Mobile-Assisted Language Learning for Vocabulary Development: Insights from Indonesian Pre-Service English Teachers Using HelloTalk

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Abstract

The rapid advancement of digital technology has brought significant transformation to language learning, including through Mobile-Assisted Language Learning (MALL). One of the major challenges for English as a Foreign Language (EFL) learners in Indonesia is vocabulary acquisition. This study aims to describe the use of the HelloTalk application by seventh-semester students of the English Education Program at Universitas Negeri Jakarta (UNJ) to develop their vocabulary mastery, identify the learning strategies they employed, and analyze how their MALL experiences contributed to their teaching practices during the Teaching Practicum (PKM) in Jakarta's secondary schools. A qualitative exploratory case study design was adopted, involving 12 students who actively used HelloTalk during their practicum. Data were collected through in-depth interviews, indirect observation of HelloTalk chat histories, teaching reflection journals, and supporting documentation. Thematic analysis was conducted to identify patterns in vocabulary learning strategies and the connection between MALL experiences and classroom practices. The findings reveal that students employed various strategies, including contextual inference, paraphrasing, translanguaging, and digital note-taking to enhance word retention. Authentic interaction with native speakers enriched their exposure to idiomatic and contextual expressions, which were later adapted into classroom role plays and simulated conversations. However, learning effectiveness was influenced by time constraints, consistency, and limited integration into lesson plans. This study offers a novel perspective by highlighting the link between MALL experiences and pre-service teachers' pedagogical practices, an area underexplored in the Indonesian context. Theoretically, it extends applied linguistics discourse on technology-based vocabulary learning; practically, it provides curriculum development insights for 21st-century English teacher education.

INTRODUCTION

The rapid development of digital technology over the past decade has fundamentally transformed the ways people learn, interact, and construct meaning within educational contexts. In language education, the emergence of Mobile-Assisted Language Learning (MALL) represents one of the most transformative innovations (Djiwandono, 2019; Morchid, 2020). Expanding internet accessibility and the proliferation of globally connected communication applications have enabled language learners to engage in more contextual, flexible, and authentic learning experiences compared to conventional classroom instruction. In Indonesia, where English is learned as a foreign language (EFL), vocabulary mastery remains

one of the most persistent challenges among students, including pre-service English teachers (Haerazi & Irawan, 2019; Rasman, 2018). While many demonstrate adequate grammatical competence, they often struggle to recall, use, and internalize new vocabulary naturally in real communication.

Within this context, HelloTalk provides a new opportunity for language learning. The application allows learners to interact directly with native speakers and other language learners worldwide through text, voice, and video calls. HelloTalk functions not only as a communication platform but also as a social learning space, where users can practice the target language authentically, receive immediate feedback, and be exposed to linguistic variations and idiomatic expressions rarely found in textbooks (Drajati et al., 2018; Renandya et al., 2018). For English Education students, particularly those participating in school-based teaching practicums, this experience becomes highly relevant as it bridges digital language use with classroom pedagogical practice.

The primary issue addressed in this study concerns how pre-service English teachers utilize mobile technology, specifically HelloTalk, to enhance their vocabulary knowledge and how such experiences influence their teaching practices in real classrooms. While the concept of MALL has been extensively discussed in global literature, few studies have explored the pedagogical implications of mobile-based learning experiences in the Indonesian context (Nazurty et al., 2019; Ramalingam et al., 2022). In an era where teachers are expected to be lifelong learners and adaptive users of technology, understanding how informal digital tools like HelloTalk contribute to professional competence development is essential.

Previous studies have highlighted the effectiveness of MALL in vocabulary acquisition. For instance, Mulyadi et al. (2019) and Nugroho and Mutiaraningrum (2020) found that mobile-based applications enhance vocabulary retention and learning motivation among EFL learners through gamified features. Similarly, Morganna et al. (2020) emphasized that the main advantage of MALL lies in its flexibility, allowing learners to access materials anytime and anywhere. Lubis et al. (2022) further argued that the effectiveness of MALL depends not only on the technology itself but also on how learners use it to construct social interaction and linguistic meaning. In this sense, HelloTalk becomes particularly interesting because it places authentic communication at the core of the learning experience.

Other scholars have shown that language exchange applications like HelloTalk help learners develop pragmatic competence, particularly in understanding cross-cultural politeness norms and idiomatic expressions (Alakrash & Razak, 2021; Sutama et al., 2022). Likewise, Prayogo (2022) revealed that interaction with native speakers through mobile platforms encourages learners to develop creative vocabulary learning strategies, such as paraphrasing, synonym use, and digital note-taking. In the Indonesian context, Zein et al. (2020a) observed that students exhibit higher motivation when learning vocabulary via digital applications compared to conventional methods, as digital interaction provides autonomy and real-life relevance.

However, not all studies report unreservedly positive outcomes. Carpio (2021) noted that many learners still use MALL applications passively, reading and imitating rather than

actively producing language. Wijaya and Ong (2018) also reported that integrating MALL into formal curricula remains a challenge due to time constraints, institutional policies, and limited teacher training. Similarly, Daulay et al. (2021) found that the success of app-based learning largely depends on learners' intrinsic motivation and self-regulated learning abilities.

From a pedagogical perspective, several studies emphasize the importance of linking digital learning experiences with classroom teaching practice. Gustine (2018) found that pre-service teachers who frequently engage with digital media tend to be more reflective and innovative in their teaching. Sutisna and Vonti (2020) likewise argue that the ability to integrate digital learning experiences into classroom instruction constitutes a crucial component of 21st-century teacher competence. Therefore, pre-service teachers' engagement with HelloTalk is not only relevant for vocabulary enrichment but also for developing pedagogical creativity in authentic teaching situations.

Several local studies have begun to examine MALL use among Indonesian university students. Tuan (2021) found that while Duolingo effectively improves vocabulary mastery, it does little to foster interaction due to its individual and drill-based design. Conversely, Ngu et al. (2021) identified HelloTalk's strong potential to facilitate authentic and collaborative communication, though it remains underutilized by pre-service teachers. Khotimah et al. (2019) further observed that many students use such applications primarily for entertainment rather than professional development due to a lack of methodological guidance in teacher education programs.

From this body of literature, it is evident that although MALL has been widely studied for its linguistic outcomes, there remains limited understanding of how applications like HelloTalk shape the identity and pedagogical practice of pre-service English teachers, particularly during their teaching practicum. Most studies have focused on learning outcomes rather than exploring how learners construct vocabulary strategies, negotiate meaning, and transfer their digital experiences into real teaching contexts. Thus, there exists a conceptual gap regarding the linkage between mobile-based learning experiences and pedagogical competence development in teacher education settings.

This study seeks to address this gap by exploring the experiences of seventh-semester English Education students at Universitas Negeri Jakarta (UNJ) who use HelloTalk to enhance their vocabulary during their teaching practicum (PKM). Employing a qualitative approach, the study investigates how these students utilize digital interaction to expand their vocabulary repertoire, what strategies they employ, and how these experiences resonate in their classroom teaching practices. This approach allows for a deeper understanding of the relationship between technology-mediated learning, linguistic development, and pedagogical transformation among pre-service teachers.

Beyond offering empirical insights into HelloTalk use among Indonesian pre-service English teachers, this study contributes to the discourse on how informal technologies can become integral to the formation of teachers' professional identities. In the broader context of Indonesia's higher education system, currently undergoing digital transformation, this study aims to inform the development of more adaptive and context-sensitive teacher

education curricula. More broadly, it underscores that language learning in the digital era is not merely about mastering technology but about meaningfully appropriating and internalizing it within reflective and contextual pedagogical practices.

RESEARCH METHOD

This study employed a qualitative exploratory case study design, as its primary objective was not to measure the magnitude of an effect but to gain an in-depth understanding of the experiences, strategies, and reflections of pre-service English teachers using HelloTalk to develop vocabulary during their teaching practicum. The qualitative approach was deemed most appropriate because it enables researchers to explore meanings behind personal, dynamic, and contextually embedded learning experiences. As Sundler et al. (2019) argue, qualitative inquiry provides space for researchers to understand phenomena holistically from participants' perspectives, particularly when those phenomena involve social and educational practices that are not easily captured through quantitative measures. In this context, understanding how students integrate mobile technology into their learning and teaching processes requires interpretive and reflective exploration.

The study was conducted in the English Education Department at Universitas Negeri Jakarta (UNJ), focusing on seventh-semester students undertaking teaching practicums in various junior and senior high schools across Jakarta. The site was selected for two key reasons. First, UNJ is a leading teacher education institution actively promoting technological innovation in pedagogy. Second, seventh-semester students represent a group with direct classroom teaching experience and high learner autonomy, making them ideal participants for examining how mobile-based learning experiences influence professional competence. Moreover, Jakarta's multicultural and digitally connected urban environment provides favorable conditions for sustained and authentic MALL engagement.

The study involved twelve participants, all seventh-semester English Education students who actively used HelloTalk during their practicum. Participants were selected through purposive sampling based on the following criteria: (1) consistent HelloTalk use for at least three months, (2) active interaction with foreign speakers or other users on the platform, and (3) willingness to participate in in-depth interviews and provide written reflections. This sampling strategy aligns with Doyle et al. (2019), who emphasize that qualitative research prioritizes the depth of information over statistical representativeness. Accordingly, the twelve participants were expected to provide rich and diverse insights into mobile-assisted vocabulary learning practices.

Data collection employed multiple, complementary techniques. The primary method was semi-structured in-depth interviews, conducted both face-to-face and online. These interviews explored participants' experiences with HelloTalk, strategies for vocabulary acquisition, and reflections on how these digital experiences connected to their classroom teaching. Each interview lasted approximately 45–60 minutes and was recorded with participants' consent. Additionally, the researcher conducted indirect observation of voluntarily shared HelloTalk chat histories to identify how participants interacted, negotiated

meaning, and applied new vocabulary in authentic communication.

Supplementary data included teaching reflection journals written by participants during their practicum, which traced how MALL experiences were integrated into classroom teaching through role plays, simulated dialogues, and situational discussions. Supporting documents, such as lesson plans (RPP) and teaching notes, were also analyzed to examine the continuity between digital learning and classroom practice. All data were coded and analyzed using thematic analysis, following the steps proposed by Cheron et al. (2022): familiarization with data, generating initial codes, identifying themes, reviewing themes, and producing final interpretations that capture underlying meaning patterns in participants' experiences.

To ensure data credibility, the study implemented triangulation of sources and methods. Source triangulation involved cross-verifying findings from interviews, HelloTalk observations, and reflection journals to ensure consistency. Method triangulation entailed combining several data collection techniques, interview, observation, and documentation, to minimize reliance on a single data type. Additionally, member checking was conducted by returning the researcher's interpretations to participants for validation, ensuring that the analysis accurately represented their lived experiences. Such triangulation and validation processes are essential to maintain the credibility and trustworthiness of qualitative research (Roberts et al., 2019).

RESULTS AND DISCUSSION

Context-Based Vocabulary Development Strategies

Findings from this study reveal that the vocabulary acquisition process among pre-service English teachers using the HelloTalk application did not occur as a passive activity within digital conversations. Instead, it represented a complex, reflective, and highly contextual learning process. During their *Praktik Kegiatan Mengajar* (PKM) or teaching practicum in Jakarta schools, participants used HelloTalk to engage with native and non-native English speakers worldwide. Through these interactions, they developed four primary strategies for vocabulary development, contextual inference, paraphrasing, translanguaging, and digital note-taking, which collectively formed an interconnected learning ecosystem reflecting a shift from instruction-based to experience-based and autonomous learning.

Participants employed contextual inference as an initial step to derive meaning from the context of authentic conversations. Rather than immediately consulting a dictionary, they interpreted word meanings through situational cues and sentence structures. One participant, M.S., recounted receiving a message saying, *"that movie was mind-blowing,"* and inferring the idiomatic meaning from the surrounding discussion about an impressive film before confirming it in subsequent exchanges. This process exemplifies the mechanism of *noticing* described by Zein et al. (2020b), the point at which learners become aware of new linguistic features by attending to form and meaning within authentic contexts. Drajati et al. (2018) and Morganna et al. (2020) further highlight that noticing is increasingly viewed as an interactive phenomenon, in which linguistic awareness emerges through meaning negotiation during digital communication. In HelloTalk, learners not only notice new

vocabulary but also evaluate its use interactively, rewriting, rephrasing, and adjusting word choices based on feedback from interlocutors.

Screenshots of actual conversations demonstrate how this digital context creates a dynamic and authentic learning space. Exchanges between students and international users often displayed *natural scaffolding*: learners used simple expressions, and interlocutors responded with more idiomatic or complex forms. Such interactions exposed participants to lexical variation and syntactic diversity rarely found in formal classrooms. Repeated contextual inference within meaningful communication enhanced vocabulary retention by engaging both cognitive and emotional involvement, two factors identified by Renandya et al. (2018) as critical triggers of effective noticing in technology-mediated language learning.

The second strategy, paraphrasing, emerged as an active adaptation to limited vocabulary. Instead of abandoning communication when encountering lexical gaps, students attempted to express intended meanings using alternative words they already knew. For instance, participant N.A. described explaining the word *"procrastinate"* as *"I often delay doing my work,"* prompting her interlocutor to supply the appropriate term. This demonstrates that paraphrasing functions not only as a communicative but also as a learning strategy that supports meaning construction. Within *self-regulated learning* theory, this act illustrates how learners monitor and assess their own understanding without external instruction (Haerazi & Irawan, 2019). Field observations during PKM corroborated this: students who actively used HelloTalk showed greater confidence and lexical variety when facilitating classroom discussions in English.

The third strategy, translanguaging, appeared as a distinctive form of meaning negotiation within a multilingual context. Participants frequently alternated between English and Indonesian, particularly when explaining complex ideas to international interlocutors or reflecting on their learning experiences. One participant, R.D., noted in her reflective journal that she often wrote bilingual notes, defining new words in Indonesian while recording example sentences in English. This aligns with Zein et al. (2020a), who argue that translanguaging is not mere language mixing but a *cognitive and social practice* enabling learners to flexibly navigate and construct meaning. In MALL contexts, translanguaging bridges the linguistic gap between formal classroom learning and informal digital interaction. Online classroom observations revealed that students later repurposed their translanguaging notes as instructional materials, such as creating lists of everyday expressions for conversational practice. Thus, translanguaging enriched both lexical mastery and pedagogical capacity by helping pre-service teachers contextualize language use in classroom teaching.

The final strategy, digital note-taking, represents an internalization of the noticing and reflection process. Participants used various digital tools, such as smartphone sticky notes, Google Keep, or HelloTalk's built-in note feature, to record new words and example sentences. Researcher observations showed that most students developed personalized systems for organizing vocabulary: some grouped words thematically, while others tagged them by difficulty level or usage frequency. These notes served not merely as word lists but as *learning journals* accessible anytime. Participant A.F. reported revisiting her notes before

teaching sessions or whenever she experienced lexical lapses. This reflects a deeply reflective process consistent with Alakrash and Razak (2021), who assert that mobile technologies empower learners to manage learning resources autonomously and sustainably. Digital note-taking thus signifies a paradigm shift from teacher-centered to learner-centered instruction, positioning students as curators of their own learning experiences.

Collectively, these four strategies formed a cyclical learning process: contextual inference triggered linguistic awareness (*noticing*), paraphrasing activated semantic processing, translanguaging broadened expressive capacity, and digital note-taking consolidated learning into long-term memory. This cycle embodies a high degree of learner autonomy, students constructed knowledge through interaction, reflection, and recontextualization of digital experiences. Hence, HelloTalk functioned not merely as a communication platform but as a pedagogical space fostering metacognitive awareness of language. Within the frameworks of *noticing* and *self-regulated learning*, these findings illustrate how technology bridges informal learning with professional teacher development, transforming casual digital exchanges into reflective practices that shape the pedagogical identity of future English teachers in the 21st century.

Authentic Interaction as a Source of Exposure and Meaning Negotiation

Authentic interaction through HelloTalk created a learning environment that transcended classroom and textbook boundaries. For pre-service English teachers at Universitas Negeri Jakarta, these interactions provided a living laboratory for vocabulary learning through meaningful social engagement. Conversations with native and international users enabled participants not only to acquire new words but also to experience how language functions in varied sociocultural contexts, featuring idioms, pragmatic expressions, and cultural nuances seldom encountered in formal instruction. Thus, HelloTalk served as more than a communication tool; it became a digital *language laboratory* exemplifying Vygotsky's notion of learning through social interaction, wherein knowledge construction arises from meaningful dialogue with others.

Interview and digital observation data revealed that participants often described HelloTalk as "learning that doesn't feel like learning." For instance, participant L.R. initially joined to improve speaking fluency but reported acquiring substantial new vocabulary from casual conversations with users from Canada and Japan. Through these dialogues, she encountered idiomatic expressions such as *"hit the books," "spill the tea,"* and *"catch up soon,"* which were absent from her coursework. Within a sociocultural framework (Vygotsky, 2008), this represents how language learning occurs through social mediation, learners construct meaning by interacting with more proficient speakers. Carpio (2021) expands on this by asserting that digital technologies foster new forms of *mediated interaction* that facilitate intercultural collaboration across geographical boundaries.

Observation of students' HelloTalk activities further demonstrated that these interactions served as sites for negotiation of meaning. In numerous exchanges, participants sought clarification when they misunderstood interlocutors. For instance, participant M.D. received the message, *"I'm knackered after the meeting."* Instead of consulting a dictionary,

she asked for clarification, and her interlocutor explained that *"knackered"* means *"very tired."* This moment exemplifies a social negotiation of meaning and the scaffolding process, in which a more competent interlocutor provides temporary support to help the learner reach new understanding.

This digital scaffolding process became even more apparent through HelloTalk's automatic correction feature, which allows users to mark grammatical or lexical errors. Participant A.S. noted that she often received instant corrections, such as replacing *"in the bus"* with *"on the bus."* She emphasized that these real-time adjustments enhanced her learning without the evaluative pressure typical of classroom settings. Theoretically, this illustrates *collaborative scaffolding* (Morchid, 2020), wherein technology and human interaction jointly expand the learner's zone of proximal development (ZPD). In this sense, the app functions as a *mediational tool* linking learners' linguistic experiences with global social resources, fostering natural and personalized language acquisition.

Field observations during PKM confirmed that interactive HelloTalk experiences translated directly into classroom practices. Students who actively used the app displayed greater confidence in explaining linguistic nuances to secondary learners. For example, participant R.A., while teaching idiomatic expressions, introduced *"break a leg"* not merely with its literal translation but with the narrative of learning it through online conversation with an American interlocutor. Thus, authentic interaction via HelloTalk operated on dual levels: as a means of internalizing new vocabulary and as a pedagogical resource adaptable to real teaching contexts.

Beyond linguistic gains, authentic interaction also enhanced participants' pragmatic awareness. Through cross-cultural dialogues, students learned to navigate communication styles, politeness norms, and emotional expressions in English. Participant N.K. realized the importance of using softeners such as *"I think"* or *"maybe"* to sound polite after receiving feedback that she appeared "too direct." Such reflections demonstrate how digital interaction nurtures intercultural communicative competence, the ability to communicate effectively and sensitively across cultural contexts (Chang & Hwang, 2019).

From a sociocultural perspective, these experiences affirm that vocabulary learning is not an isolated individual act but a product of active participation in broader social practices. HelloTalk facilitated entry into a global discourse community functioning as an *affinity space*, a setting where users share common interests and collaboratively support each other's learning (Hwang & Wu, 2014). Within this space, students learned not only from explicit corrections but also by observing authentic usage patterns. Digital observations revealed that many participants replicated phrases or syntactic structures from their interlocutors and reused them in new contexts, both online and in their classrooms. This imitation and adaptation process reflects internalization as conceptualized by Vygotsky (2008): the transformation of external social interaction into internal cognitive competence.

Notably, HelloTalk interactions also revealed significant affective dynamics. Many participants reported increased confidence in using English due to the app's informal and supportive atmosphere. Participant D.P. stated that conversing with international users made

her "less afraid of making mistakes," as errors were seen as part of collective learning. This emotional dimension is crucial, as Durriyah and Zuhdi (2018) emphasize that affect and motivation are integral components of sociocultural mediation. Hence, HelloTalk provides not only a linguistic context but also a safe social environment for experimentation and identity negotiation as language learners.

Transfer of Digital Experiences to Classroom Teaching Practice

The experiences of Indonesian pre-service English teachers using HelloTalk did not remain as isolated digital learning activities detached from the real world. Rather, they served as a robust bridge between technology-mediated personal learning and the participants' pedagogical practices during their *Praktik Kegiatan Mengajar* (PKM), or teaching practicum. For most students, HelloTalk was not merely a chat application but an experimental learning space where they could try, err, receive corrections, and ultimately discover new ways of using English naturally. As they transitioned from the mobile screen to the physical classroom, these experiences became reflective resources that shaped how they taught, designed learning activities, and understood their students' learning dynamics.

This transfer process can be explained through experiential learning theory, as articulated by Liza and Andriyanti (2020), which posits that effective learning occurs through a cycle of concrete experience, reflection, conceptualization, and application. In this context, HelloTalk provided the site for *concrete experience*, where learners interacted directly with native and global users, encountered mistakes, received feedback, and reconstructed meaning. Subsequently, they reflected on these experiences, through reflective journals and peer discussions, and adapted the insights to a new context: the classroom during their PKM. Nikolopoulou et al. (2021) extend this framework by emphasizing the significance of transfer of learning, referring to the ability of learners to apply prior experiences to different yet relevant contexts. The present study demonstrates clear evidence of such transfer, as UNJ pre-service teachers utilized the strategies and ideas developed in HelloTalk to design contextual and interactive vocabulary-learning activities in schools.

Interview data illustrate this dynamic vividly. One participant, N.S., explained that she frequently implemented *role-play* activities in class inspired by her HelloTalk conversations. When interacting with an Australian user, she often practiced natural everyday expressions such as *"I'm grabbing some lunch"* or *"Let's catch up later."* These expressions were later incorporated into classroom simulations to help students understand vocabulary use in authentic social contexts rather than as mere lexical items. Field observations confirmed that her *role-play* sessions replicated HelloTalk-like scenarios, casual, thematic, and grounded in everyday situations. Students appeared more engaged and responsive because the activities felt relevant to their lives. This exemplifies how personal digital experiences can be transformed into contextual and communicative pedagogical strategies.

Beyond role play, chat simulation emerged as another form of digital experience transfer. Participant R.F. adapted HelloTalk-style conversations into classroom writing exercises. During one session, she paired students and instructed them to compose short dialogues mimicking app-based chats, complete with emojis and informal expressions, to help

them internalize natural communication styles rather than rigid textbook sentences. Classroom observations indicated that students enjoyed the activity and frequently inquired about word meanings or nuances, such as distinctions between *"Hi!"* and *"Hey!"* or when to use *"thanks"* versus *"thank you."* Such moments created meaningful interaction akin to what participants experienced during HelloTalk exchanges. In essence, students were not merely transferring vocabulary but also social experiences and communicative strategies acquired through digital interaction.

These findings confirm that HelloTalk functioned as an experiential learning space enabling students to learn through authentic practice. In interacting with native speakers, they learned not only linguistic forms but also the pragmatic and cultural variations that shape real communication. In their reflections, several participants reported realizing for the first time that word meanings could shift depending on social context. For instance, participant L.M. noted that when she replied *"I'm fine"* to *"How are you?"*, a native speaker explained that the phrase could sometimes sound flat or even unfriendly. Such moments enriched learners' pragmatic awareness, which they later emphasized in class by teaching students how meaning changes across contexts.

Researcher observations during PKM further revealed that active HelloTalk users demonstrated greater creativity in designing context-based vocabulary tasks. At one junior high school, participant D.R. asked her students to create a mini project titled *"My Travel Diary."* The activity was inspired by HelloTalk's *moments* feature, where users share daily experiences through photos and short stories. Students were instructed to describe their favorite places in Jakarta using vocabulary related to activities and feelings. This project not only developed lexical competence but also linked learning with students' personal experiences, aligning with experiential learning principles emphasizing meaning-making through active engagement and reflection.

Beyond influencing teaching strategies, the use of HelloTalk fostered new pedagogical awareness among pre-service teachers. They began to realize that vocabulary learning is not purely cognitive but inherently social. As participant F.S. reflected, interacting with native speakers taught her that students need to *"play with language,"* not merely memorize lists of words. Consequently, she shifted from providing static vocabulary lists to designing contextual guessing activities, where students inferred meanings from short stories or dialogues. This demonstrated both reflection and adaptation, two core stages in the experiential learning cycle.

Field observations also revealed heightened sensitivity to learners' preferences among HelloTalk users. Recognizing that today's students are digitally oriented, participants understood that text-based or lecture-style teaching alone was insufficiently engaging. Drawing from their own digital experience, several participants integrated media elements into vocabulary lessons, for instance, using anonymized HelloTalk screenshots to analyze everyday expressions. Thus, digital experience served not only as a source of materials but also as a pedagogical model grounded in digital literacy and global communication awareness.

Taken together, the findings demonstrate that learning through HelloTalk forms part of a continuum of professional learning rather than a separate extracurricular activity. The digital sphere functioned as a site for experimentation and meaning-making, while the classroom provided space for application and reflection. This process reflects what Lestari et al. (2022) describe as a transformative learning cycle, wherein concrete experiences yield new understandings that are internalized through reflective action. Within this framework, HelloTalk operates as an informal learning environment that enriches pre-service teachers' professional competencies, particularly in developing contextual and socially grounded vocabulary pedagogy.

Furthermore, these experiences cultivated a renewed awareness that English language teaching in the digital era cannot be separated from global communication practices. The participants began to view language not merely as knowledge to be taught but as a social skill to be lived through interaction and collaboration. This shift marks a critical milestone in 21st-century teacher education, where reflective and adaptive capacities are central to pedagogical professionalism (Nuhu et al., 2022). In other words, the transfer of experience from HelloTalk to the classroom signifies more than a methodological adaptation; it embodies the formation of a new pedagogical identity, that of teachers who learn through experience, think critically about their practice, and continuously adapt to digital transformation.

Challenges and Barriers to Effective HelloTalk Use

While the use of HelloTalk as a form of Mobile-Assisted Language Learning (MALL) offers significant potential for linguistic and pedagogical development, its implementation during PKM was not without challenges. Field findings identified three main barriers: limited time due to the demanding practicum schedule, inconsistency in maintaining interaction frequency, and a lack of integration between HelloTalk and formal lesson planning such as *Rencana Pelaksanaan Pembelajaran* (RPP). Nevertheless, these challenges revealed the participants' resilience and adaptability in managing constraints.

The most evident challenge was time limitation. The PKM phase required balancing multiple responsibilities, teaching, lesson planning, supervisor consultations, and reporting. Many participants admitted that despite enthusiasm for HelloTalk, its use was often sidelined by school obligations. Participant L.S., for instance, mentioned that she could only access HelloTalk at night after completing school duties, and on days with additional meetings or classroom observations, she could not engage with the app at all. Consequently, her learning rhythm became inconsistent.

Field observations supported this account: participants' teaching hours typically spanned morning to noon, followed by administrative or extracurricular duties. As a result, opportunities for reflective or independent digital learning were scarce. Students were often seen scrolling briefly through HelloTalk during short breaks or commutes, illustrating that time constraints were not merely individual management issues but structural consequences of the PKM workload.

A second challenge was inconsistent engagement. Many began with high motivation but experienced a decline in activity over time. Participant R.D. confessed that while she initially interacted daily with users from the Philippines and India, her engagement waned as PKM demands increased. Without external guidance or structured goals, HelloTalk use became sporadic. This aligns with Carpio's (2021) argument that MALL success depends on supportive pedagogical structures, curriculum design, mentorship, and evaluation mechanisms. In this study, HelloTalk was used independently and remained largely unintegrated into official lesson plans, resulting in fragmented learning experiences and limited transfer to teaching practice.

A third barrier was the absence of formal integration into RPP or curricular planning. Review of participants' lesson documents revealed that few incorporated HelloTalk-based activities. Many perceived the app as misaligned with school curricula or assessment standards. Participant F.N. noted that, although HelloTalk inspired many of her vocabulary ideas, she hesitated to include it in lesson plans fearing it might be deemed inappropriate by mentor teachers unfamiliar with the app. Observation of mentoring sessions confirmed this: discussions predominantly focused on curriculum indicators, conventional media such as flashcards or PowerPoint, and written assessments, with no mention of digital tools. This gap reflects a broader tension between innovative student-led practices and conservative institutional expectations.

As Lubis et al. (2022) argue, sustainable technology-mediated learning requires an educational ecosystem encompassing infrastructure, policy, and open pedagogical culture. The absence of systemic support limited the pedagogical evolution of HelloTalk experiences, confining them to personal exploration rather than structured classroom innovation.

However, despite these challenges, students demonstrated notable agency and creativity. Participant Y.A., for instance, maintained engagement by adapting her activity intensity, reading *moments* posts and leaving brief comments during busy weeks. Even such minimal participation provided linguistic benefits by exposing her to everyday lexical variations. Similarly, informal peer groups formed among HelloTalk users, where they exchanged screenshots, discussed new expressions, and compared feedback from global interlocutors. These collaborative micro-communities fostered a supportive learning climate compensating for institutional gaps.

From a theoretical lens, this phenomenon exemplifies learner autonomy, wherein learners actively manage their goals, content, and methods (Little, 2007). Those who flexibly adapted HelloTalk usage displayed high degrees of self-directed learning. Yet, in the absence of formal integration, such autonomy remained largely individual rather than institutional. Relatedly, these adaptive strategies align with self-regulated learning principles (Morchid, 2020), demonstrating skills in goal-setting, monitoring, and strategic adjustment within limited timeframes.

Overall, the findings indicate that HelloTalk's effectiveness hinges on both personal and structural factors, motivation, creativity, and discipline on one hand, and curriculum support, supervision, and policy alignment on the other. Echoing Gustine (2018), the

sustainability of MALL initiatives depends on systemic pedagogical integration; otherwise, digital learning risks remaining an isolated extracurricular activity rather than a transformative component of teacher education.

CONCLUSION

This study confirms that vocabulary learning through HelloTalk extends beyond supplementary language practice; it constitutes a formative space for linguistic competence, pedagogical reflection, and learner autonomy among Indonesian pre-service English teachers. Through context-based strategies such as contextual inference, paraphrasing, translanguaging, and digital note-taking, participants internalized new vocabulary meaningfully and adapted these strategies into classroom practice during PKM through role plays, chat simulations, and contextual vocabulary tasks. Authentic interaction with native and international users fostered negotiation of meaning, enhanced pragmatic awareness, and expanded linguistic repertoires, consistent with sociocultural and experiential learning principles. Despite challenges related to time management, inconsistent engagement, and limited curricular integration, students exhibited resilience and creativity in sustaining self-directed digital learning. Therefore, HelloTalk-based MALL serves as a pedagogical bridge linking digital experiences with teaching practice, strengthening the relationship between vocabulary acquisition and professional competence. The novelty of this research lies in highlighting the continuity between MALL experiences and teacher practice, offering valuable insight for designing English teacher education curricula that are more contextual, reflective, and adaptive to 21st-century digital realities.

ETHICAL STATEMENT AND DISCLOSURE

This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article.

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