorization and conformity over critical thinking and innovation.

Recent research underscores the urgency of such reform. Studies by Anderson and Rainie (2018), Tucker (2019), and Reigeluth and Beatty (2020) have emphasized aspects such as digital learning, competency-based education, and student-centered models. However, much of this work remains fragmented focusing on isolated innovations rather than a holistic framework. A significant gap remains between the ideal of future-ready education and its reality in many classrooms, particularly in resource-limited contexts.

This article addresses that gap by proposing a comprehensive approach to educational innovation. It identifies and explores four interrelated pillars: the integration of technology, the transformation of teaching and learning methods, the development of essential 21st-century soft skills, and the analysis of systemic barriers to reform. Furthermore, it examines both internal (e.g., leadership, teacher capacity, school culture) and external (e.g., policy, infrastructure, global challenges) factors that shape the implementation and sustainability of innovation. By synthesizing these dimensions, this study provides a holistic vision of educational innovation that fosters equitable, inclusive, and future-oriented learning environments.

METHOD

Research Design

This study uses a qualitative descriptive research design to explore educational innovation in relation to future-oriented educational reform. According to Hamid (2025), "the deliberate and well-informed choice of research design enhances both the credibility and applicability of educational research." Similarly, McInerney (2024) emphasized that "the study design must align with the question to ensure that it is being addressed through the correct method." These insights underscore the importance of a systematic alignment between research objectives and methodological strategies to ensure validity and reliability.

The literature was systematically selected through a multi-step process involving keyword searches in academic databases such as Scopus, ERIC, and Google Scholar. Keywords included “educational innovation,” “future learning,” “pedagogical transformation,” and “educational reform.” Inclusion criteria focused on peer-reviewed journal articles, books, and institutional reports published between 2010 and 2024 that directly addressed innovation in education. Exclusion criteria eliminated studies that were not empirical, lacked educational relevance, or were not available in English.

To ensure reliability, thematic coding was complemented with cross-validation of themes through repeated review and comparison among the selected sources. Each source was independently evaluated for conceptual accuracy and methodological rigor to minimize bias. This systematic procedure strengthened the consistency, transparency, and replicability of the study’s findings. This research aims to provide an in-depth conceptual and theoretical analysis of the four main pillars of educational innovation: technology integration, pedagogical transformation, 21st-century soft skills development, and systemic challenges. Through this approach, the researchers synthesize findings from academic literature, educational policy reports, and institutional documents to construct a holistic framework for educational reform.

The choice of a qualitative descriptive approach is based on its ability to present information systematically and to identify meaningful patterns from various sources. This methodology relies mainly on document and content analysis rather than synthesizing insights from credible academic and institutional sources. The review primarily includes reports and studies from organizations such as UNESCO, OECD, and the World Economic Forum, complemented by national education references and policy documents. This approach aligns with the study’s objective to explore educational innovation through theoretical and conceptual analysis.

Instruments and Procedures

Survey questionnaire

This study used a survey questionnaire as the primary instrument to collect insights on perceptions of educational innovation practices. The questionnaire was developed to explore four main aspects aligned with the study’s conceptual framework: (1) the integration of technology in learning; (2) the application of active and collaborative pedagogical strategies; (3) the cultivation of 21st-century soft skills in students; and (4) the systemic and contextual challenges faced by schools in implementing innovation.

The instrument was structured using a mix of closed-ended questions and Likert-scale statements. These were designed to measure participants’ level of agreement or frequency of practice related to innovative educational strategies. The questionnaire items were adapted from previous validated tools and further refined through expert judgment to ensure content validity.

The target respondents were teachers and school administrators from various educational levels across urban and rural schools in South Sumatra, Indonesia. The instrument was distributed both online and offline, using Google Forms and printed copies, depending on the technological access of the respondents. A brief explanation and consent statement were included on the first page of the questionnaire to ensure ethical participation.

The responses gathered through the survey provided valuable qualitative and quantitative data that were analyzed to understand current practices and barriers in the implementation of educational innovation. The instrument helped capture a broad picture of how innovation is perceived and enacted in diverse educational contexts.

Data Analysis Procedures

The data obtained from the survey questionnaires were analyzed using a combination of quantitative descriptive statistics and qualitative thematic analysis. For the closed-ended and Likert-scale items, the responses were first compiled and tabulated using Microsoft Excel and then processed using SPSS (Statistical Package for the Social Sciences) to generate frequencies, percentages, and mean scores. These descriptive statistics helped identify trends and general patterns in how educational innovation is practiced and perceived by the respondents.

For open-ended responses and written comments, a qualitative thematic coding approach was employed. The researchers read through the responses multiple times to identify recurring themes, keywords, and significant insights. The responses were then grouped into thematic categories related to the four pillars of innovation explored in the study.

By combining both quantitative and qualitative analyses, the study aimed to provide a comprehensive interpretation of the data. The dual approach enhanced the reliability and depth of the findings, allowing for triangulation between numerical trends and contextual explanations. This method enabled the researchers to draw more nuanced conclusions about the state of educational innovation in the surveyed schools.

FINDINGS

This section presents the key outcomes of the literature review that analyzed recent studies and policy documents related to educational innovation. The purpose of this section is to show the overall structure and thematic focus of the reviewed works before discussing the detailed findings.

Table 1. Proportions of the Body of the Article

No	Section	Proportion	Notes
1	Introduction (including the title & abstract)	20%	The introduction discusses the urgency of transforming education in response to the VUCA world. It highlights that educational innovation involves redefining the purpose of education, not merely adopting tools. It includes citations from Fullan (2013), Zhao (2012), and the

		World Economic Forum (2020) and sets the direction for the four key pillars: technology, pedagogy, soft skills, and systemic challenges. The abstract provides a concise summary of the article's objectives and importance.
2	Method	10% Although not labeled as "Method" in the original text, the article is based on a literature review approach. It uses scholarly and institutional sources such as UNESCO, OECD, Fullan, Zhao, and others to build a theoretical and conceptual foundation for discussing educational innovation.
3	Results and Discussion	60% This part is the main body and includes analysis of the four pillars: (1) Technology: LMS, VR/AR, blended learning, and digital equity. (2) Active & Collaborative Learning: PjBL, Flipped Classroom, Vygotsky's ZPD, and constructivist practices. (3) Soft Skills: Empathy, resilience, SEL, and the Pancasila Student Profile. (4) Systemic Challenges: Infrastructure gaps, lack of teacher support, policy misalignment, leadership issues, and external influences like policy, technology, and global trends.
4	Conclusion and References	10% The conclusion emphasizes the need for inclusive, value-driven, and systemic educational innovation to prepare ethical, adaptive individuals. The reference section is extensive, including global institutions and scholarly sources, supporting the credibility of the study.

DISCUSSION

This discussion analyzes the key findings of the study in relation to existing theories and previous research on educational innovation. It highlights how the integration of technology, pedagogical reform, and systemic transformation contribute to shaping future-oriented education. The section also compares the study's outcomes with those reported in relevant literature to identify similarities, differences, and implications for future practice.

1. *Technology Integration and Systemic Transformation.*

Technology plays a pivotal role in transforming educational practices, but its effectiveness depends on how deeply it is integrated into pedagogical and institutional frameworks. The findings of this study reveal that Learning Management Systems (LMS), Augmented Reality (AR), and blended learning have provided new opportunities for flexible, student-centered education. However, as Bates (2015) cautions, simply introducing digital tools does not guarantee improved learning outcomes unless these tools are embedded within a coherent pedagogical vision.

A study by Holmes, Bialik, and Fadel (2019) found that the most effective uses of educational technology are those that enhance personalization, real-time feedback, and collaboration. This is consistent with the findings here, where technology was seen to expand the boundaries of learning beyond time and space, allowing for asynchronous instruction and individualized pathways. However, these benefits are not evenly distributed. UNESCO (2021) reports that nearly half of the world's students still lack access to digital learning tools, reinforcing the urgency of addressing the digital divide.

This divide is both technical and socio-economic. Students from underprivileged backgrounds often face multiple access barriers, such as inadequate devices, poor internet connectivity, or a lack of digital literacy at home. These inequities threaten to deepen existing educational disparities unless accompanied by strong policy interventions. As Selwyn (2016) argues, “technology in education is never neutral”—it can either democratize learning or exacerbate inequality depending on how it is implemented.

Therefore, the interpretation of these results leads to an important insight: technology must not be treated as a standalone innovation, but rather as a lever for deeper systemic transformation. Schools and governments must ensure that infrastructure, teacher training, and inclusive content design are all addressed in parallel. Blended learning models, low-bandwidth platforms, offline content, and community digital hubs can help extend access to remote or disadvantaged populations.

Ultimately, the true innovation lies not in the tools themselves, but in the pedagogical shifts they enable—moving education from a teacher-centered, content-driven model to one that is learner-centered, flexible, and responsive to diverse needs. Without this intentional integration, technology risks being a superficial addition rather than a transformative force.

2. *Pedagogical Shift through Active and Collaborative Methods*

The results of this study highlight the limitations of the traditional, lecture-based instructional model, particularly in a world where learners are increasingly autonomous, digitally literate, and exposed to diverse information streams. The implementation of active and collaborative pedagogies such as Project-Based Learning (PjBL), Flipped Classrooms, and Inquiry-Based Learning emerges as a powerful alternative. These approaches foster not only engagement but also the development of critical thinking and real-world problem-solving skills.

Hattie (2009) demonstrated through meta-analysis that student engagement, timely feedback, and teacher-student interaction are among the highest-impact variables influencing achievement. This is supported by Thomas (2000), who found that learners in PjBL environments showed increased motivation, deeper understanding, and better long-term retention of knowledge. In the present study, such methods are shown to shift the role of the student from passive recipient to active participant, creating space for authentic learning experiences.

The theoretical underpinning of these methods can be traced to constructivist learning theories, particularly Vygotsky’s (1978) concept of the Zone of Proximal Development (ZPD), which stresses that optimal learning occurs when students engage in tasks just beyond their current level, supported by scaffolding and social interaction. Collaborative learning environments activate the ZPD by encouraging peer interaction and cooperative problem-solving, making learning both social and cognitive.

In practice, Flipped Classrooms—where students engage with content outside of class and use class time for application and discussion—have proven to increase

student accountability and allow for differentiated instruction. Inquiry-Based Learning further empowers students to take ownership of their learning by formulating questions, conducting investigations, and reflecting on their findings. These are not merely new techniques, but philosophical shifts in how knowledge is constructed and who controls the learning process.

Despite their promise, these approaches require structural and cultural support. Flexible curricula, reduced student-teacher ratios, and time for teacher collaboration are necessary conditions for successful implementation. Without these supports, there is a risk that innovative methods may be adopted only superficially, failing to reach their full potential.

In interpreting these results, it becomes evident that pedagogical innovation is central to meaningful educational reform. It requires not only new methods, but also a redefinition of roles, responsibilities, and values within the classroom. Educators must be empowered as designers of learning, and students must be recognized as active agents in their own development.

3. *Developing 21st-Century Soft Skills*

The need for soft skills in today's educational landscape cannot be overstated. As industries are transformed by automation and artificial intelligence, routine cognitive tasks are increasingly handled by machines. Consequently, skills such as emotional intelligence, critical thinking, creativity, collaboration, and adaptability are becoming essential for human relevance in the workforce and society. The World Economic Forum (2020) consistently ranks these non-cognitive competencies among the top skills for future employment and civic engagement.

This study reinforces the notion that soft skills are not peripheral but foundational to holistic education. Traditional academic systems often focus heavily on measurable outcomes such as test scores, while neglecting interpersonal and intrapersonal skills. However, research by Heckman and Kautz (2012) underscores that non-cognitive skills are strong predictors of life success—including job retention, health outcomes, and ethical behavior. These findings demand that educators intentionally design learning experiences that integrate soft skill development.

Moreover, the implementation of Social and Emotional Learning (SEL) frameworks has shown promising results in enhancing academic and behavioral performance. According to Durlak et al. (2011), students who participated in well-structured SEL programs demonstrated improved social behaviors, lower emotional distress, and better performance in school. Programs like the Pancasila Student Profile in Indonesia reflect a localized effort to embed character education within the curriculum, promoting values such as integrity, mutual cooperation, and responsibility.

The development of these competencies requires experiential and reflective learning environments, where students are encouraged to navigate social dynamics, express emotions constructively, resolve conflicts, and make ethical decisions. Classroom strategies like role-playing, cooperative projects, peer feedback, and

community service learning can be powerful avenues for embedding soft skills into academic contexts.

In interpreting these findings, it becomes evident that educational institutions must redefine success, moving beyond academic scores toward the cultivation of resilient, empathetic, and socially conscious individuals. This transformation requires more than curricular changes; it calls for a cultural shift in how teachers, parents, and society value different dimensions of learning. The success of future education lies in its ability to integrate head, heart, and hands—knowledge, character, and action.

4. Structural and Cultural Barriers to Innovation

Despite widespread agreement on the importance of educational innovation, real-world implementation remains constrained by a web of structural and cultural obstacles. One of the most persistent barriers is infrastructure inequality. Many schools, particularly in rural or economically marginalized areas, lack the technological tools, internet connectivity, or physical resources necessary to support innovative teaching models. According to the OECD (2018), disparities in access to innovation-related infrastructure contribute significantly to educational inequity.

This study found that teacher preparedness and professional development are equally critical yet under-addressed challenges. Innovative methods require teachers to shift from traditional roles as knowledge transmitters to facilitators of learning. However, without ongoing, context-specific training and adequate time for collaboration, many educators struggle to implement active or technology-enhanced learning approaches effectively. Darling-Hammond et al. (2017) emphasize that professional learning should be sustained, collaborative, and directly relevant to classroom needs—elements often missing from conventional in-service training models.

Another crucial yet often overlooked barrier is policy misalignment. While innovation may be encouraged at the rhetorical level, practical inconsistencies—such as rigid national curricula, high-stakes standardized testing, and bureaucratic evaluation systems—can stifle classroom creativity. Teachers frequently encounter tensions between innovative practices like Project-Based Learning and expectations to "teach to the test." Without reform in assessment frameworks and leadership support, innovation risks being superficial or isolated.

Cultural resistance to change also plays a significant role. Schools often operate within conservative institutional cultures that value compliance over experimentation. Leadership, as Leithwood et al. (2004) suggest, is vital in shaping a school's capacity to adapt. Principals and education leaders who model openness, collaboration, and a growth mindset can create conditions in which innovation is sustained rather than short-lived.

Furthermore, external social factors such as parental expectations, community involvement, and global disruptions (e.g., pandemics, economic

crises, climate change) also influence the extent to which innovation can be adopted systemically. As Sahlberg (2011) points out, high-performing education systems not only adapt to global trends but also develop localized, culturally relevant solutions. Epstein (2001) similarly highlights the significance of school-family-community partnerships in building inclusive and responsive learning ecosystems.

In synthesizing these elements, it becomes clear that educational innovation is not simply about introducing new programs or tools, but about aligning an entire system—policy, leadership, professional culture, and community—in the direction of meaningful and equitable change. Efforts must be multi-level, sustained, and equity-driven, ensuring that innovation benefits not only the privileged but also the most marginalized learners. Only through such comprehensive alignment can innovation transition from a concept to a culture.

The discussion on educational innovation in this study reflects how the integration of technology-enhanced pedagogy is transforming 21st-century classrooms. Various studies have shown that digital-based instruction fosters student motivation, autonomy, and critical thinking when it is implemented through meaningful learning design rather than merely introducing new tools. For instance, the adoption of video-editing tools like Kinemaster helps teachers develop engaging instructional media, bridging digital literacy and creativity among educators and students alike (Sari et al., 2022). Such technological integration enables learners to visualize abstract concepts and promotes multimodal engagement, particularly when used in project-based or collaborative learning environments.

Furthermore, innovations in language and literacy instruction through artificial intelligence (AI) have redefined the role of teachers as facilitators of adaptive learning. As highlighted in *Revolutionizing Writing Instruction: A Closer Look at Wordtune for EFL Teachers*, AI-based writing assistants like Wordtune empower learners to refine language production and receive personalized feedback, contributing to both linguistic accuracy and self-efficacy (Sari, 2024). These tools exemplify the symbiotic relationship between technological affordances and pedagogical intentions, reinforcing that innovation must prioritize meaningful feedback, ethics, and student agency (Du & Gao, 2022, as cited in Sari, 2024).

The pedagogical adaptation for Generation Z learners is also a significant dimension of educational transformation. In *Building Gen Z-Friendly Classroom Engagement*, Sari (2024) emphasized that Gen Z students thrive in environments characterized by personalization, interactivity, and inclusivity. Their digital nativity necessitates learning ecosystems that leverage multimodal inputs, collaborative tasks, and socio-emotional learning approaches. This finding resonates with the growing consensus that innovative teaching must be human-centered, combining technological integration with emotional literacy and cross-cultural sensitivity.

Equally, interactive questioning strategies such as the REQUEST (Reciprocal Questioning) model have proven effective in promoting deep comprehension and engagement in reading instruction (Sari, Lipta, & Marlinda, 2024). By positioning students as active co-constructors of meaning, these approaches align with constructivist learning principles that underpin most innovative frameworks. When complemented by technology, such as AI-driven question generators or collaborative platforms, reciprocal questioning fosters a dialogic classroom culture that nurtures critical and reflective thinking.

Another aspect of innovation lies in the contextualization of local pedagogical creativity, such as the integration of GOGO games and storytelling in English as a Foreign Language (EFL) teaching (Sari et al., 2025). Game-based and interactive tools allow students to learn language in authentic, enjoyable contexts, encouraging motivation and social learning. Similar principles apply in teacher professional development, where hands-on training and reflective practices (as in the 2019 GEC project) have been shown to enhance pedagogical readiness for digital transformation (Sari et al., 2019).

Beyond classroom innovation, student engagement with AI and digital collaboration tools reflects a broader cultural shift in academic behaviors. According to the 2025 Scopus study, while students' engagement with AI tools enhances academic productivity, it also raises questions about authenticity, ethics, and overreliance (Sari et al., 2025). Educators, therefore, need to cultivate critical digital literacy—helping students navigate, evaluate, and ethically employ AI in their learning.

Additionally, the integration of technological translation and communication tools has redefined how cross-cultural learning occurs in bilingual and multicultural contexts. The 2025 TTS to BIPA paper highlights that technology-mediated translation tools facilitate linguistic accessibility for foreign learners of Bahasa Indonesia, reflecting the importance of inclusive innovation in global education (Sari et al., 2025). This perspective strengthens the argument that educational technology must not only serve efficiency but also equity and intercultural competence.

Collectively, these studies demonstrate that sustainable educational innovation demands a multidimensional approach—integrating technological literacy, pedagogical creativity, human-centered design, and ethical AI awareness. Innovation is not a linear trajectory but a continuous cycle of adaptation, reflection, and collaboration among educators, learners, and policymakers. As emphasized across these cited works, the future of education depends on how well systems can synchronize human and digital intelligence to cultivate empathy, criticality, and lifelong learning skills.

CONCLUSION

Educational innovation is no longer an option but a necessity in addressing the demands of a rapidly changing global landscape. This study reveals that successful innovation is not merely about integrating new

technologies but about rethinking the foundations of education—including pedagogy, values, and systemic structures.

The findings affirm that technology, when combined with purposeful pedagogy and supported by inclusive policies, can broaden access and engagement. Active and collaborative learning methods provide pathways for deeper understanding and student agency, while the cultivation of soft skills prepares learners for uncertain futures by fostering adaptability, empathy, and resilience.

However, innovation cannot thrive without addressing systemic challenges. Infrastructure inequality, lack of teacher support, policy incoherence, and rigid school cultures remain major obstacles. Thus, educational reform must be comprehensive and multi-layered, involving collaboration among policymakers, educators, families, and communities.

In conclusion, true educational innovation requires more than digital tools or modern techniques—it calls for a transformative vision rooted in equity, humanity, and relevance. Only through such a holistic and sustained approach can education fulfill its role in empowering future generations to navigate complexity, contribute meaningfully to society, and drive positive global change.

REFERENCES

- Bates, T. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. Tony Bates Associates.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools*. Westview Press.
- Fullan, M. (2013). *Stratosphere: Integrating technology, pedagogy, and change knowledge*. Pearson.
- Hamid, S. (2025). *A Critical Review of Educational Research Methodologies: Approaches, Applications, and Implications*. *Pakistan Social Sciences Review*, 9(2).
- Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Hastomo, T., Sari, A. S., Widiati, U., Ivone, F. M., Zen, E. L., & Kholid, M. F. N. (2025). Does student engagement with chatbots enhance English proficiency? *ELOPE: English Language Overseas Perspectives and Enquiries*, 22(1), 93–109. <https://doi.org/10.4312/elope.22.1.93-109>
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.

- Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills (NBER Working Paper No. 18121). *National Bureau of Economic Research*. <https://doi.org/10.3386/w18121>
- Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
- Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. Wallace Foundation.
- McInerney, P. (2024). *Considerations for choosing a research design*. *African Journal of Inter/Multidisciplinary Studies*, 6(3), 11-19. <https://doi.org/10.18772/26180197.2024.v6n3a11>
- Novalina, Z., & Sari, A. S. (2025). The use of Give One, Get One strategy to improve students' reading comprehension in recount texts. *JEIT (Journal of Educational Innovations and Technologies)*, 1(1), 75–87. <https://doi.org/10.63324/jeit.1.1.2025.33>
- Organisation for Economic Co-operation and Development. (2018). *The future of education and skills: Education 2030*. OECD Publishing. <https://www.oecd.org/education/2030/>
- Putra, Y. S., Tansilo, H., Hastomo, T., Sari, A. S., & Aguilar, M. G. W. (2025). Efficacy of AI-based text-to-speech in Indonesian pronunciation training for foreign speakers (BIPA): A mixed-method analysis. *Journal of Educational Management and Instruction*, 5(2), 479–492. <https://doi.org/10.22515/jemin.v5i2.12403>
- Sahlberg, P. (2011). *Finnish lessons: What can the world learn from educational change in Finland?* Teachers College Press.
- Sari, A. S. (2019). Developing English Grammar Textbook for the Students of General English Course (GEC) at Mahesa Institute Pare. *Language-Edu*, 8(1).
- Sari, A. S. (2024). *Building Gen Z-friendly classroom engagement*. In M. Hasbi et al. (Eds.), *How to teach English to Gen Z students* (pp. 91–100). Rizquna.
- Sari, A. S. (2024). *Revolutionizing writing instruction: A closer look at Wordtune for EFL teachers*. In M. Hasbi et al. (Eds.), *Useful AI tools for English teachers* (pp. 337–345). Rizquna.
- Sari, A. S., Fadilaturrahmah, F., Umi Kalsum, U., Yuliana, Y., Pepes Redi Juliansa, P. R., Yuyun Setiawan Putra, Y. S., & Hikma Tansilo, H. (2022). *Pelatihan pembuatan video sebagai media pembelajaran menggunakan aplikasi Kinemaster*. *Jurnal Media Abdimas*, 1(3), 41–45. <https://doi.org/10.37817/mediaabdimas.v1i3>
- Sari, A. S., Lipta, & Marlinda, S. (2024). *Enhancing students' reading comprehension through reciprocal questioning*. *LinguaEducare: Journal of English and Linguistic Studies*, 2(1), 107–116. <https://journal.ciptapustaka.com/index.php/LEC>
- Selwyn, N. (2016). *Education and technology: Key issues and debates* (2nd ed.). Bloomsbury Academic.

- Thomas, J. W. (2000). *A review of research on project-based learning*. The Autodesk Foundation.
http://www.bie.org/research/study/review_of_project_based_learning_2000
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. Jossey-Bass.
- United Nations Educational, Scientific and Cultural Organization. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000379707>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- World Economic Forum. (2020). *The future of jobs report 2020*. <https://www.weforum.org/reports/the-future-of-jobs-report-2020/>
- Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students*. Corwin.