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ASSESSING TEACHERS' READINESS AND CHALLENGES IN IMPLEMENTING MOBILE-ASSISTED LANGUAGE LEARNING (MALL) IN RURAL AREAS

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Abstract

This study seeks to investigate the readiness of English teachers and the obstacles they face in adopting Mobile-Assisted Language Learning (MALL) in rural areas of Mandrehe Utara Sub-district, West Nias Regency, North Sumatra. Using a qualitative research design grounded in a phenomenological approach, data were collected through semi-structured in-depth interviews, non-participant classroom observations, and document analysis involving eight English teachers from five different schools. The results indicate that teachers' readiness falls within low to moderate levels. While attitudinal readiness appears relatively favourable, both knowledge-based and practical readiness remain notably limited. The study further identifies four major challenges: inadequate technological infrastructure, limited digital literacy among teachers, a lack of sufficient institutional support, and pedagogical issues related to classroom management. Based on these findings, the study suggests the need to prioritise the improvement of digital infrastructure, provide context-sensitive professional development, and formulate school policies that clearly encourage the integration of mobile technology into English language instruction in remote rural contexts.

Keywords: *Mobile-Assisted Language Learning; Teacher Readiness; Implementation Challenges; Rural Settings; Indonesian EFL*

A. Introduction

The rapid advancement of digital technology over the past decade has brought about profound transformations across various sectors of human life, with education being among the most significantly affected. Within the educational landscape, the emergence of mobile technology has introduced new paradigms in language teaching and learning, giving rise to what scholars and practitioners widely refer to as Mobile-Assisted Language Learning (MALL). According to Crompton and Burke (2018), MALL is broadly defined as any form of language learning that occurs through the use of mobile devices, enabling learners to engage with educational content anytime and anywhere, transcending the physical boundaries of traditional classroom

settings. This capacity for ubiquitous and contextualised learning has positioned MALL as one of the most promising pedagogical innovations in contemporary language education.

On a global scale, the adoption of MALL has demonstrated considerable potential in enhancing learners' language proficiency across all four macro-skills, namely reading, writing, speaking, and listening. Reinders and Pegrum (2021) argue that mobile devices do not merely serve as supplementary tools in language learning; rather, they function as transformative mediums capable of fostering learner autonomy, promoting self-directed study, and sustaining intrinsic motivation. Such arguments are particularly compelling given the characteristics of today's learners, widely regarded as digital natives who are inherently more responsive to technology-mediated instruction than to conventional, teacher-centred pedagogical approaches. The integration of mobile technology into language learning, therefore, represents not only a technological shift but also a fundamental reconceptualisation of the roles of both teachers and learners in the educational process.

Nevertheless, the implementation of MALL is far from straightforward, particularly in rural contexts where infrastructural limitations and resource constraints remain persistent challenges. Research conducted by Nuchto and Suksakulchai (2022) reveals that the digital divide between urban and rural areas continues to constitute one of the most formidable barriers to equitable access to technology-enhanced education in developing countries. In many rural settings, unreliable internet connectivity, limited availability of mobile devices, and insufficient technical support collectively undermine efforts to integrate MALL into mainstream classroom practice. These structural inequalities not only restrict learners' access to digital learning resources but also impede teachers' capacity to innovate and experiment with technology-driven pedagogical approaches.

In the Indonesian context, these challenges are particularly pronounced given the country's vast and diverse geographical landscape. Wulandari and Suryani (2023) note that despite the continued growth of smartphone penetration across the archipelago, the digital disparity between urban and rural regions remains deeply entrenched. A substantial number of schools located in remote and semi-rural areas still lack adequate internet infrastructure, and teachers in these settings have yet to develop the necessary competencies to meaningfully incorporate mobile technology into their instructional practices. This situation presents a

significant paradox, as the Indonesian government, through a series of educational reform initiatives including the Merdeka Belajar curriculum framework, has consistently emphasised the importance of digital innovation and creative pedagogy as cornerstones of twenty-first century education.

Teacher readiness is widely recognised as one of the most critical determinants of successful MALL implementation in formal educational settings. Hashim (2021) conceptualises teacher readiness as a multidimensional construct encompassing three interrelated dimensions: knowledge readiness, which refers to teachers' understanding of mobile technology and its pedagogical applications; attitudinal readiness, which pertains to teachers' dispositions and beliefs towards technology integration; and practical readiness, which concerns teachers' actual competencies in deploying mobile tools within instructional contexts. These dimensions are deeply interdependent, and a deficiency in any one of them may significantly compromise the overall effectiveness of MALL implementation. A teacher who possesses technical knowledge but harbours negative attitudes towards technology, for instance, is unlikely to leverage MALL's full pedagogical potential in the classroom.

Beyond attitudinal factors, the challenges confronting teachers in implementing MALL are equally technical, pedagogical, and institutional in nature. From a technical standpoint, inconsistent internet access, incompatible devices, and insufficient technical training remain common obstacles in rural school environments. From a pedagogical perspective, teachers frequently encounter difficulties in designing mobile-based learning activities that are coherently aligned with prescribed curricular objectives and assessment frameworks. Institutionally, the absence of supportive leadership, inadequate policy frameworks, and limited professional development opportunities further compound these challenges. These findings resonate with the observations of Almekhlafy (2021), who established that affective variables, particularly technology anxiety, bear a significant negative correlation with teachers' willingness to adopt and sustain MALL practices in their classrooms.

Scholarly inquiry into MALL implementation in rural educational contexts remains comparatively limited relative to the wealth of research conducted in urban settings. The predominance of urban-centred MALL studies means that the findings generated therein are frequently inapplicable to the distinctive socio-economic,

infrastructural, and cultural conditions characteristic of rural schools. Purwati and Rofiqoh (2022) underscore the critical need for contextually grounded research in rural environments to generate empirical data that accurately reflect the realities teachers encounter on a daily basis. Without such evidence, professional development programmes and educational technology policies risk remaining generic and insufficiently responsive to the nuanced needs of rural educators and their learners.

Importantly, however, several studies have indicated that teachers in rural settings are not uniformly resistant to technological innovation; on the contrary, many exhibit a genuine desire to incorporate MALL into their instructional repertoire. Yunus, Nordin, and Salehi (2021) found that rural English language teachers in Malaysia demonstrated broadly positive attitudes towards MALL adoption, yet consistently reported a lack of institutional support, inadequate access to resources, and insufficient professional guidance as key impediments to sustained implementation. These findings underscore the importance of distinguishing between teachers' motivational orientations and the structural conditions that either enable or constrain their pedagogical agency.

The relationship between professional development and teacher readiness for MALL implementation warrants particular attention in this discussion. Rahimi and Miri (2021) demonstrated, through a study of EFL teachers in Iran, that participation in technology-focused training programmes was significantly associated with higher levels of readiness to integrate mobile technology into classroom instruction. Teachers who had engaged with structured professional development reported greater confidence, stronger pedagogical rationale, and more sophisticated implementation strategies compared to their untrained counterparts. These findings have clear implications for educational policy, suggesting that sustained investment in teacher professional development is an indispensable prerequisite for the successful and equitable diffusion of MALL across diverse educational contexts.

Within the specific domain of English as a Foreign Language (EFL) instruction in Indonesia, the relevance of MALL is particularly acute. English occupies a compulsory position within the national secondary school curriculum, yet its teaching in rural areas is frequently hindered by a dual set of challenges: restricted access to technological infrastructure on one hand, and limited exposure to authentic English-language environments on the other. Septiani and

Yusuf (2023) argue that MALL holds considerable promise as a mediating tool capable of bridging the gap between rural EFL learners and a broader, more diverse range of authentic language learning resources, provided that its implementation is carefully calibrated to the local conditions and needs of rural school communities.

From a theoretical standpoint, the Technology Acceptance Model (TAM), originally formulated by Davis (1989) and subsequently refined by numerous scholars, continues to offer a robust conceptual framework for examining the factors that shape teachers' adoption of MALL. Sung, Chang, and Liu (2021) affirm that perceived ease of use and perceived usefulness remain the two most influential determinants of individuals' intentions to adopt and continue using mobile technology for educational purposes. Understanding how rural teachers perceive these constructs is therefore essential for designing targeted interventions and contextually relevant support mechanisms that can meaningfully enhance MALL adoption in resource-constrained settings.

In light of the foregoing discussion, the present study aims to conduct a comprehensive investigation into the readiness of English language teachers in rural areas to implement MALL, as well as the challenges they encounter in doing so. Specifically, this study seeks to examine the multidimensional nature of teacher readiness across knowledge, attitudinal, and practical dimensions, whilst identifying the structural, pedagogical, and contextual barriers that impede effective MALL implementation. The findings are anticipated to contribute meaningfully to the theoretical development of MALL scholarship in rural contexts, an area that remains considerably underexplored in the existing literature, whilst simultaneously offering evidence-based recommendations for educational policymakers and teacher educators committed to advancing equitable, technology-enhanced language education across Indonesia's diverse and geographically dispersed school communities.

B. Research Method

This study employs a qualitative design with a phenomenological approach to explore the lived experiences of English language teachers in implementing Mobile-Assisted Language Learning (MALL) in rural school settings. This approach was selected for its capacity to capture the depth of participants' perspectives, meanings, and contextual interpretations, as affirmed by Creswell and Poth (2018), who assert that phenomenological inquiry is most

appropriate when the researcher seeks to understand how individuals make meaning of a specific lived experience within a unique and particular situation.

The study was conducted in Mandrehe Utara Sub-district, West Nias Regency, North Sumatra Province, Indonesia. The research sites comprised five schools, namely two Primary Schools (SD) in Balodano Village, two Junior Secondary Schools (SMP) located in Balodano Village and Hilimbaruzo Village respectively, and one Senior Secondary School (SMA) in Ononamolo II Village. The selection of these sites was grounded in the area's remote geographical conditions, limited technological infrastructure, and the scarcity of prior academic investigations conducted in the region, rendering it a highly relevant and compelling context for examining MALL implementation in rural educational settings.

A total of eight English language teachers drawn from across the five research sites participated in this study. Participants were selected through purposive sampling, a strategy premised on the deliberate identification of individuals who possess the experience, knowledge, and characteristics most pertinent to the research focus (Merriam & Tisdell, 2016). The inclusion criteria encompassed the following: currently serving as an active English language teacher at one of the designated research schools, possessing a minimum of two years of teaching experience, and willingness to participate voluntarily upon providing written informed consent.

Data were collected through three complementary methods, namely semi-structured in-depth interviews, non-participant classroom observations, and document analysis. Semi-structured interviews constituted the primary instrument, conducted individually with each participant, lasting between forty-five and seventy minutes, and carried out in Bahasa Indonesia to ensure participants' comfort and openness in articulating their experiences (Kvale & Brinkmann, 2015). Classroom observations were undertaken across a number of instructional sessions to obtain a direct account of teachers' pedagogical practices and the extent to which mobile technology was incorporated into the instructional process. Document analysis involved a systematic review of lesson plans (RPP), syllabi, and school policies pertaining to technology use in teaching and learning, thereby providing a more complete institutional context to complement the data gathered through interviews and observations (Bowen, 2009).

Data analysis was conducted using the six-phase thematic analysis framework developed by Braun and

Clarke (2021), encompassing data familiarisation, inductive generation of initial codes, grouping of codes into themes, review and refinement of themes, definitive definition of themes, and narrative reporting of findings. To ensure the trustworthiness of the research, member checking procedures were applied by confirming interpretive summaries with a selection of participants, alongside peer debriefing sessions conducted with colleagues experienced in qualitative research methodology, as recommended by Lincoln and Guba (1985).

The entire research process was carried out in strict adherence to established ethical principles governing research involving human participants. Each participant received a thorough explanation of the study's purpose, procedures, and their rights as research participants, including the unconditional right to withdraw at any stage without consequence. Written informed consent was obtained prior to the commencement of data collection, and all participant identities have been safeguarded through the use of pseudonyms throughout the reporting of findings.

C. Findings and Discussion

1. Teachers' Readiness to Implement MALL

The findings of this study reveal that the level of readiness among English language teachers in Mandrehe Utara Sub-district, West Nias Regency to implement Mobile-Assisted Language Learning (MALL) varies considerably, ranging from highly limited to moderately developed readiness. In broad terms, this readiness can be mapped across three principal dimensions, namely knowledge readiness, attitudinal readiness, and practical readiness, as conceptualised by Hashim (2021).

With regard to knowledge readiness, the majority of participants acknowledged that their understanding of the concept of MALL and its pedagogical potential within the English language learning context remains at a rudimentary level (Interview, 2026). Most participants were familiar with smartphones as everyday communication devices; however, they had yet to develop a sufficient understanding of how such devices might be purposefully employed as pedagogical instruments within the classroom. One participant noted that whilst she was aware of language learning applications such as Duolingo, Google Translate, and several others, she had never attempted to formally integrate these tools into her lesson plans, citing unstable network conditions and prevailing school regulations as the primary deterrents (Interview, 2026). This

finding is consistent with the observations of Almekhlafy (2021), who demonstrated that a considerable number of EFL teachers in developing contexts continue to perceive mobile technology primarily as a communication tool rather than as a pedagogical medium capable of enriching language learning experiences.

With respect to attitudinal readiness, the findings present a comparatively optimistic picture. Five of the eight participants expressed positive and open attitudes towards the possibility of incorporating mobile technology into English language teaching. They expressed the belief that MALL holds considerable potential to enhance student motivation and learning engagement, particularly given the pronounced interest of younger generations in digital devices (Interview, 2026). This finding aligns with the conclusions of Yunus, Nordin, and Salehi (2021), who established that teachers in rural settings generally demonstrate positive dispositions towards MALL adoption even when confronted with a range of structural limitations. Nevertheless, the remaining participants articulated significant reservations concerning the potential misuse of smartphones by students during instructional time, leading them to adopt a more cautious stance with regard to MALL implementation.

Concerning practical readiness, all eight participants consistently reported a low level of preparedness. None of the participants had ever designed or delivered a lesson that explicitly integrated MALL as a planned instructional component, as formal classroom policy at the research sites generally prohibits students from bringing personal digital devices to school unless expressly directed by school leadership (Interview, 2026). In the majority of classrooms observed, students were routinely required to bring printed English and Indonesian dictionaries as their primary reference resources. A number of participants acknowledged having occasionally encouraged students to use Google Translate to look up unfamiliar vocabulary, though this practice occurred exclusively outside school hours and away from the school premises (Interview, 2026), and was neither pedagogically planned nor integrated into broader learning objectives. Rahimi and Miri (2021) affirm that practical readiness is substantially influenced by the extent to which teachers have had access to technology-focused professional development, and the conspicuous absence of such training opportunities among the participants in this study constitutes the most pertinent explanation for the low levels of practical readiness documented herein.

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2. Challenges Encountered by Teachers in Implementing MALL

Thematic analysis of the interview, observation, and document data identified four principal thematic clusters of challenges that emerged consistently across all participants, namely limitations in technological infrastructure, low levels of teacher digital literacy, insufficient institutional support, and pedagogical concerns pertaining to classroom management.

a. Limitations in Technological Infrastructure

The most fundamental and most frequently cited challenge across all participants was the severe limitation of technological infrastructure at the research schools. Five participants reported that their schools lacked adequate internet access, with several schools having no internet connectivity whatsoever. Mobile network signals were described as highly unstable and frequently unavailable within classroom spaces. These conditions directly impede any attempt to utilise internet-dependent learning applications, including e-learning platforms, online audio-visual content, and cloud-based collaborative activities. This finding is in close accord with Nuchto and Suksakulchai (2022), who assert that the digital divide between urban and rural areas remains the most structurally significant barrier to MALL implementation in developing countries. Compounding the network limitations, the majority of students at the research sites were also reported to lack personal smartphones of sufficient capability to support mobile-based learning activities, further amplifying the complexity of the challenges confronting their teachers.

b. Low Levels of Teacher Digital Literacy

The second theme to emerge consistently concerned the low levels of digital literacy among participants. Whilst all participants owned personal smartphones, their capacity to operate educational applications, download and manage digital learning content, and integrate technology into lesson design remained considerably limited. One participant disclosed that she lacked the confidence to attempt using a learning application in front of her students, fearing that technical difficulties might arise and disrupt the flow of the lesson (Interview, 2026). Similar sentiments, characterised in the scholarly literature as technology anxiety, were expressed by several other participants. Almekhlafy (2021) has documented that technology anxiety constitutes a significant affective barrier to MALL adoption among EFL teachers, and the findings of the present study provide empirical corroboration of

this claim within the specific context of rural Indonesia.

c. Insufficient Institutional Support

The third theme to emerge concerned the conspicuous absence of institutional support from school administrations and local education authorities alike. All participants reported that they had never attended any training programme or professional workshop specifically addressing the use of mobile technology in English language teaching. None of the research schools possessed a formal policy governing the use of mobile devices in learning, and school principals were generally described as adopting a neutral stance, neither actively encouraging nor prohibiting smartphone use within instructional contexts. This situation mirrors the findings of Yunus, Nordin, and Salehi (2021), who identified the absence of institutional support as one of the foremost impediments to MALL implementation among rural teachers, underscoring the widely held view that teachers' intrinsic motivation alone is insufficient without a conducive institutional ecosystem to sustain innovation. Furthermore, the absence of professional incentives for teachers who endeavour to innovate in their instructional practice was identified as an additional factor that weakens motivation to independently explore technology-based pedagogical approaches.

d. Pedagogical Concerns and Classroom Management

The fourth theme pertained to the pedagogical concerns expressed by participants in relation to classroom management in the event that smartphones were permitted during lessons. Several participants articulated apprehension that students would use mobile devices for purposes unrelated to learning, such as playing games or accessing social media, thereby undermining concentration and overall learning productivity. One participant stated that she found classroom management considerably more straightforward in the absence of mobile devices, even whilst acknowledging that MALL holds theoretically compelling potential. Such concerns are by no means unique to the present research context; Sung, Chang, and Liu (2021), in their comprehensive meta-analysis, found that classroom management concerns constitute one of the most consistently identified factors inhibiting the implementation of mobile technology in teaching and learning across a broad range of international contexts.

3. Discussion

Taken as a whole, the findings of this study indicate that MALL implementation in the rural schools of Mandrehe Utara Sub-district remains at an embryonic stage and has yet to be formally institutionalised in any of the research sites. The substantial gap between the theoretical promise of MALL as a pedagogical innovation and the practical reality of its implementation on the ground is attributable to a complex and mutually reinforcing interplay of infrastructural, individual, and institutional factors. These findings lend empirical weight to the argument advanced by Purwati and Rofiqoh (2022) that the successful implementation of MALL in rural contexts demands a holistic and contextually sensitive approach that extends well beyond the mere provision of technological devices.

Notably, despite confronting a formidable array of challenges, the majority of participants nonetheless expressed a genuine desire and aspiration to implement MALL in the future, should infrastructural conditions and institutional support improve sufficiently. This finding is significant as it suggests that the barriers identified are fundamentally structural and contextual in nature, rather than rooted in ideological resistance to technological innovation. Accordingly, the most urgently needed interventions are not those aimed at persuasion or motivational enhancement, but rather those directed at concrete infrastructural improvement, the provision of sustained and contextually relevant professional development, and the establishment of explicit school-level policies that meaningfully endorse and support the integration of mobile technology into English language teaching.

These findings carry important implications for educational stakeholders in West Nias Regency and analogous rural regions across Indonesia. Local governments must prioritise the expansion of internet connectivity to remote schools as a foundational prerequisite for any sustainable MALL implementation initiative. Concurrently, district education offices ought to design professional development programmes that specifically target the enhancement of teachers' digital literacy and technology-integrated pedagogical competencies, whilst remaining attentive to the distinctive conditions and needs of rural educators. Reinders and Pegrum (2021) affirm that sustained and structured support for teachers is the cornerstone of broad and equitable MALL adoption, and this recommendation resonates with particular force in light of the empirical realities documented in the present study.

D. Conclusion

This study has examined the readiness of English language teachers to implement Mobile-Assisted Language Learning (MALL) and the challenges they encounter across the rural schools of Mandrehe Utara Sub-district, West Nias Regency. Overall, the findings indicate that teachers' readiness to implement MALL remains at a low to moderate level. Of the three readiness dimensions examined, only attitudinal readiness presented a relatively positive picture, whilst knowledge readiness and practical readiness were found to be considerably limited. None of the participants had ever designed or delivered a lesson that formally integrated MALL as a planned instructional component, a circumstance largely attributable to prevailing school policies that generally prohibit students from bringing personal digital devices onto school premises. The principal challenges identified encompass limitations in technological infrastructure, low levels of teacher digital literacy, insufficient institutional support, and pedagogical concerns relating to classroom management. Amongst these, the absence of adequate internet connectivity emerged as the most fundamental and consequential barrier to any meaningful MALL implementation within the research context.

Notwithstanding these challenges, the majority of participants expressed a genuine and sincere aspiration to implement MALL in the future, should infrastructural conditions and institutional support improve sufficiently. This finding affirms that the barriers encountered are structural and contextual in nature, rather than rooted in any ideological resistance to technological innovation. Accordingly, this study recommends that local government authorities prioritise the expansion of internet access to remote schools as a matter of educational urgency, that district education offices design contextually sensitive digital literacy training programmes tailored specifically to the needs of rural teachers, and that school administrations establish explicit policies that meaningfully endorse and facilitate the integration of mobile technology into classroom instruction. For future researchers, longitudinal studies and mixed methods approaches are strongly encouraged in order to generate a more comprehensive and nuanced understanding of the dynamics surrounding MALL implementation across the diverse rural educational landscapes of Indonesia.

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