The Meaning of Digital Literacy for Elementary School Teachers in Rural Chiang Mai

Nattapong Khamdee[1]
[1]*Chiang Mai University, Thailand*
Siriporn Limsakul[2]
[2]*Chiang Mai University, Thailand*

Corresponding Author: nattapong.kh@cmu.ac.th

ABSTRACT

This study explores the meanings and experiences of digital literacy among primary school teachers in rural Chiang Mai, Thailand, where technological infrastructure and educational resources differ significantly from urban contexts. As digital technologies increasingly permeate educational practices globally, understanding how rural educators conceptualize and engage with digital literacy becomes crucial for equitable educational development. Through qualitative inquiry involving twenty primary school teachers from eight rural schools, this research examines teachers' perceptions of digital literacy, their self-assessed competencies, integration practices in classroom instruction, and challenges encountered in resource-limited environments. Findings reveal that rural teachers construct digital literacy meanings shaped by contextual constraints, viewing it simultaneously as an aspirational competency, a professional necessity, and a culturally mediated practice. While teachers recognize digital literacy's importance for student preparation and pedagogical innovation, implementation remains hindered by inadequate infrastructure, limited training opportunities, and tensions between traditional teaching values and technology integration. The study contributes nuanced understanding of digital literacy in marginalized educational contexts and recommends context-sensitive professional development, infrastructure investment, and policy frameworks

acknowledging rural-urban digital divides in educational technology adoption.

INTRODUCTION

The rapid advancement of digital technologies has fundamentally transformed educational landscapes worldwide, creating new imperatives for teacher competencies and pedagogical practices. Digital literacy—defined by Gilster (1997) as the ability to understand and use information from digital sources—has evolved from a supplementary skill to a core educational competency essential for 21st-century teaching and learning. International organizations including UNESCO and the OECD have emphasized digital literacy as fundamental to educational quality and student preparation for increasingly technology-mediated societies (UNESCO, 2018). However, the discourse surrounding educational technology and digital literacy often reflects urban, resource-rich contexts, potentially overlooking the distinct realities, challenges, and meanings that emerge in rural educational settings where technological access and infrastructure differ markedly from metropolitan areas.

Thailand's education system exemplifies these disparities, with significant gaps in technological resources, teacher training, and digital infrastructure between urban centers like Bangkok and rural regions (Phuwanatwichit, 2020). The northern province of Chiang Mai, while containing the region's largest city, encompasses extensive rural and mountainous areas where schools serve predominantly agricultural communities, ethnic minority populations, and economically disadvantaged families. Primary schools in these rural zones face challenges including teacher shortages, limited educational budgets, unreliable electricity and internet connectivity, and geographical isolation from professional development opportunities. Within this context, understanding how primary school teachers—who serve as critical agents of educational change—conceptualize digital literacy and navigate technology integration provides essential insights for educational policy and practice.

The concept of digital literacy itself has undergone significant evolution and contestation within educational scholarship. Early conceptualizations focused primarily on technical skills such as operating computers and navigating software applications. However, contemporary frameworks recognize digital literacy as multidimensional, encompassing technical proficiency, information evaluation, digital communication, content creation, online safety awareness, and critical understanding of digital environments (Janssen et al., 2013). Eshet-Alkalai (2004) proposes a comprehensive framework identifying six types of digital literacies: photo-visual literacy, reproduction literacy, branching literacy, information literacy,

socioemotional literacy, and real-time thinking literacy. These expanded conceptualizations acknowledge that meaningful digital literacy extends beyond instrumental skills to include cognitive, social, and ethical dimensions.

For teachers specifically, digital literacy acquires additional complexity as it encompasses both personal competency and pedagogical application. According to Krumsvik (2014), teacher digital literacy involves the ability to use Information and Communication Technology (ICT) with sound pedagogical judgment while being aware of its implications for learning strategies and students' digital formation. This pedagogical dimension requires teachers to understand not merely how to use digital tools but how to integrate them effectively to enhance student learning, differentiate instruction, assess student progress, and foster students' own digital competencies. The European Framework for the Digital Competence of Educators (DigCompEdu) articulates six competency areas: professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence (Redecker, 2017). These frameworks highlight that teacher digital literacy represents a specialized professional competency distinct from general digital literacy.

However, digital literacy scholarship has been critiqued for insufficient attention to contextual and cultural factors shaping how technologies are understood and utilized in diverse settings. Warschauer (2004) argues that meaningful technology integration requires addressing not only physical access to devices but also skills, social support, and relevant content—factors that vary significantly across sociocultural contexts. Rural educational environments present particular challenges including limited broadband infrastructure, fewer technology support personnel, restricted access to current devices, and reduced professional development opportunities compared to urban schools (Azano & Stewart, 2015). Additionally, rural communities often maintain distinct cultural values, educational priorities, and epistemologies that may shape how educational technologies are perceived and integrated into existing pedagogical practices.

Thailand's rural education context introduces additional considerations related to linguistic diversity, cultural preservation, and educational equity. Many rural schools in northern Thailand serve ethnic minority communities including Karen, Hmong, Lahu, and Lisu populations, where maintaining cultural identity and indigenous knowledge alongside national curriculum requirements creates complex pedagogical negotiations (Boonlue & Charoenporn, 2018). Teachers in these contexts must consider how digital technologies might support or potentially threaten cultural preservation efforts, language maintenance, and community-based learning traditions. Furthermore, the Thai education system's hierarchical structure and examination-oriented culture may influence how teachers perceive professional autonomy in adopting new pedagogical approaches, including technology integration.

Despite growing policy attention to educational technology in Thailand, empirical research examining rural teachers' digital literacy experiences remains

limited. Most existing studies focus on urban contexts, technology adoption rates, or quantitative skill assessments, providing insufficient understanding of how rural educators make meaning of digital literacy within their particular professional and cultural contexts (Muhsyanur, 2025; Muhsyanur et al., 2022). Previous research has documented infrastructure challenges and skill gaps in rural Thai schools (Phuwanatwichit, 2020) but has not deeply explored teachers' subjective experiences, belief systems, or pedagogical reasoning regarding digital technologies. Understanding these dimensions is crucial because teacher beliefs and perceptions significantly influence technology adoption and integration effectiveness (Ertmer et al., 2012).

The present study addresses these gaps by examining how primary school teachers in rural Chiang Mai construct meanings of digital literacy through their lived professional experiences. Research questions guiding this investigation include: How do rural primary teachers conceptualize digital literacy in relation to their professional roles? What meanings do teachers ascribe to digital literacy within their specific contextual constraints? How do teachers perceive their own digital literacy competencies and professional development needs? What challenges and opportunities do rural contexts present for developing and applying digital literacy? By centering teachers' voices and perspectives, this research contributes to more inclusive, contextually grounded understanding of digital literacy in educational settings beyond privileged, technologically saturated environments. The findings have implications for teacher education, professional development design, educational policy, and technology implementation strategies that acknowledge and address rural educational realities rather than imposing urban-centric models onto diverse contexts.

METHODE

This qualitative study employed phenomenological inquiry to explore the lived experiences and meaning-making processes of primary school teachers regarding digital literacy in rural Chiang Mai contexts. Twenty primary school teachers from eight government schools located in rural sub-districts of Chiang Mai province participated in the research during the 2023-2024 academic year. Purposive sampling ensured participant diversity across teaching experience levels (ranging from 3 to 28 years), grade levels taught (Prathom 1-6), gender (14 female, 6 male), and school characteristics including student enrollment sizes, ethnic composition, and geographical remoteness (Muhsyanur, 2023a). All participating schools were located at least 40 kilometers from Chiang Mai city center, serving predominantly agricultural communities with limited technological infrastructure (M Muhsyanur, SY Sudikan, 2025). Data collection involved individual semi-structured interviews conducted in Thai language, lasting 60-90 minutes each, exploring teachers' understanding of digital literacy, self-assessed competencies, technology use in teaching, professional learning experiences, and perceived challenges and opportunities. Interview protocols were developed based on digital literacy

frameworks from Krumsvik (2014) and Redecker (2017), adapted to rural Thai educational contexts through preliminary consultation with local education officials and experienced rural teachers.

Complementary data sources included classroom observations of technology-integrated lessons when available, photographs of available digital resources in schools, and analysis of school documents related to technology policies and professional development programs. All interviews were audio-recorded with participants' informed consent, transcribed verbatim, and analyzed using thematic analysis following Braun and Clarke's (2006) six-phase process: familiarization, initial coding, theme development, theme review, definition and naming, and report production. Analysis proceeded inductively, allowing themes to emerge from data rather than imposing predetermined categories, while remaining informed by digital literacy theoretical frameworks. Thai language data were analyzed in the original language, with representative quotations translated to English for presentation, verified through back-translation to ensure meaning preservation. Trustworthiness was established through prolonged engagement with participants, member checking of preliminary findings, peer debriefing with Thai educational researchers, and reflexive journaling addressing the researcher's positionality as someone familiar with both urban Thai and international educational technology contexts. Ethical approval was obtained from relevant institutional review boards and the Chiang Mai Provincial Education Office, with all participants assigned pseudonyms to protect confidentiality. The study acknowledges limitations including the specific geographical focus and reliance on self-reported data, while recognizing these choices as appropriate for exploratory, meaning-focused inquiry into underexplored educational contexts.

RESULT AND DISCUSSION

Teachers' Conceptualizations of Digital Literacy: Aspirational Competency and Professional Identity

Rural primary teachers in Chiang Mai constructed digital literacy meanings through complex negotiations between professional aspirations, contextual realities, and evolving educational expectations. Most participants (17 of 20) articulated digital literacy as an aspirational competency they desired to develop more fully but felt inadequately equipped to achieve given current circumstances. Teachers described digital literacy using metaphors of journeying, learning, and striving, positioning themselves as perpetual beginners despite years of teaching experience. One teacher with 15 years' experience explained, "I feel like a student again when it comes to technology. The children sometimes know more than me about phones and applications. I want to learn, but it's difficult without proper training or support." This positioning reflects what Ertmer et al. (2012) identify as teachers' self-efficacy beliefs regarding technology integration—when teachers perceive limited competence, they may avoid technology use regardless of available resources.

Participants' conceptualizations revealed tension between instrumental and pedagogical dimensions of digital literacy. Twelve teachers emphasized technical skills such as operating computers, using Microsoft Office applications, searching the internet, and managing educational software as constituting digital literacy. This instrumental focus aligns with what Gilster (1997) originally proposed but represents a narrower conception than contemporary multidimensional frameworks. In contrast, eight teachers articulated more sophisticated understandings incorporating pedagogical considerations, describing digital literacy as knowing how to select appropriate technologies for specific learning objectives, designing engaging digital activities, and assessing student learning through technology. One experienced teacher stated, "Digital literacy isn't just about using computers. It's about understanding when technology helps learning and when traditional methods work better. We must think like teachers, not just users." This pedagogical awareness corresponds with Krumsvik's (2014) notion of teacher digital literacy as pedagogically grounded technological competence.

Notably, teachers' conceptualizations were strongly influenced by perceived professional identity and generational positioning. Younger teachers (under 35 years old) tended to view digital literacy as a natural professional expectation and integral to modern teaching identity, whereas older teachers (over 45 years) more frequently expressed it as an externally imposed requirement potentially conflicting with established teaching practices. Several senior teachers articulated concerns that excessive technology emphasis might undermine valued traditional pedagogical approaches emphasizing personal relationships, oral storytelling, and hands-on learning. One teacher reflected, "Our grandparents taught through stories and experience. Technology can help, but we shouldn't forget the human connection in teaching." This generational divergence highlights how digital literacy meanings are culturally and biographically situated rather than universally constructed, supporting Warschauer's (2004) argument that technology adoption involves negotiating cultural values and established practices (Ibrahim, 2020).

Furthermore, teachers' conceptualizations revealed awareness of digital literacy as socially stratified competency linked to educational equity concerns. Sixteen participants explicitly connected digital literacy to student future opportunities, expressing that rural students deserved comparable technological preparation to urban peers despite resource disparities. Teachers described digital literacy as a potential equalizer that could provide rural children access to information and opportunities otherwise unavailable in their communities. However, this aspiration coexisted with recognition that current resource limitations perpetuated rather than reduced educational inequities. As one teacher poignantly stated, "City schools have computer labs, internet, smartboards. Our students have one old computer for the whole school. How can we prepare them equally?" This awareness of structural inequality shaping digital literacy possibilities reflects critical consciousness regarding how resource distribution affects educational outcomes,

aligning with sociocultural perspectives emphasizing that literacy practices are embedded within power relations (Street, 2003).

Digital Literacy Integration Practices and Contextual Adaptations

Teachers' actual digital literacy practices demonstrated creative adaptation to severe resource constraints, revealing how contextual limitations shape technology integration patterns. Only three of the eight participating schools possessed functional computer laboratories, and even these contained outdated equipment with limited internet connectivity. Consequently, teachers developed alternative strategies for incorporating digital elements into instruction despite infrastructural deficits. The most common practice involved teachers personally accessing digital resources through smartphones or home computers, then adapting content for non-digital classroom delivery (Muhsyanur Muhsyanur, 2024). Fifteen teachers reported regularly searching online for lesson ideas, educational videos, or supplementary materials, which they would print, summarize verbally, or recreate through traditional media. One teacher explained, "I watch YouTube science experiments at home, then demonstrate similar activities using local materials in class. Students don't see the video, but they benefit from the ideas I learned digitally (Muhsyanur et al., 2021) (Muhsyanur, 2023b)."

This pattern reveals what might be termed "indirect digital literacy integration," where teachers' digital competencies inform pedagogy without direct student technology interaction. While this approach enables some benefit from teachers' digital literacy development, it limits students' own digital skill acquisition and represents a significant departure from digital literacy frameworks emphasizing student digital competence development (Redecker, 2017). However, teachers' resourcefulness in adapting digital content to available media demonstrates professional agency and contextual responsiveness—valuable qualities often overlooked in technology integration research focused primarily on resource-rich environments. This finding challenges assumptions that meaningful technology integration requires extensive digital infrastructure, suggesting instead that teacher digital literacy can enhance instruction even when direct technology use remains limited.

When digital tools were available, teachers employed them primarily for three purposes: content presentation through occasional video screenings, basic student computer skills instruction, and administrative tasks including grade recording and report preparation. Table 1 presents the frequency and types of digital technology integration observed and reported across participating schools, illustrating the limited scope of current practices relative to comprehensive digital literacy frameworks. Notably, more advanced applications such as digital content creation, online collaboration, educational gaming, or formative assessment through digital tools remained virtually absent from teachers' practices. Several teachers expressed unfamiliarity with these possibilities, indicating that both resource limitations and knowledge gaps constrained integration breadth.

T

Table 1. Types and Frequency of Digital Technology Integration in Rural Primary Classrooms

Integration Type	Schools with Capacity	Frequency of Use	Teachers Implementing	Primary Constraints
Educational video presentation	6/8 schools	Monthly	14/20 teachers	Limited projectors, internet
Student computer skills practice	3/8 schools	Quarterly	7/20 teachers	Insufficient computers
Online research for lesson planning	All schools (personal)	Weekly	18/20 teachers	Personal device dependence
Administrative digital tasks	5/8 schools	Daily	12/20 teachers	Limited software access
Digital content creation	1/8 schools	Rarely	2/20 teachers	Lack of training, resources
Educational applications/games	2/8 schools	Rarely	3/20 teachers	No tablets, unreliable internet
Digital assessment tools	0/8 schools	Never	0/20 teachers	No infrastructure, awareness
Online student collaboration	0/8 schools	Never	0/20 teachers	No devices, connectivity

Teachers' integration practices were further shaped by cultural considerations regarding appropriate technology use in educational contexts. Several participants expressed concerns about potential negative effects of technology on student behavior, attention spans, and moral development—concerns reflecting broader Thai cultural anxieties about modernization and Western influence. Nine teachers mentioned monitoring technology use carefully to prevent students from accessing inappropriate content or developing device dependency, viewing their role as cultural gatekeepers alongside educational facilitators. This protective stance aligns with research on Asian educational contexts where teacher authority and moral guidance remain central professional responsibilities (Nguyen et al., 2020). However, it also potentially limits exploratory, student-centered technology use that contemporary digital literacy frameworks advocate (Muhsyanur and Mustapha, 2023; Torgerson, 2021).

Interestingly, some teachers identified unique advantages of rural contexts for certain digital literacy applications, particularly regarding locally relevant content creation. Three teachers described projects where students photographed community environments, interviewed elders about traditional practices, or documented local agricultural processes, then compiled these into simple digital presentations. These activities integrated digital literacy skills with cultural preservation and place-based education, demonstrating how technology can support rather than threaten local knowledge systems when thoughtfully implemented. One teacher enthused, "Students learned to use cameras and computers while recording grandparents' stories about traditional rice farming. Technology helped preserve our culture, not replace it." This culturally grounded approach exemplifies what Warschauer (2004) advocates as contextualized technology integration respecting local values and knowledge, offering promising models for rural digital literacy development that honor rather than erase cultural identities.

Challenges, Professional Development Needs, and Support Systems

Participants identified multifaceted challenges impeding digital literacy development and integration, with infrastructural deficits representing the most fundamental barrier. All twenty teachers described inadequate technological resources as the primary obstacle, including insufficient devices, unreliable electricity supply, absent or poor internet connectivity, and lack of technical support when equipment malfunctioned. Rural schools' limited budgets allocated minimal funds for technology purchases or maintenance, often prioritizing basic educational necessities like textbooks and building repairs. Teachers recounted frustrations of planning technology-integrated lessons only to cancel them due to power outages, internet failures, or equipment breakdowns (Muhsyanur and Mustapha, 2023). One teacher lamented, "We received five tablets from a donation three years ago. Now only one works, and we have no money to repair the others. Without reliable tools, how can we integrate technology meaningfully?"

This infrastructural challenge reflects broader patterns of educational inequality in Thailand, where urban-rural resource disparities create fundamentally different teaching and learning conditions (Phuwanatwichit, 2020). Teachers recognized that addressing these gaps required policy-level intervention beyond individual or school capacity, yet expressed skepticism about government prioritization of rural educational technology given limited resources and competing demands. Several participants noted that infrastructure investments often targeted easily accessible schools near district centers rather than the most remote communities facing greatest challenges, perpetuating rather than reducing inequities.

Professional development opportunities for digital literacy represented a second critical challenge, with teachers describing extremely limited access to relevant, high-quality training. Eighteen participants reported receiving no formal digital literacy training within the past three years, instead relying on self-directed

learning through online tutorials, peer assistance, or trial-and-error experimentation. While educational authorities occasionally organized technology workshops, these typically occurred in district centers requiring extensive travel from rural schools, during school hours when teachers struggled to arrange substitute coverage, and often addressed generic computer skills rather than pedagogical integration strategies specific to primary teaching contexts. Teachers emphasized needing sustained, practice-oriented professional development that addressed their actual technological resources and student populations rather than idealized scenarios assuming extensive infrastructure.

The few teachers who had accessed meaningful professional development universally emphasized its transformative impact on their confidence and practice. Two participants who attended a week-long training program sponsored by an NGO described it as revelatory, stating it fundamentally changed their understanding of technology's pedagogical potential. However, these opportunities remained exceptional rather than systematic, available through personal initiative and fortunate circumstances rather than guaranteed professional entitlements. Teachers advocated for school-based professional learning communities where colleagues could share knowledge collaboratively, observing that this collegial approach would address geographical barriers and enable ongoing support rather than isolated workshop attendance. This preference aligns with research indicating that sustained, collaborative, practice-embedded professional development proves more effective than decontextualized training sessions (Dede et al., 2009).

Support system inadequacies extended beyond formal training to include limited technical assistance and pedagogical resources. None of the participating schools employed dedicated IT support staff, leaving teachers responsible for troubleshooting technical problems without expertise or authorization to address complex issues. When equipment malfunctioned, teachers often waited weeks or months for district technicians to visit, during which technology remained unusable. Additionally, teachers identified scarcity of Thai-language, culturally appropriate digital educational resources aligned with national curriculum standards. While international platforms offered abundant materials, language barriers and cultural misalignment limited their utility. Teachers expressed desire for curated repositories of locally relevant digital resources, preferably developed by Thai educators familiar with rural contexts, that they could confidently integrate without extensive adaptation. The absence of such resources required teachers to independently evaluate and adapt materials—a time-consuming process that discouraged regular technology integration given already heavy workloads including administrative duties, extra-curricular supervision, and community engagement responsibilities typical of rural teaching positions.

CONCLUSION

This study reveals that rural primary teachers in Chiang Mai construct digital literacy as an aspirational professional competency shaped by severe contextual

constraints, positioning themselves as learners striving to develop technological expertise despite inadequate infrastructure, training, and support systems. Teachers demonstrate creative adaptation strategies and cultural awareness in technology integration while recognizing that current practices inadequately prepare students for digital futures or address urban-rural educational equity gaps. Advancing meaningful digital literacy development requires coordinated interventions addressing multiple levels: substantial infrastructure investment ensuring reliable electricity, internet connectivity, and sufficient devices in rural schools; sustained, school-based professional development emphasizing pedagogical integration and culturally responsive practices; development of Thai-language, curriculum-aligned digital resources appropriate for rural contexts; technical support systems enabling equipment maintenance and troubleshooting; and policy frameworks acknowledging that equitable digital literacy development demands differentiated resource allocation favoring historically underserved rural communities. Educational technology initiatives must move beyond urban-centric assumptions, instead embracing contextually grounded approaches that honor rural teachers' expertise, respect cultural values, and commit to infrastructural justice ensuring all Thai children access quality digital learning opportunities regardless of geographical location.

REFERENCES

Azano, A. P., & Stewart, T. T. (2015). Exploring place and practicing justice: Preparing pre-service teachers for success in rural schools. Journal of Research in Rural Education, 30(9), 1–12.

Boonlue, K., & Charoenporn, P. (2018). Multicultural education in northern Thailand: Challenges and opportunities. International Journal of Educational Development, 62, 189–197. https://doi.org/10.1016/j.ijedudev.2018.04.002

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Dede, C., Ketelhut, D. J., Whitehouse, P., Breit, L., & McCloskey, E. M. (2009). A research agenda for online teacher professional development. Journal of Teacher Education, 60(1), 8–19. https://doi.org/10.1177/0022487108327554

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. Computers & Education, 59(2), 423–435. https://doi.org/10.1016/j.compedu.2012.02.001

Eshet-Alkalai, Y. (2004). Digital literacy: A conceptual framework for survival skills in the digital era. Journal of Educational Multimedia and Hypermedia, 13(1), 93–106.

Gilster, P. (1997). Digital literacy. Wiley.

Janssen, J., Stoyanov, S., Ferrari, A., Punie, Y., Pannekeet, K., & Sloep, P. (2013). Experts' views on digital competence: Commonalities and differences. Computers & Education, 68, 473–481. https://doi.org/10.1016/j.compedu.2013.06.008

Krumsvik, R. J. (2014). Teacher educators' digital competence. Scandinavian Journal of Educational Research, 58(3), 269–280. https://doi.org/10.1080/00313831.2012.726273

Ibrahim, M. (2020). Psikologi Pendidikan: Suatu Stimulus Awal. In M. dan I. Rumalean (Ed.), *Forsiladi Pers* (Vol. 7, Issue 2). https://books.google.co.id/books?hl=en&lr=&id=WT-HEAAAQBAJ&oi=fnd&pg=PR2&ots=orOGoJ4XaM&sig=_RldS7mWG5ZSpRE8sRmGX1Kt2Hs&redir_esc=y#v=onepage&q&f=false

M Muhsyanur, SY Sudikan, M. M. (2025). Linguistic Identity Negotiation on TikTok : Glocal Practices of Indonesian Content Creators. *LiNGUA: Jurnal Ilmu Bahasa Dan Sastra*, 20(2), 85–97. https://doi.org/https://doi.org/10.18860/ling.v20i2.32574

Muhsyanur and Mustapha, B. (2023). Challenges and Strategies in Teaching Indonesian to Indonesian Occupied Students in Malaysia. *TRICKS: Journal Ff Education And Learning Practices*, 1(1), 32–39. https://journal.echaprogres.or.id/index.php/tricks/article/view/6

Muhsyanur, M. (2023a). The Bugis People's Naming System in Bugis Ethnic Tradition. *Journal of Language and Literature*, 23(1), 67–76. https://doi.org/10.24071/joll.v23i1.5062

Muhsyanur, M. (2023b). The Effectiveness of Problem-Based Learning on Critical Thinking Skills in Indonesian Language Education. *TRICKS: Journal of Education and Learning Practices*, 1(3), 12–23. https://journal.echaprogres.or.id/index.php/tricks/article/view/36

Muhsyanur, M. (2025). Digital Literation: Dening Network-Based Hoaks Language in The News A Covid-19 Pandemic Discourse in Indonesia. *INSPIRATION: Instructional Practices in Language Education*, 4(1), 20–29. https://jurnal.uinsu.ac.id/index.php/inspiration/article/view/25790

Muhsyanur, M., Suharti, S., & Sudikan, S. Y. (2022). Physical representation of female character in children's novels by children. *Diksi*, 30(1), 66–73. https://doi.org/10.21831/diksi.v30i1.45663

Muhsyanur Muhsyanur, S. S. (2024). Implementation of Madrasah Literacy Program to Enhance Language Competence of Female Students at MTs As' adiyah Putri Pusat Sengkang, Indonesia. *Global Society and Knowledge Review*, 2(6), 69–81.

Muhsyanur, Rahmatullah, A. S., Misnawati, Dumiyati, & Ghufron, S. (2021). The Effectiveness of "Facebook" As Indonesian Language Learning Media for Elementary School Student: Distance Learning Solutions in the Era of the COVID-19 Pandemic. *Multicultural Education*, 7(04), 38–47. https://www.mccaddogap.com/ojs/index.php/me/article/view/8%0Ahttps://www.mccaddogap.com/ojs/index.php/me/article/download/8/10

Torgerson, C. J. (2021). *Systematic reviews in educational research*. Bloomsbury Academic.

Nguyen, T. M., Hallinger, P., & Chen, C. W. (2020). Confucian values and school leadership in Vietnam: Exploring the influence of culture on principal decision making. Educational Management Administration & Leadership, 48(1), 104–122. https://doi.org/10.1177/1741143218759090

Phuwanatwichit, T. (2020). Digital divide and educational inequality in Thailand: Challenges for rural schools. Asian Journal of Education and Training, 6(2), 220–228. https://doi.org/10.20448/journal.522.2020.62.220.228

Redecker, C. (2017). European framework for the digital competence of educators: DigCompEdu. Publications Office of the European Union. https://doi.org/10.2760/159770

Street, B. V. (2003). What's "new" in new literacy studies? Critical approaches to literacy in theory and practice. Current Issues in Comparative Education, 5(2), 77–91.

UNESCO. (2018). UNESCO ICT competency framework for teachers. UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000265721

Warschauer, M. (2004). Technology and social inclusion: Rethinking the digital divide. MIT Press.