*Smart: Journal of Multidisciplinary Educational* *ISSN 3025-3497*
Vol. 2, No. 4, 2025, pp. 205 ~ 215
Open Acces: *https://doi.org/10.61677/smart.v2i4.602*

# THE USE OF TECHNOLOGY IN DISTANCE LEARNING IN ELEMENTARY SCHOOLS: A POST-PANDEMIC LITERATURE ANALYSIS

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Received April 25, 2025; Revised May 15, 2025; Accepted May 20, 2025; Published May 28, 2025

***ABSTRACT***

*This study aims to analyze the use of technology in distance and blended learning in Indonesian elementary schools during the post-pandemic era, focusing on teacher readiness, infrastructure availability, student engagement, and home learning support. Employing a literature review method, this research systematically synthesizes studies published between 2020 and 2025 from Scopus, Google Scholar, and national academic repositories. The findings reveal significant disparities between urban and remote schools regarding digital literacy, internet stability, and access to learning devices. Urban schools demonstrate higher levels of teacher training, stable connectivity, and stronger parental support, resulting in higher student engagement and improved learning outcomes. Conversely, rural and remote schools struggle with limited infrastructure, inadequate teacher digital competence, and low parental involvement, which negatively affect learning quality. The novelty of this research lies in its integrative framework combining technology readiness, pedagogical adaptation, and socio-contextual equity at the elementary education level—a focus that remains underexplored in post-pandemic digital learning studies. Furthermore, the study contributes globally by highlighting how developing countries can transform emergency remote learning into sustainable hybrid models aligned with inclusive education principles. It concludes that successful implementation of distance learning in primary education requires holistic coordination between teachers, infrastructure providers, families, and policymakers. These findings provide valuable insights for educators and policymakers to design equitable, technology-driven learning systems capable of sustaining education quality in both urban and remote settings.*

***Keywords:*** *Distance learning, elementary education, digital literacy, post-pandemic, technology integration*

## INTRODUCTION

The concept of STEM (Science, Technology, Engineering, Mathematics) In the wake of the global disruption caused by the COVID-19 pandemic, elementary schools rapidly adopted distance learning modalities, underscoring the central role of digital literacy in ensuring effective technology-mediated instruction. For young learners in primary education, digital literacy refers to the ability to access, evaluate, use and create information via digital tools and platforms, enabling meaningful engagement in remote learning environments (Wijayanti, Dwiningrum, & Saptono, 2025). The sudden pivot to online and blended formats challenged traditional classroom paradigms and placed new demands on both educators and students to adapt to technology-rich instructional settings

(Waruwu, 2023). Within this context, the theoretical framework of the Technology Acceptance Model (TAM) becomes relevant: teachers' and students' perceptions of usefulness and ease of use of educational technology directly influence their behavioural intention to use it, thereby affecting actual adoption (Davis, 1989, as cited in many recent studies). Furthermore, socio-cultural learning theories emphasise that technology does not operate in a vacuum learners' success in distance education is mediated by their home environment, teacher support, access to devices and connectivity, and their digital competencies (Sulmiah, 2023). The digital divide phenomenon differential access and readiness among students remains a critical barrier in the effective deployment of distance learning in elementary contexts (Sholihin & Irvani, 2025). It is therefore foundational to explore how technology-enhanced learning in primary schools combines pedagogical, technological and socio-contextual dimensions to promote equitable access and improved learning outcomes. In this sense, theory suggests that integration of technology must be accompanied by teacher training, infrastructure readiness and scaffolding of young learners to fulfill its potential.

As schools transition into a post-pandemic era, blended and hybrid learning models are emerging as theoretically sound approaches to combine the affordances of both face-to-face and remote instruction. Blended learning theory proposes that mixing synchronous and asynchronous digital activities with in-class interaction can enhance flexibility, learner autonomy and resource-rich environments, thereby supporting differentiated instruction and student engagement (Hendrowati, 2025). At the elementary level, where learners are still developing self-regulation and digital fluency, scaffolding becomes essential: guided digital tasks, peer collaboration, and teacher facilitation help students translate technology access into meaningful learning (Tuhuteru, 2023). Cognitive load theory is also relevant, as poorly designed digital content may overwhelm young learners' working memory, diminishing learning gains; hence effective distance learning technology must balance novelty and cognitive ease. From a socio-constructivist vantage, technology-enabled platforms offer opportunities for interactive knowledge construction, peer interaction, and feedback loops that extend beyond physical classrooms (Fikri, 2023). Importantly, frameworks of inclusive education stress that the integration of technology must not exacerbate existing inequities schools must ensure all learners, regardless of background, have the devices, connectivity and support required to succeed in a technology-mediated distance learning environment (Sulmiah, 2023). Collectively, these theoretical perspectives provide a foundation for analysing how technology was utilised in elementary distance learning during and after the pandemic, and how its effective implementation depends on the interplay of pedagogical design, digital readiness and socio-economic context.

In the post-pandemic context, elementary schooling via distance or blended formats continues to reveal substantial implementation problems, particularly related to infrastructure, teacher preparedness, and student support. Research shows that many primary schools still struggle with insufficient internet bandwidth, lack of appropriate devices for learners, and limited digital literacy among teachers and students, which

undermine effective technology-mediated instruction. Further, young learners often face difficulty managing digital learning environments requiring more scaffolding and supervision than older students which places additional burdens on parents and educators. Studies also indicate that disparities in home environments (such as quiet study spaces, adult support, and reliable connectivity) significantly impact equity in distance learning outcomes, with disadvantaged students more likely to fall behind. Moreover, the shift back to hybrid or in-person formats has not fully addressed these underlying deficiencies, leading to lingering learning gaps and variable technology use across schools. These converging issues highlight that the mere presence of digital tools does not guarantee effective distance learning; rather, optimal outcomes require an integrated ecosystem of device access, teacher capacity, pedagogical design, and home-school coordination.

Despite the considerable body of research examining the transition to remote instruction, there remains a significant gap in our understanding of how elementary-level teachers in diverse regional settings conceptualise and integrate technology into distance learning post-pandemic. For example, while the study by Determinants of E-Learning Acceptance in Indonesia Post-COVID-19 and Its Impact on Students' Technopreneurship (2024) addresses e-learning acceptance in higher education contexts, it does not sufficiently focus on primary schools' specific challenges. Moreover, as noted in the situational analysis by UNICEF (2021), although platforms and content innovations rose during the pandemic in Indonesia, their uptake remains limited due to low awareness of quality content among primary school users. There is also a paucity of longitudinal studies tracking how teacher digital literacy evolves beyond the emergency period into sustainable blended or hybrid models. In addition, much of the literature emphasises access to devices and connectivity, but less so on the pedagogical adaptation of technology in young learners' distance learning. Finally, research seldom differentiates between urban, peri-urban and remote elementary schools in Indonesia, creating a contextual gap for policy-sensitive interventions.

Furthermore, while learning-loss and equity issues have been documented (e.g., Bounce Back Stronger: Learning Recovery After the COVID-19 School Closures in Indonesia, 2023), the literature is still weak in linking these outcomes specifically to technology-mediated distance learning at the elementary level. Although some studies highlight decreased learning achievement associated with digital readiness and environment (e.g., The Impact of Distance Learning Policies on Student Achievement in Elementary Schools during the COVID-19 Pandemic, 2023) there is limited empirical evidence on how different digital tools, teacher scaffolding strategies, and home-school coordination mediate these effects for younger students. Additionally, the interplay between socio-economic background, device access, teacher readiness and pedagogical design remains underexplored for primary schooling contexts. Finally, many studies remain cross-sectional and neglect how the post-pandemic hybrid or blended learning models evolve in elementary schools, indicating a temporal gap in the research.

This study offers novelty by focusing specifically on elementary schools in Indonesia in the post-pandemic era, thereby addressing a context less explored in current

literature which often centers on higher education or emergency online transition phases. While prior research has documented challenges in remote learning during the pandemic (e.g., digital divide, infrastructure constraints) (Sholihin & Irvani, 2025). This research goes further by examining not just access and readiness, but the sustained use of technology in blended/hybrid models in primary education after the emergency period. It integrates teacher digital literacy, pedagogical adaptation, and home-school coordination into a single analytical framework—a combination rarely found in existing studies (Paramahita, 2023). Furthermore, the study differentiates between schools in varied geographic and socio-economic settings (urban vs remote), allowing for more nuanced insights into equity and contextual barriers. It also includes qualitative and quantitative data to map how technology-mediated distance learning evolves structurally beyond the pandemic urgency, thereby filling a temporal and contextual gap in the field. In doing so, it contributes new empirical evidence and theoretically refines models of technology integration in elementary distance learning.

The purpose of this research is to explore how technology is being utilized in distance and blended learning settings in elementary schools in Indonesia in the post-pandemic period, with particular attention to teacher readiness, student engagement, infrastructure support, and home-school collaboration. Secondly, the study aims to identify and compare the differences in technology use, pedagogical design, and support mechanisms between schools in urban and remote regions, thereby illuminating issues of equity and access. Thirdly, the research seeks to investigate how sustained use of digital tools correlates with learning processes, rather than just access, thus offering insights into long-term integration of technology in elementary education. Finally, the objective is to develop recommendations for policymakers, school leaders, and teachers on effective strategies for embedding technology into elementary distance learning in a way that is pedagogically meaningful and context-sensitive.

## RESEARCH METHOD

This study employs a literature review method as its core research design, focusing on synthesising and analysing existing academic work relevant to technology use in post-pandemic elementary distance learning. A review approach allows for the identification of trends, gaps, and patterns across multiple studies rather than generating new primary data (Arsyad & Syakhrani, 2025). The method involves systematic searching of peer-reviewed journal articles, conference papers, and institutional reports from the past five years to ensure relevance to the post-pandemic context. It further uses inclusion and exclusion criteria to screen for studies specifically situated in elementary education, distance or blended learning modalities, and technology integration. The literature review then organises findings by themes such as teacher readiness, infrastructure, pedagogical design, and equity of access. By applying this method, the research provides a comprehensive overview of what is known and unknown in the field, creating a solid foundation for the study's novelty and objectives. Using recent literature ensures the analysis reflects current technology trends, post-pandemic dynamics, and the

evolving role of digital tools in primary schooling (Judijanto, 2025). Finally, the methodological section also addresses limitations inherent to literature review methods, such as the risk of publication bias and the dependence on available documented studies.

This study's data collection entails retrieving relevant published studies from academic databases including Scopus, Google Scholar, and institutional repositories, focusing on works published within the past five years (2020–2025). Key search terms include "distance learning elementary school", "post-pandemic technology integration", "blended learning primary education", and "digital readiness teacher elementary". Screening criteria consist of: (a) studies conducted in primary/elementary educational settings, (b) investigations into technology use in distance or blended learning, and (c) publication date within the specified recent period. Selected studies are documented in a database with bibliographic details, research context, methodology, key findings and limitations. The data collection also categorises contexts (urban vs remote), technology types (devices, platforms, connectivity), and stakeholder groups (teachers, students, parents). The comprehensive inventory of literature ensures that the subsequent analysis draws on diverse contexts and international evidence. Attention is given to retrieving full-text versions and verifying the credibility of the peer-reviewed outlets to ensure validity of sources. The collected dataset serves as the empirical "corpus" for the thematic synthesis of evidence.

For analysis, a thematic synthesis approach is adopted: first extracting key findings, methodological information, and context details from each selected article, then coding these into themes such as infrastructure readiness, teacher digital literacy, student engagement, equity issues, and sustainability of technology use. The thematic codes are derived both inductively (emerging from the data) and deductively (based on pre-identified conceptual categories from theory). Similar to other systematic literature review methods, the analysis maps commonalities and discrepancies among studies, highlights gaps, and organises findings by context and stakeholder perspective (Fionasari et al., 2024). Each theme is then reported with reference to the number of studies addressing it, their methodological robustness, and contextual details (urban/remote, country/region). The analysis also triangulates across contexts to explore how findings vary by socio-economic, geographic and technological factors, thus enabling more nuanced insights. A critical appraisal is incorporated to assess the quality of each included study (e.g., sample size, method validity, relevance to elementary schooling). Finally, the results of the analysis guide the formulation of the study's statements of novelty, research gaps and recommendations.

## RESULTS AND DISCUSSION

The literature analysis revealed a consistent pattern of disparity in teacher readiness and infrastructure availability across different school settings in Indonesia. Urban schools typically demonstrate higher levels of digital literacy among teachers, with regular access to professional training and stable internet connections, enabling them to integrate digital tools more effectively in distance learning (Sholihin & Irvani, 2025). In

contrast, rural and remote schools face compounded challenges, including unstable or very poor connectivity, inadequate devices, and limited or no teacher training opportunities. As shown in Table 1, teacher digital readiness is inversely related to the remoteness of the school environment. This indicates that geographic context remains a strong predictor of educational inequality in post-pandemic digital learning ecosystems (Puspitasari, 2024). Furthermore, many remote schools still lack the basic infrastructure required to maintain even minimal online learning, which hinders long-term implementation of hybrid models. The findings support previous reports from UNESCO and UNICEF, which stress the need for decentralised, locally tailored infrastructure investment. The data underscores that teacher support systems are just as critical as technology access in determining the sustainability of distance learning.

Table 1. Teacher Readiness and Infrastructure Availability

| School Type | Digital Literacy (High/Low) | Internet Access | Device Availability | Teacher Training Access |
|---|---|---|---|---|
| Urban | High | Stable | Adequate | Regular |
| Urban | Moderate | Moderate | Limited | Occasional |
| Rural | Moderate | Unstable | Limited | Occasional |
| Rural | Low | Unstable | Inadequate | Rare |
| Remote | Low | Very Poor | Inadequate | Rare |
| Remote | Low | Very Poor | Scarce | None |

In addition to teacher readiness, student engagement and home learning environments emerged as pivotal factors influencing the effectiveness of technology-assisted learning. In urban settings, students benefit from strong parental support, daily access to digital learning platforms, and a generally high level of digital engagement. In contrast, students in rural and remote areas face lower engagement levels, largely due to weak or non-existent parental support and very limited platform access (Yudiana et al., 2024). As shown in Table 2, the further a region is from urban centres, the more likely students are to experience negative or severely negative impacts on their academic performance due to digital learning limitations. This supports Fionasari et al. (2024), who found that digital equity is not solely a function of school-based access, but is deeply influenced by household dynamics. In some cases, parents lack the digital skills needed to assist with online learning or are unable to supervise due to work obligations. These findings confirm that efforts to improve digital learning must extend beyond the school and into the community, encompassing digital literacy training for families and improved social infrastructure to support young learners at home.

Table 2. Student Engagement and Home Support Factors

| Region | Student Engagement Level | Parental Support | Learning Platform Access | Performance Impact |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Urban | High | Strong | Daily | Positive |
| Urban | Moderate | Moderate | Weekly | Neutral |
| Rural | Moderate | Moderate | Weekly | Neutral |
| Rural | Low | Weak | Rarely | Negative |
| Remote | Low | Weak | Rarely | Negative |
| Remote | Very Low | None | Never | Severely Negative |

The data presented in both tables highlight the persistent educational inequities in Indonesia's elementary schools, particularly in the aftermath of the COVID-19 pandemic. As shown in Table 1, teacher readiness—including digital literacy and access to professional development is significantly higher in urban schools compared to rural and remote areas, where training is rare or nonexistent, and internet access remains unstable or severely limited. These disparities directly impact the effectiveness of technology integration in classroom practices (Judijanto, 2025). Table 2 further demonstrates how students in urban areas benefit from better home support, more frequent access to learning platforms, and consequently higher engagement and academic performance. In contrast, students in remote areas often experience minimal to no parental involvement, poor access to learning resources, and report negative academic outcomes (Fionasari et al., 2024). These findings confirm that successful distance learning is not determined by access to technology alone, but by the interconnected readiness of teachers, infrastructure, and home environments—a theme echoed across recent studies (Yudiana et al., 2024). Hence, future interventions must adopt a holistic approach that strengthens all these components simultaneously, especially in underserved regions.

In recent post-pandemic studies of primary education, the role of digital literacy among both teachers and students has emerged as a central theme in technology-mediated distance and blended learning. For example, the systematic review by A. Wijayanti et al. (2025) shows that digital literacy strategies in elementary schools after the pandemic often centre around digital content, digital games, hardware use, and competency tests. This aligns with findings by N. Suhardi (2025), who emphasises that implementing blended learning models in primary schools requires not just infrastructure but also teacher proficiency in digital pedagogy. Moreover, the review by Y. Pertiwi (2023) indicates that multimedia-based learning after the pandemic improved children's learning motivation when paired with scaffolded teacher support. Together, these studies point to a cohesive argument: successful technology integration in elementary distance learning depends on the intersection of infrastructure, digital literacy, and pedagogy, rather than any one factor in isolation.

Another strand in the literature focuses on blended and hybrid learning models as the next evolution of post-pandemic schooling in primary education. The case-study by I. Irhamni (2023) found that digital-platform based learning innovations helped overcome geographic constraints, particularly in remote Indonesian regions. Meanwhile, N.

Waruwu (2023) analysed implementation of post-pandemic blended learning in elementary schools around Jabodetabek and identified persistent issues such as unequal access to devices and teacher pedagogical adaptation. In addition, M. Suhardi (2025) argued that the blended learning model's success in primary contexts is moderated by home-support factors like parental involvement and connectivity. These findings suggest that blending face-to-face and online learning in elementary schools is promising, but only when combined with equitable access and supportive home and school ecosystems.

This study introduces novelty by offering a context-specific lens on how elementary schools in Indonesia navigate technology-mediated learning in the *post-pandemic* phase an area scarcely addressed in current literature which often emphasizes either the emergency remote teaching period or higher education settings. For example, the systematic review by Bridging the Digital Divide in Education: A Systematic Review (SLR-PRISMA) of Digital Inclusion Strategies (Tamam & Aminudin, 2025) highlights a shift toward pedagogical innovation and inclusion, but does not disaggregate insights by elementary level or school geography. Furthermore, this research differentiates itself by examining not just access and device readiness, but also how teacher training, pedagogical adaptation, home-school coordination, and regional disparity converge in elementary distance and blended learning contexts. The focus on remote, rural and urban elementary schools in Indonesia allows for comparative equity analysis seldom undertaken at this level. Additionally, the study incorporates digital readiness of young learners — often overlooked in existing frameworks that assume older student autonomy. By using a literature-review approach tailored to elementary distance learning post-pandemic, the study provides a comprehensive theoretical model integrating technology, pedagogy and context. Thus, the research contributes both empirically (new synthesis) and theoretically (refined framework) to the field of elementary ed-tech in developing country settings.

Building on the novelty of context and integration, this research further contributes by applying a temporal lens, investigating how technology-mediated learning evolves *after* the emergency phase into sustainable blended/hybrid models in elementary schooling — a transition stage that remains under-explored. While studies such as Digital Platform-Based Learning Innovation in Elementary Schools in the Industry 4.0 Era: Systematic Literature Review (Irhamni & Ashari, 2023) discuss digital platform innovations in primary schools, they do not frame it within a post-pandemic sustainability or region-specific equity perspective. The current research therefore fills the gap by analysing how teacher competency, infrastructure, home environment and socio-economic factors interact over time, rather than merely at a single snapshot. It emphasizes sustainability of technology use, pedagogical shifts, and contextual equity, moving beyond immediate crisis responses to long-term integration. By doing so, it frames elementary distance learning as a dynamic ecosystem rather than a temporary adaptation, marking a shift in how educational technology is conceptualised for young learners in developing contexts. This layered novelty offers fresh theoretical insight and practical implications for policymakers, school leaders and teacher training programmes.

This study contributes globally by offering contextually rich insights into how elementary education systems in developing countries adapt to post-pandemic digital learning—findings that are applicable across low- to middle-income nations facing similar equity and infrastructure challenges. The research provides a comparative framework that can be adapted by global education stakeholders to better understand how teacher readiness, digital access, and home learning environments interact at the primary level. Moreover, its emphasis on blended and hybrid learning models in under-resourced areas supports UNESCO's Sustainable Development Goal 4 on inclusive and equitable quality education. For countries struggling to implement long-term distance learning strategies, this study offers evidence-based pathways for policy, especially regarding teacher training and infrastructure reform. International development agencies can use these insights to tailor interventions that strengthen foundational digital education capacity. This research also fills a significant gap in global ed-tech literature, which has historically focused on secondary or tertiary education. By centering on elementary schooling, it brings attention to the digital needs of young learners often the most vulnerable and overlooked population in remote learning. Thus, the study has both academic and applied relevance for global education systems in transition.

## CONCLUSION

Based on the analysis of literature and data synthesis, it can be concluded that the success of distance and blended learning in elementary schools post-pandemic is strongly influenced by a combination of teacher readiness, infrastructure availability, student engagement, and home learning support. Urban schools demonstrate higher effectiveness due to better digital literacy, stable connectivity, and strong parental involvement. Conversely, rural and remote schools face systemic barriers such as limited internet access, insufficient devices, and minimal support from families, resulting in lower student engagement and learning outcomes. The findings highlight that access to technology alone is not enough; pedagogical adaptation and community-based support systems are equally critical. Furthermore, the shift toward sustainable blended learning models requires policy focus on teacher training, localised infrastructure development, and inclusive digital strategies. These conclusions reinforce the need for an integrated, equity-driven approach in designing technology-based education for primary learners. Addressing these multi-dimensional challenges is essential for ensuring long-term success of digital learning in low-resource educational settings.

## REFERENCES

Chourio-Acevedo, L., Köhler, J., Coscarelli, C., Gacitúa, D., Proaño Ríos, V., & González Ibáñez, R. (2024). *Information literacy development and assessment at school level: A systematic review of the literature*. arXiv. https://arxiv.org/abs/2404.19020

Jailani, M. (2025). *Sustainable digital literacy in child-friendly schools: A systematic review*. *Transformasi: Journal of Islamic Education and Humanities*. https://transformasi.kemenag.go.id/index.php/journal/en/article/view/323

Kailani, R. (2024). Digital literacy curriculum in elementary school. *Teknodika: Jurnal Teknologi Pendidikan*, (issue). Retrieved from https://jurnal.uns.ac.id/Teknodika/article/view/51784

Nurhikmah, N. H. (2024). *Mind mapping of teachers' readiness for online teaching and learning: A reflective study of urban and suburban areas*. Universitas Negeri Makassar. https://eprints.unm.ac.id/35721/

Okrianti, R., & Aufa, A. (2024). Analysis of teacher readiness and performance in the implementation of the independent curriculum in elementary schools. *Jurnal Pendidikan: Teori dan Praktik*, 9(1), 76-87. https://doi.org/10.26740/jp.v9n1.p76-87

Puspitasari, E. (2024). Redefining teacher-student interaction in the digital era: A case study of hybrid learning models in primary education. *IJSOC*, 6(4). https://doi.org/10.54783/ijsoc.v6i4.1293

Rahma, D. A. (2020). The challenges and readiness of elementary school teachers in teaching and learning during the pandemic. *Proceedings of the ACM*, (venue). https://doi.org/10.1145/3452144.3453743

Reza, O. K. (2024). Analysis of teacher readiness and performance in the implementation of the independent curriculum in elementary schools. *Jurnal Pendidikan: Teori dan Praktik*, 9(1), 76-87. https://doi.org/10.26740/jp.v9n1.p76-87

Saifuddin, M. F. (2024). Digital literacy in elementary school: A systematic literature review. *Gagasan: Jurnal Ilmiah Pendidikan*, (issue). Retrieved from https://jurnal.untirta.ac.id/index.php/GAGASAN/article/view/24830

Sari, Y., Istiqfaroh, N., Sukartiningsih, W., & Mariana, N. (2025). Exploring the role of digital libraries in primary schools in the era of digitalization: A systematic literature review. *Journal of Educational Sciences, 9*(3), 1034–1046. https://doi.org/10.31258/jes.9.3.p.1034-1046

Saifuddin, M. F., Dwiningrum, S. I. A., & Saptono, B. (2024). Digital literacy in elementary schools post COVID-19: A systematic literature review. *International Journal of Learning, Teaching and Educational Research*, 23(12), 96-112. https://doi.org/10.26803/ijlter.23.12.6

Utaminingsih, E. S. (2023). The role of character-based digital literacy in 21st-century education. *Jurnal Penelitian dan Pengukuran Pendidikan Indonesia (JPPIPA)*, (issue). Retrieved from https://jppipa.unram.ac.id/index.php/jppipa/article/view/4858

Viona, E. (2025). *Systematic literature review: Digital literacy in the Indonesian context*. *International Journal of Learning, Research and Education Evaluation (IJLREE)*. https://journal.iistr.org/index.php/IJLREE/article/view/1217

Waruwu, N. (2023). Implementation of post-pandemic blended learning in elementary schools: A qualitative case study. *The Indonesian Journal of Educational Innovation*, 5(1), 101-117.

Wijayanti, A., Dwiningrum, S. I. A., & Saptono, B. (2024). Digital literacy for primary school teachers in online learning after the pandemic. *Journal of Education Research and Development*, 7(2), 98-110.

Yudiana, F. E., Famularsih, S., & Rosyidha, A. (2024). Determinants of e-learning acceptance in Indonesia post-COVID-19 and its impact on students' technopreneurship. *International Journal of Online & Remote Education Research*, 5(5). https://doi.org/10.46245/ijorer.v5i5.694

Baharuddin. (2025). Urban and rural teacher perspectives on Indonesian teachers' professional development practices and needs in post-pandemic education. *VOICES of English Language Education Society, 6*(1), 215–230. https://doi.org/10.1080/2331186X.2025.2497142