



Future Implementation of Mobile Assisted Language Learning (MALL) in English Language Learning: A Case of University Lecturers and Students in The English Language Education Study Program in Indonesia

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ABSTRACT. The objective of this study is to explore the implementation of Mobile-Assisted Language Learning (MALL) in English language learning, describe the students' perceptions of MALL's implementation, lecturers' views about the implementation of MALL, and also the future implementation of MALL. This research was employed qualitative method with a case study design. The subjects of this research are 3 lecturers of English Language Education Study Program (ELESP) who have knowledge of using technology in the classroom and have concern to the using of MALL in teaching learning process. This research also has 15 students of ELESP in Universitas Negeri Gorontalo as the second subject. The data were collected through interview and field notes. The data was analyzed sequentially based on the collected data. Based on the findings, the lecturers and students use various applications and platforms as their teaching aid in MALL implementation. MALL has influenced students' ability and skill through learning English using mobile devices. Students perceive that learning to use mobile devices makes learning easier. They only study from the comfort of their own homes, their learning behavior is better, more efficient, and their learning achievement does not decrease. Students were enthusiastic in learning; they have good confidence during communicating using English and they solved the problem of using mobile devices during teaching learning process. These may indicate that they have positive attitude to the use of MALL in English language learning. The researcher also investigated the implementation of MALL not only in online or offline learning but also by combining online and offline learning in synchronous and asynchronous modes through the use of various applications and platforms during the teaching and learning process. The researcher has developed a new model, Hybrid Mobile-Assisted Language Learning (Hyb-MALL), as an extended model of MALL for this learning paradigm.

Keywords: mobile-assisted language learning (MALL); students' perceptions; hybrid mobile-assisted language learning (Hyb-MALL); teaching and learning process.

Implementação futura da aprendizagem de línguas assistida por dispositivos móveis (MALL) na aprendizagem da língua inglesa: um caso de professores universitários e estudantes do Programa de Estudos de Ensino da Língua Inglesa na Indonésia

RESUMO. O objetivo deste estudo é explorar a implementação da Aprendizagem de Línguas Assistida por Dispositivos Móveis (MALL) na aprendizagem da língua inglesa, descrever as percepções dos alunos sobre a implementação da MALL, as opiniões dos professores sobre a implementação da MALL e também a implementação futura da MALL. Esta investigação utilizou um método qualitativo com um desenho de estudo de caso. Os sujeitos desta pesquisa são três professores do Programa de Estudos de Ensino da Língua Inglesa (ELESP) que têm conhecimento sobre o uso da tecnologia em sala de aula e se preocupam com o uso da MALL no processo de ensino-aprendizagem. Esta pesquisa também tem 15 alunos do ELESP da Universitas Negeri Gorontalo como segundo sujeito. Os dados foram coletados por meio de entrevistas e notas de campo. Os dados foram analisados sequencialmente com base nos dados recolhidos. Com base nas conclusões, os professores e alunos utilizam várias aplicações e plataformas como auxiliares de ensino na implementação do MALL. O MALL influenciou a capacidade e as competências dos alunos através da aprendizagem do inglês utilizando dispositivos móveis. Os alunos consideram que aprender a utilizar dispositivos móveis facilita a aprendizagem. Eles apenas estudam no conforto das suas próprias casas, o seu comportamento de aprendizagem é melhor, mais eficiente e o seu desempenho na aprendizagem não diminui. Os alunos estavam entusiasmados com a aprendizagem; têm boa

confiança durante a comunicação em inglês e resolveram o problema da utilização de dispositivos móveis durante o processo de ensino-aprendizagem. Isto pode indicar que têm uma atitude positiva em relação à utilização do MALL na aprendizagem da língua inglesa. O investigador também investigou a implementação do MALL não só na aprendizagem online ou offline, mas também combinando a aprendizagem online e offline em modos síncronos e assíncronos através da utilização de várias aplicações e plataformas durante o processo de ensino e aprendizagem. O investigador desenvolveu um novo modelo, o Hybrid Mobile-Assisted Language Learning (Hyb-MALL), como um modelo estendido do MALL para este paradigma de aprendizagem.

Palavras-chave: aprendizagem de línguas assistida por dispositivos móveis (MALL); percepções dos alunos; aprendizagem híbrida de línguas assistida por dispositivos móveis (Hyb-MALL); processo de ensino e aprendizagem.

Implementación futura del aprendizaje de idiomas asistido por dispositivos móviles (MALL) en el aprendizaje del inglés: el caso de los profesores universitarios y los estudiantes del programa de estudios de enseñanza del inglés en Indonesia

RESUMEN. El objetivo de este estudio es explorar la implementación del aprendizaje de idiomas asistido por dispositivos móviles (MALL) en el aprendizaje del inglés, describir las percepciones de los estudiantes sobre la implementación del MALL, las opiniones de los profesores sobre la implementación del MALL y también la implementación futura del MALL. Esta investigación se llevó a cabo utilizando un método cualitativo con un diseño de estudio de caso. Los sujetos de esta investigación son tres profesores del Programa de Estudios de Enseñanza del Idioma Inglés (ELESP) que tienen conocimientos sobre el uso de la tecnología en el aula y se interesan por el uso del MALL en el proceso de enseñanza-aprendizaje. Esta investigación también cuenta con 15 estudiantes del ELESP de la Universidad Estatal de Gorontalo como segundo sujeto. Los datos se recopilaban mediante entrevistas y notas de campo. Los datos se analizaron secuencialmente en función de los datos recopilados. Según los resultados, los profesores y los estudiantes utilizan diversas aplicaciones y plataformas como apoyo didáctico en la implementación del MALL. El MALL ha influido en la capacidad y las habilidades de los estudiantes a través del aprendizaje del inglés mediante dispositivos móviles. Los estudiantes perciben que aprender a utilizar los dispositivos móviles facilita el aprendizaje. Solo estudian desde la comodidad de sus propios hogares, su comportamiento de aprendizaje es mejor y más eficiente, y su rendimiento académico no disminuye. Los estudiantes se mostraron entusiastas con el aprendizaje, tienen confianza a la hora de comunicarse en inglés y resolvieron el problema del uso de dispositivos móviles durante el proceso de enseñanza-aprendizaje. Esto puede indicar que tienen una actitud positiva hacia el uso del MALL en el aprendizaje del inglés. El investigador también estudió la implementación del MALL no solo en el aprendizaje en línea o fuera de línea, sino también combinando el aprendizaje en línea y fuera de línea en modos síncronos y asincrónicos mediante el uso de diversas aplicaciones y plataformas durante el proceso de enseñanza y aprendizaje. El investigador ha desarrollado un nuevo modelo, el aprendizaje híbrido de idiomas asistido por dispositivos móviles (Hyb-MALL), como modelo ampliado del MALL para este paradigma de aprendizaje.

Palabras clave: aprendizaje de idiomas asistido por dispositivos móviles (MALL); percepciones de los estudiantes; aprendizaje híbrido de idiomas asistido por dispositivos móviles (Hyb-MALL); proceso de enseñanza y aprendizaje.

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Introduction

English, as an international language, has become increasingly influential and necessary for global communication. With approximately 400 million native speakers, 400 million second-language users, and 600-700 million foreign language learners, English plays a crucial role in various international contexts, from conferences to sports competitions (Crystal, 2016). In Indonesia, where English is considered a foreign language, the evolution of the English curriculum has led to changes in learning approaches, aiming to enhance the quality of English education. The rapid advancement of technology has transformed the landscape of English language teaching and learning. Traditional methods relying on course books, chalkboards, and audio-visual materials have given way to computer and internet-based resources (Klopfer, 2008; Yaman et al., 2015). This shift has made information more accessible and has introduced new possibilities for effective and efficient learning both inside and outside the classroom.

In the 21st century, technology has become an integral part of education, particularly for digital native students. Teachers and pre-service teachers are now expected to incorporate technology into all aspects of their teaching, from lesson preparation to evaluation. The integration of technology and media in learning

can create an environment where students actively participate and engage with the material. Mobile learning has emerged as a solution to overcome the limitations of traditional PC-based learning. The portability of mobile devices allows for flexible access to learning resources, enhancing communication and increasing student involvement in the learning process (Woodill, 2010). O'Malley et al (2003) defines mobile learning as a tool that enables learners to access educational content from anywhere and at any time, breaking the constraints of fixed locations and schedules.

Mobile-Assisted Language Learning (MALL), a subfield of mobile learning, has made significant contributions to various aspects of language acquisition, including vocabulary learning, idiom practice, writing proficiency development, listening skills, and pronunciation practice (Çakir, 2016; Arvanitis et al., 2016). MALL offers an ideal solution to overcome time and place barriers in language learning, allowing learners to engage with educational content through portable devices such as smartphones, tablets, and other handheld devices. The effectiveness of mobile phones in education is particularly noteworthy due to their widespread availability and affordability. Mobile learning, or m-learning, utilizes these devices to deliver educational content and facilitate learning activities (Czerska-Andrejewska, 2016). The portability and connectivity of mobile devices enable users to access learning materials, communicate with instructors, and engage in various learning activities, including audio-based learning, text messaging, graphical displays, internet searches, and multimedia content.

Research has shown that MALL applications can enhance motivation, support learner autonomy, and improve creative thinking (Dörnyei & Ushioda, 2009; Khaddage et al., 2009). By integrating real-life communication into English learning, MALL provides opportunities for students to negotiate meaning and engage with comprehensible input and output. Moreover, the flexibility of mobile learning allows students to acquire knowledge at their own pace and in any location, making it an attractive option for language learners. Despite the potential benefits of MALL, researchers suggest that there is still work to be done in integrating mobile devices into classroom settings effectively (Rohandi et al., 2018). It is crucial to ensure that MALL applications develop students' linguistic competencies and skills uniformly, and to explore teachers' and students' perspectives on its use. Additionally, understanding students' emotional responses to learning English via MALL is essential for its successful implementation.

Given the growing importance of MALL in language education and the need for further research in this area, this study aims to investigate the implementation of Mobile-Assisted Language Learning (MALL) among university students in the English Department at Universitas Negeri Gorontalo. Specifically, the research seeks to explore how teachers assist students in using various applications and learning platforms, how they address challenges that arise during the learning process, and how mobile devices can be utilized as effective learning aids. Furthermore, the study aims to examine students' perceptions and attitudes towards MALL, focusing on their emotional, behavioral, and cognitive development in the context of online learning through mobile devices.

Literature review

Mobile-Assisted Language Learning (MALL) on Language Learning

Mobile-Assisted Language Learning (MALL) has emerged as a significant subfield within mobile learning and Computer-Assisted Language Learning (CALL). Kukulska-Hulme and Shield (2008) define MALL as formal or informal learning mediated by portable devices that can be used anytime and anywhere. This concept has evolved from early experiments with telephone-assisted study in the 1980s (Hasyim et al., 2017; Yang, 2013) to encompass a wide range of Internet-capable mobile phones, tablet computers, and other handheld devices. The rapid advancement of mobile technology has led to an increased interest in MALL approaches, with researchers exploring its potential to enhance language learning experiences.

The defining characteristics of mobile learning, as outlined by Klopfer et al. (2002), include portability, social interactivity, context sensitivity, connectivity, and individuality. These features allow learners to regulate their learning process and develop at their own pace in non-classroom contexts. It emphasizes that mobile learning is particularly effective in collaborative settings, enabling close interactions, conversations, and decision-making while learners are physically mobile. The versatility of mobile devices supports various language learning activities, including SMS-based learning, game-based learning, and skill-specific tasks for vocabulary, pronunciation, grammar, and comprehension (Kukulska-Hulme & Shield, 2008).

MALL offers numerous advantages for language learners and educators. Ally (2009), highlight benefits such as increased interaction, enhanced understanding of socio-cultural aspects, provision of comprehensible input, support for various learning styles, and promotion of learner autonomy. Mobile devices facilitate access to authentic materials, enable communicative language practice, and support the development of cognitive abilities and critical thinking skills. Moreover, MALL allows for personalized learning experiences that address specific student needs and provide immediate feedback and assessment.

Despite its potential, MALL faces several challenges. Kukulska-Hulme and Shield (2008) note that mobile devices' limitations, such as small screen size, difficulty in reading, data storage constraints, and virtual keyboarding issues, can hinder certain learning activities. Kim (2013) found that small screens can create cognitive disadvantages related to attention and visual perception. He argues that the compact size of mobile technologies may not be conducive to learning certain language skills. Additionally, Colpaert (2004) points out that the shift from verbal to visual output in mobile technologies may pose a disadvantage for language development.

The implementation of MALL in higher education settings presents both opportunities and challenges. It suggests that while most mobile learning initiatives are still in pilot or trial phases, they hint at significant infrastructure and support challenges. The successful integration of MALL in universities requires consideration of not only technological and pedagogical factors but also strategic dynamics within educational institutions, including financial resources, human resources, institutional culture, and the expectations of staff, students, and wider communities.

Research has demonstrated the positive impact of MALL on various aspects of language learning. Burston (2014) emphasize MALL's role in strengthening students' achievement in English learning. Chinnery (2006) indicate that mobile devices are particularly suitable for vocabulary learning and are feasible tools for enhancing overall language learning. It has shown successful applications of mobile devices in teaching English pronunciation, listening skills, and grammar tenses to ESL learners. These findings suggest that MALL offers a promising avenue for improving English language proficiency across multiple skills and components.

The Impact of MALL on Students Learning

Technology has emerged as a crucial component in the educational landscape, serving as a catalyst for enhancing learning experiences and outcomes. Technology improves the quality of teaching and learning by providing access to up-to-date learning materials and facilitating the acquisition, interpretation, and processing of information. The integration of technology into classrooms worldwide has not replaced traditional teaching methods but rather complemented them, offering new avenues for increasing student engagement and achievement (Richards & Schmidt, 2002). This synergy between technology and traditional pedagogy has led to a transformation in educational practices, with digital learning technologies being utilized to develop better lesson plans, enable personalized learning, and meet diverse student needs more effectively (Wuntu et al., 2024).

The benefits of technology in education are multifaceted, encompassing both cognitive and practical aspects of the learning process. It highlights several key advantages, including the ability to put student knowledge into action, sharpen critical thinking skills, increase collaboration, improve communication, and provide personalized learning opportunities. Furthermore, technology has been shown to enrich classroom experiences by facilitating better comprehension, enhancing interactivity and class engagement, enabling the exploration of complex subject matter, and saving time through more effective learning methodologies. These benefits extend beyond the classroom, as technology provides students with unprecedented access to global information resources, allowing them to overcome learning challenges and seek additional support when needed.

The integration of technology into the educational environment has significantly altered classroom dynamics, fostering a more student-centered, project-based learning approach. This shift has empowered students to take greater control over their learning process while maintaining easy communication with teachers and peers through various digital platforms. Moreover, technology has proven invaluable in addressing diverse learning styles and paces. As noted by several researchers, digital tools enable teachers to accommodate visual, auditory, and kinesthetic learners by offering a range of resources such as online videos, audiobooks, and interactive games. This flexibility not only caters to individual learning preferences but also ensures that students have access to the most current information, as online content is frequently updated.

Mobile-Assisted Language Learning (MALL) has emerged as a particularly impactful technological tool in the realm of language education. Studies have shown that MALL has positively influenced students' learning

experiences and outcomes. Helwa (2017) report that MALL has increased students' motivation and interest in using mobile phones as learning tools for English language acquisition. Additionally, MALL has been found to enhance students' learning behavior by providing opportunities for learning both inside and outside the classroom, boosting speaking confidence, and supporting listening skills in foreign languages (Godwin-Jones, 2011). These findings underscore the potential of mobile technologies to extend the learning environment beyond traditional classroom boundaries and foster autonomous learning practices.

While the benefits of technology in education are substantial, it is crucial to approach its implementation thoughtfully. Educators must carefully consider their learning objectives when selecting appropriate technological tools, ensuring that the chosen technologies align with pedagogical goals and student needs. Despite potential challenges such as limited device availability in some schools, digital technologies offer solutions for providing individualized assistance to students, even in larger class settings. As technology continues to evolve, its role in education is likely to expand further, offering new possibilities for enhancing teaching and learning processes across various disciplines and educational levels.

Synchronous and Asynchronous Learning

Synchronous and asynchronous learning represent two distinct approaches to education, each offering unique advantages and challenges (Woodill, 2010). Synchronous learning involves real-time interaction between instructors and students, either in physical classrooms or through virtual platforms. This model, which has been increasingly adopted in online settings due to the COVID-19 pandemic, allows for immediate feedback, real-time engagement, and collaborative activities. Examples include live classroom sessions, hands-on training, guest lectures, webinars, and live streaming. The efficacy of synchronous learning is supported by its ability to enhance student motivation, engagement, and social interaction. However, it requires meticulous planning by instructors, including scheduling, attendance tracking, and maintaining class decorum.

On the other hand, asynchronous learning offers flexibility by allowing students to access course materials and complete assignments at their own pace, without real-time interaction. This mode of learning is typically facilitated through pre-recorded lectures, virtual libraries, and online forums. Asynchronous learning enables students to manage their own learning schedules, which can enhance cognitive abilities and discipline (Stockwell, 2008). It is often considered more adaptable and cost-effective compared to synchronous learning, as it does not require real-time supervision or continuous instructor presence. Despite its advantages, asynchronous learning has its own set of limitations. Students may experience feelings of isolation and reduced engagement due to the lack of direct interaction with instructors and peers. The absence of immediate feedback can also lead to procrastination and incomplete assignments, necessitating regular reminders from instructors. Additionally, students might struggle with self-discipline and motivation without structured oversight.

In summary, both synchronous and asynchronous learning methods have their respective benefits and drawbacks. Synchronous learning fosters real-time interaction and engagement but requires rigorous scheduling and can be hampered by technical issues (Çakir, 2016). Conversely, asynchronous learning offers greater flexibility and independence but may result in lower levels of personal interaction and accountability (Hancock et al., 2009). The choice between these learning modes often depends on the specific needs of the students and the educational context.

Methodology

Research Design

The qualitative research method is characterized by its focus on understanding phenomena through detailed exploration and meaning-making, rather than through experimental or quantitative approaches (Atmowardoyo, 2018). This method often involves studying phenomena within their natural context and capturing the participants' perspectives. For this study, the qualitative approach is employed to investigate how university lecturers implement Mobile-Assisted Language Learning (MALL) in their classrooms. The research aims to explore how both lecturers and students utilize mobile devices, the types of applications and platforms employed, and the impact of MALL on students' productivity, motivation, and attitudes towards learning English (Eagly & Chaiken, 2007).

Research Subject

Research subjects are individuals who contribute data and insights relevant to the study. For this investigation, the subjects include both lecturers and students. Lecturers were selected based on specific criteria: they must have qualifications in technology, curriculum development, or educational management, possess knowledge of classroom technology, and actively use MALL strategies. Additionally, the study involves students from the English Education Department at Universitas Negeri Gorontalo, specifically those in their 1st, 3rd, and 5th years.

Research Instrument

The case study approach in qualitative research typically involves three primary data collection methods: interview and field notes. In this study, data was gathered through these methods to create a comprehensive written narrative description, supported by picture and table. Interview provided insights into the real-time application of MALL, while field notes collected subjective data on students' perceptions and experiences. Document analysis supplemented these findings with written records and materials related to the MALL implementation.

Interview

The study employed interviews as a primary research instrument to gather in-depth insights from both lecturers and students regarding their experiences with Mobile-Assisted Language Learning (MALL). These interviews likely followed a semi-structured format, allowing the researchers to explore predetermined topics while remaining flexible enough to pursue relevant tangents as they arose. Lecturers were questioned about their strategies for implementing MALL, the challenges they faced, and their observations of student engagement and performance. Students, on the other hand, were asked about their learning experiences, the benefits they perceived from using mobile devices, and any difficulties they encountered. The study involved two lecturers and five students as participants, each assigned pseudonyms to maintain confidentiality – the lecturers were identified as L1F, L2A and L3T, while the students were designated as S1, S2, S3, S4, and S5. This anonymization ensured ethical integrity while allowing for clear attribution of responses throughout the analysis. This qualitative approach provided rich, detailed data that helped illuminate the nuances of MALL implementation in English language education.

Field Notes

Field notes served as another crucial research instrument in this study, allowing researchers to document real-time observations of MALL in action. These notes likely captured the dynamics of classroom interactions, student engagement levels, and the practical application of various mobile technologies during English language lessons. Researchers may have recorded details such as the types of devices and applications used, student reactions to different MALL activities, and any technical or pedagogical issues that arose during lessons. Field notes also potentially included reflections on the effectiveness of different MALL strategies and any adaptations made by lecturers in response to challenges. This observational data complemented the interview findings, providing a more comprehensive understanding of how MALL functions in practice and its impact on the teaching and learning process.

Data Collection Procedures

Data collection in this study involved two key procedures: interview and field notes. The researcher conducted field notes during teaching sessions and collected data through interview administered at the end of each session. Field notes were used to review written responses and other relevant materials. These methods ensured a comprehensive approach to gathering and analyzing data related to MALL in English language education.

Data Analysis

Data analysis in qualitative research follows a structured process as outlined by Hancock et al. (2009), which includes data condensation, data display, and conclusion drawing. Initially, data was condensed through reduction techniques such as selection and summarization. Following condensation, the data was presented in various forms, including narrative descriptions and charts, to facilitate understanding. The final stage involved drawing

conclusions based on the analysis, which included verifying findings against existing theories and previous research. This process allowed for the development of new insights and theoretical contributions.

Results

The implementation of Mobile-Assisted Language Learning (MALL) in English language education has yielded both promising results and notable challenges. This study explored the experiences of lecturers and students using mobile devices during the teaching and learning process, particularly in the context of English language skills development. Findings reveal that MALL has positively impacted students' learning behavior, fostering independence, confidence, and engagement. Students reported benefiting from diverse learning resources, improved access to information, and enhanced speaking and writing skills through various mobile applications. However, the research also uncovered several obstacles, including technical issues, internet connectivity problems, and the need for both lecturers and students to adapt to new technologies. Despite these challenges, both groups demonstrated resilience and creativity in finding solutions, highlighting the potential of MALL to transform language education when implemented thoughtfully.

Lectures and Students Different Devices Used during Teaching and Learning Process

In the lectures, many strategies are used to deal with the various types of technology tools used by the students. According to lecture L2A, the rate at which students complete writing assignments varies. Lecture L1F said that a large class can be transformed into a fun class if the teacher knows how to use technology. However, if the teacher is unable to use the technology, the situation will be disastrous. L3T, it works sometimes well, sometimes not, because it takes time to explain something using different devices, and the desktop version differs from the mobile phone version, for example.

The pace at which students complete writing assignment varies.

If the teacher knows how to use technology, a large class can be transformed into a fun class. However, if the teacher lack of ability to use technology, it will be a disaster for the teacher itself.

Sometimes it works well, sometime it does not, because it takes time to explain something using different devices, and for example the desktop version differs from the mobile phone version.

Working on MALL implementation benefited students in several ways in the future. It is true, according to Lecture L2A, that being familiar with mobile devices help students in the future business. It enables them to gain quick access to information. Lecturer L1F said that there were many applications about English learning in the play store that students could download to help them with their studies. The application is constantly being improved, and it is also designed to make it easy for students to learn said lecture L4T.

In my opinion, it is true that being familiar with mobile devices help students in the future businesses. For instance, it helps them in getting quick access to information.

There were many apps about English Learning on play store that the students can download in order to support their study.

I believe that in the next years the technology of mobile devices will improve so much. There will be more applications that will be created to make the students will be easy to learn.

The Students Work Productively Using MALL during Teaching Learning Process

Students must master a variety of academic skills. The goal of this academic skill is to help students improve as people by helping them gain information and knowledge, exposing them to a variety of fields and aspects of life, and increasing their intellect. Academic skills are subdivided into many sub-skills, such as comprehension, critical thinking, organizing thoughts, extracting useful information, writing, and explanation. In the questionnaire, the researcher asked the students about the way of learning using mobile devices, particularly when learning speaking skills. Some students stated that mobile devices aided them in learning speaking skills, such as watching YouTube to learn proper pronunciation and accent. They also learn from music apps and dictionaries. Students (S1-S3) improved their English skills by reading captions on social media.

[sering mendengarkan speech dari YouTube membantu saya dalam aspek pronunciation dan belajar beragam aksen berbicara]

[listening to YouTube speech often helps me with pronunciation and learning different accents]

[seperti hal simple dalam membaca caption orang disosmed dapat membantu]

[by simple things such as reading the captions on social media, help me to learn]

Mobile devices not only assist students in learning to speak English through the various applications and learning resources available, but also in practicing their speaking skills. Students can interact with others directly through social media by writing status updates or commenting on others' status updates. They are confident that the mobile devices facility assisted them in speaking English.

[berinteraksi dengan yang lain melalu sosial media]

[interact with other through social media]

[dapat berkomunikasi banyak dengan orang-orang tanpa malu karena tanpa bertemu langsung]

[can communicate with people without feeling embarrassed because we haven't met in person]

Learning by using mobile devices also makes students (S1-S3) find a fun learning experience with a low budget because they don't have to go to the course location. Students can also choose their own learning resources based on their abilities and preferred method of learning, so that learning does not become monotonous or bored.

[tanpa harus membayar mahal ditempat kursus]

[without having to pay a large fee at the course location]

[sumber belajar tidak monoton dari buku saja]

[learning sources isn't just about books anymore]

When asked about the way of using mobile devices on their writing skills, students expressed a variety of viewpoints. The students stated that several things aided them in learning to write using mobile devices, including: getting ideas from various sources, applications that can be used to edit writing, particularly grammar checking, ease in avoiding plagiarism by checking plagiarism, and social media sites where they can practice writing. There are some applications that used by the lecturer during teaching writing in the class, among them are Menti.com and MindMaster.com (Figure 1).

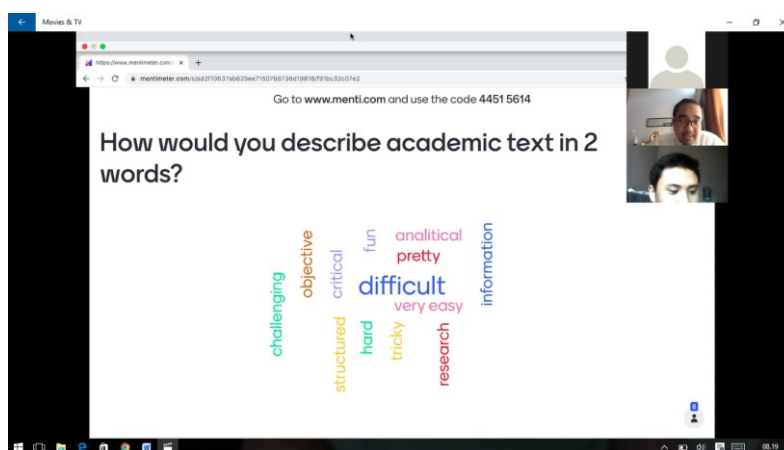


Figure 1. Menti.com application.

Menti.com is a solution that many teachers, speakers and various event organizers may be familiar with. It can be used for surveys, quizzes, interactive presentation and more. This tool is used by teacher for various purposes for example in writing class. During the writing class, the lecturer uses an interactive slide to ask students any words that relate to topic discussed. Every student responded and asked question also reacted using their devices. Then the respond immediately appeared on screen as dynamic and colorful visual.

Students (S1-S3) not only got writing ideas from lecturer assignments related to learning topics, but they also got from learning resources that they explored using mobile devices. Students got writing ideas from social media information sources such as news portals. Students easily obtain additional references for their writing by reading various articles in a journal. Alternatively, simply typing the right keywords into a specific website can provide a source for writing ideas.

[dengan membaca berbagai tulisan dalam bahasa Inggris, saya mendapat ide menulis]

[I got the idea to write after reading various English writings]

[contoh hasil tulisan orang menjadi sumber informasi baru bagi tulisan saya]

[example of a person's writing result becoming new information for my writing]

After brainstorming ideas and beginning to write, students (S1-S3) used various applications on their mobile devices to check a selection of good words, including grammar checks. According to the students, this

greatly assists them in minimizing errors when writing. It is usually possible to check plagiarism with the same application.

[adanya fitur perbaikan grammar dapat membantu memperbaiki tulisan kita]
 [any grammar improvement feature can help us improve our writing]
[membantu dalam mencari dan mengakses kosakata yang diperlukan]
 [assist in the search for and access to required word]
[membantu dalam mengedit paragraf dan mudah dalam cek plagiat]
 [easy in editing paragraph and It's easy to check plagiarism]

Students (S1-S3) typically used social media, blogs, and/or online newspapers to publish the results of their writing. They claimed that social media is the most practical place to communicate because it provides a quick response. Many people will comment on the outcomes of their writing, including ideas, how to write, grammar, and the use of incorrect words.

[menggunggah postingan dengan caption bahasa Inggris]
 [using English caption in the social media]
[dengan mobile phone, saya dapat berkomunikasi dengan teman online melalui whatsapp dan instagram]
 [with mobile phone, I can communicate with online friends via WhatsApp and Instagram using my mobile phone]

Mobile devices have a positive impact on how students write English by providing them with various references or tutorials on how to write, allowing them to become more adept at writing through an easy and enjoyable learning system.

[sangat terbantu dengan penggunaan mobile devices]
 [the use of mobile devices is greatly useful]
[bisa lebih mahir dalam menulis dengan menonton tutorial]
 [can make writing easier by following a tutorial]

Students (S1-S3) who have already felt the positive impact of mobile devices on learning choose to use their mobile devices for language achievement and learning development rather than just games. They stated that with mobile devices, they could learn a topic more than once. They learn not only from their teachers, but also from a variety of other sources via mobile devices.

[prestasi saya meningkat karena belajar bukan Cuma dari satu guru saja]
 [my achievement has increased because I am not only learning from one teacher]
[saya merasa lebih pintar karena mempunyai banyak buku pdf]
 [because I have more Pdf book, I feel more confidence]

The features of mobile devices enable lecturers to present learning material in a fun and engaging way, allowing students to easily understand a topic being taught. Mobile devices as learning media are one of the factors that contribute to increased student understanding and learning achievement. The ability to obtain a special explanation or additional explanation from the lecturer without having to wait for the next class schedule is freely available via mobile phone.

[media belajar yang variatif membuat saya mudah belajar sehingga nilai saya memuaskan]
 [various learning media facilitate my learning, allowing me to achieve satisfactory grades]
[semua informasi ada di Google jadi mudah buat tugas dan dapat apresiasi bagus dari dosen]
 [because all of the information is available on Google, it is simple to complete assignments and receive positive feedback from lecturers]
[mobile devices mempermudah komunikasi dengan dosen untuk penjelasan tambahan]
 [mobile devices make it easier to communicate with lecturers for further explanations]

Some Challenges Faced by Lectures and Students in Using MALL

Online learning allows students to continue learning even in limited condition caused by the pandemic. However, there are some circumstances that cause learning to fail at times. Some of the issues that both students and lecturers face when it comes to online learning are as follows: L2A said that poor internet connection may slow down virtual interaction quality and lack of skills in utilizing mobile devices may slow down learning or teaching pace. L1F said that the internet connection, the credit, and the creativity of the teacher to create the materials. The last lecture L3T said that it takes time to adjust with new devices or application, but there is many information from search engine e.g. Google, how apps work. Sometimes the

capacity of mobile phone memory could be a challenge for both teachers and students. Too many applications are provided, while the storage is limited. Internet connection also could be another problem especially in pandemic for the students. During online learning, some students do not have an access to the internet so due to they live in remote areas.

[Poor internet connection may slow down virtual interaction quality. Lack of skills in utilizing mobile devices may slow down learning or teaching pace.

The internet connection, the credit, and the creativity of the teacher to create the materials.

It takes time to adjust with new devices or application, but there is many information from search engine e.g. Google, how apps work. Sometimes the capacity of mobile phone memory could be a challenge for both teachers and students. Too many applications are provided, while the storage is limited. Internet connection also could be]

In using MALL, both the lecturers and the students encountered some difficulties during the teaching and learning process. L2A discovered that a poor internet connection can reduce the quality of virtual interactions. In addition, a lack of skill in using the device may slow the pace of learning or teaching. According to Lecture L1F, such issues that have arisen during the use of technology in teaching and learning include the internet connection, the teacher's credit, and the teacher's creativity in creating teaching materials. According to lecture L3T, adjusting to new devices or applications takes time, but there are numerous references from search engines on how the application works. The memory capacity of a mobile phone can be a challenge for both teacher and student at times. There are far too many applications available, despite the fact that storage is limited. Internet connectivity could also be an issue, especially in the event of a pandemic. Because the students live in a remote area, they do not have access to the internet during online learning. As a result, they are unable to use their application.

There was also a problem, but the lecturer also learned a lot while using MALL to teach and to learn. Lecture L2A gets help from mobile device how to make teaching materials that are easy to use and cheap. Lecture L1F said that the students learned on their own and had fun if they used an app like quiziz.com. There are a lot of applications that help teachers, and Lecture L3T found that they are very advanced. By using Canva and Comic Strip Maker, the lecturer can make the teaching materials, like posters and videos. In this application, Robin and English conversation are used to help students speak better in English. It is easy to use and fun to use. When students don't understand an explanation, they can go back and read it over again until they get it.

[I like it the most because it, for example, helps in creating accessible and cost friendly teaching resources.

The students experienced learning individually and fun. For example, if using application like quizizz.com.

It is sophisticated. Many apps provide some features that help teachers. E.g. I do not to operate coral draw while I want to make a learning media to make the students interested. By having applications Canva or comic strip maker I can create the media for that. Similarly for speaking class, there are some applications that students can improve their speaking such as Robin and English conversation where students can practice their English]

Offline learning, like online learning, faced some challenges. Online learning undoubtedly present challenges for both lecturers and students. Students who are highly motivated to learn have found solutions to problems in online learning. These students (S1-S3) revealed some of the problem solving they did so that online learning using mobile phones could still run well. When the network connection via Wi-Fi is poor, they attempted to move to find a better connection or even use data quota. Similarly, when their mobile phone capabilities are limited or loading when learning is done via the zoom/Google meet/SlAT conference application, they tried to join their friends. When they do not understand the lecturer's explanation, the lecturer has provided learning material in Google Classroom. Students can also look up additional explanations on YouTube.

[I change from Wi-Fi to data quota.

I join with friend's zoom.

I borrow my parents/sister's mobile phone.

Find out comfortable place.

If I don't understand with the lecture's explanation, I may check the materials uploaded in Google classroom or check YouTube]

Despite the various challenges encountered in online learning through MALL implementation, highly motivated students demonstrated proactive problem-solving strategies to ensure their learning continuity. As presented in Table 1, the problems students faced were primarily categorized into three main areas: internet connection issues, unclear lecture explanations, and unfamiliarity with applications. To address poor

internet connectivity, students took initiatives such as switching from Wi-Fi to mobile data quota, relocating to areas with more stable connections, or joining their classmates' devices. When faced with difficulty understanding lecture materials, students turned to alternative learning sources including Google Classroom, YouTube, and peer discussions. Meanwhile, students who struggled with unfamiliar applications independently sought out tutorials on YouTube or explored the applications on their own. These self-directed strategies reflect the students' resilience and adaptability in navigating the demands of mobile-assisted language learning.

Table 1. Students' problem and solution of learning using MALL.

Problem	Problem Solving
Internet connection	Change connection from Wi-Fi to data quota
	Change the device
	Find out stable place
	Join with friend's zoom
Lecture's unclear explanation	Learn from other source
	Discuss with friends
	Ask the question to teacher
Unfamiliar with the application	Find out the tutorial in YouTube
	Explore more the application

In implementing MALL, the researcher also asks the lecturer, how they distinguish the students using their personal devices. Lecture L1F state that if the teacher knows how to use the technology, the large class will turn into fun class, but if the teacher lack of ability to operate the technology, then it will be a disaster for the teacher. Lecturer L2A said that the pace of students in accomplishing writing tasks is not the same. Lecturer L3T said that sometimes it runs well sometimes not. It is because sometimes it takes time to explain something using different devices for example the desktop version is different with mobile phone version.

[The pace of students in accomplishing writing tasks is not the same.

If the teacher knows how to use the technology, the large class will turn into fun class, but if the teacher lack of ability to operate the technology, then it will be a disaster for the teacher.

Sometimes it runs well sometimes not. Because, sometimes it takes time to explain something using different devices. E.g. The desktop version is different with mobile phone version]

Students' Learning Behaviour during Learning English Language using MALL

It is difficult to deny that online learning has a positive impact on students' learning behaviour. Because of effective and efficient learning facilities, students have learning independence. They (S1-S3) also feel at ease during the learning process because they are in a familiar environment and have prior knowledge of the learning topic they are looking for and reading about. Because they are more confident, they can develop independent study habits without relying on lectures. Students feel more at ease learning online using mobile devices when they have access to existing learning resources. Online learning has a positive impact on the ease of access to information and various references.

[semua terasa mudah dengan mobile devices, saya tidak perlu lagi membeli dan mengcopi buku]

[with mobile devices, everything is simpler; I no longer need to buy and copy books]

[saya mendapatkan kemudahan ketika mengakses informasi]

[it is simple for me to obtain information]

Another advantage of online learning via mobile devices is that students feel at ease while learning. They (S1-S3) believe they can participate more fully in learning because they have prior knowledge of the learning material discussed in the lecture. When they don't understand lecture explanations, they look for explanations elsewhere, such as in pdf books or articles, or even in YouTube tutorials.

[kita bisa lebih banyak berpartisipasi dalam pembelajaran karena sudah mencari tahu terkait materi pembelajaran yang dibahas]

[we can participate in learning more because we know about the learning material discussed]

[sumber pembelajaran sangat bervariasi sehingga saya tidak harus terpaku pada satu sumber belajar saja]

[there are numerous other learning videos that are more entertaining and informative]

Students have high self-esteem because mobile devices can motivate their learning independence even when learning is done online (Hammacheck, 1995). So that their learning behaviour is better, more efficient, and their learning achievement does not suffer despite the fact that they only study from the comfort of their own homes. Students have numerous opportunities to investigate their own subject matter.

[saya lebih percaya diri dan mampu membuat saya lebih rajin belajar lagi]

[I am more confident and capable of motivating myself to study more diligently]

[belajar dengan menggunakan mobile devices membuat saya lebih rajin belajar mandiri]

[using mobile devices to learn makes me more considerate about independent study]

[perilaku belajar menjadi lebih baik, efisien dan prestasi saya tidak menurun]

[my learning behavior improves and becomes more efficient, while my achievement remains stable]

Students (S3) admit that their learning behavior is improving as a result of using a mobile device to learn online. Nonetheless, they face some challenges, but they hope that this does not affect their ability to learn.

Discussion

The implementation of Mobile-Assisted Language Learning (MALL) in English language education has shown promising results, as evidenced by this study. Both lecturers and students have reported positive experiences, particularly in the development of speaking and writing skills. The variety of applications and resources available through mobile devices has enriched the learning experience, making it more engaging and personalized. This aligns with the findings of Kukulska-Hulme and Shield (2008), who emphasized the potential of MALL to provide adaptive and context-aware language learning experiences.

One significant benefit of MALL highlighted in this study is its ability to foster learner autonomy. Students reported feeling more confident and independent in their learning, as they could access a wide range of resources and practice opportunities at their convenience. This self-directed learning approach is crucial for language acquisition and aligns with current pedagogical trends that emphasize learner-centered approaches. Future implementations of MALL should continue to focus on developing and curating high-quality, self-paced learning materials that cater to diverse learning styles and proficiency levels.

The research also revealed that MALL facilitates more interactive and collaborative learning experiences. Students mentioned using social media platforms and various applications to practice their language skills with peers. This peer-to-peer interaction is valuable for language learning and can be further enhanced in future MALL implementations. Developers and educators should consider creating more collaborative learning spaces within mobile applications, fostering a sense of community among language learners (Godwin-Jones, 2011).

However, the study also highlighted several challenges in implementing MALL, particularly technical issues such as internet connectivity and device limitations. These challenges are not unique to this study and have been reported in another MALL research (Stockwell, 2008). Future implementations must address these technical barriers to ensure equitable access to MALL resources. This may involve developing offline modes for applications, optimizing content for low-bandwidth environments, and providing support for a wide range of devices.

The role of teachers in MALL implementation emerged as a critical factor in this study. Lecturers reported both excitement and apprehension about integrating mobile technologies into their teaching. Future MALL implementations should prioritize comprehensive teacher training programs that not only focus on technical skills but also on pedagogical approaches to effectively integrate mobile technologies into language teaching. This training should be ongoing and responsive to emerging technologies and pedagogical innovations. An interesting finding from this study was the creative problem-solving demonstrated by both lecturers and students in overcoming MALL-related challenges. This adaptability is a valuable skill in the digital age and should be encouraged in future implementations. MALL platforms could incorporate features that allow users to share tips and workarounds, fostering a community of practice among language learners and educators.

The study also highlighted the potential of MALL to provide more authentic language learning experiences. Students reported using mobile devices to access real-world language content, such as news articles, social media posts, and videos. Future MALL implementations should leverage this potential by incorporating more authentic materials and creating tasks that simulate real-world language use scenarios. This approach can help bridge the gap between classroom learning and practical language application (Chinnery, 2006).

Looking ahead, the integration of emerging technologies such as artificial intelligence (AI) and augmented reality (AR) into MALL presents exciting possibilities for English language learning. AI could provide more personalized learning experiences and instant feedback, while AR could create immersive language practice environments. However, as these technologies are incorporated, it will be crucial to maintain a balance between technological innovation and sound pedagogical principles. Future research should focus on evaluating the effectiveness of these advanced MALL features and their impact on language acquisition outcomes.

Another point that researchers find is the concept of Hybrid Mobile-Assisted Language Learning (Hyb-MALL). It represents an evolving approach that combines the benefits of traditional classroom instruction with the flexibility and accessibility of mobile learning. This hybrid model aligns well with the findings of the current research, which highlighted both the advantages and challenges of implementing MALL in English language education. Hyb-MALL offers a potential solution to some of the issues identified, particularly in addressing the varying levels of technological proficiency among both students and lecturers (Gharehblagh & Nasri, 2020).

The research findings emphasized the positive impact of MALL on students' learning behavior, fostering independence and engagement. Hyb-MALL can further enhance these benefits by providing a structured framework that integrates face-to-face instruction with mobile learning activities. This approach allows for the development of critical language skills through in-person interaction while leveraging mobile technologies for extended practice and exposure to authentic language materials. The blend of traditional and mobile learning methods in Hyb-MALL can cater to diverse learning styles and preferences, potentially increasing overall student satisfaction and learning outcomes.

One of the challenges identified in the research was the technical issues faced by both lecturers and students, including internet connectivity problems and device limitations. Hyb-MALL can address these concerns by reducing reliance on constant internet connectivity for all learning activities. In-class sessions can focus on activities that require robust internet connections or specialized software, while mobile components can be designed for offline use or low-bandwidth environments. This strategic distribution of learning activities across different modalities can help mitigate technical barriers and ensure more equitable access to learning resources (Hashim et al., 2018).

The study also highlighted the importance of teacher training and adaptability in successful MALL implementation. Hyb-MALL necessitates a comprehensive approach to professional development, equipping educators with the skills to effectively integrate mobile technologies into their teaching practices while maintaining the benefits of face-to-face instruction (Abiding et al., 2012). This hybrid approach allows for a gradual transition, enabling lecturers to experiment with mobile learning components while still operating within familiar classroom settings. As educators become more comfortable with mobile technologies, they can progressively increase the mobile learning elements in their courses.

Furthermore, Hyb-MALL presents opportunities to address the authentic language learning experiences that students valued in the research findings. The hybrid model allows for the strategic use of mobile devices to access real-world language content outside the classroom, which can then be integrated into in-class discussions and activities. This approach bridges the gap between formal language instruction and practical application, potentially enhancing students' motivation and perceived relevance of their language learning experiences (Burston, 2014). Looking towards future implementations, Hyb-MALL can serve as a foundation for incorporating emerging technologies such as AI and AR into language learning, as mentioned in the research discussion. The hybrid model provides a structured environment for piloting and evaluating new technologies, allowing for controlled integration and assessment of their effectiveness. As Hyb-MALL evolves, it has the potential to create a more seamless and personalized language learning experience that combines the best aspects of traditional instruction with the innovative capabilities of mobile technologies.

Conclusion

This study on Mobile-Assisted Language Learning (MALL) in English language education has unveiled a complex landscape of opportunities and challenges. The research findings paint a picture of MALL as a powerful tool for enhancing language learning experiences, capable of fostering student independence, engagement, and skill development, particularly in speaking and writing. Students reported feeling more confident and motivated, leveraging a diverse array of mobile applications and resources to practice their

language skills both inside and outside the classroom. Lecturers, while facing a learning curve, discovered innovative ways to integrate mobile technologies into their teaching practices, creating more interactive and personalized learning environments. However, the implementation of MALL was not without obstacles. Technical issues, varying levels of digital literacy, and the need for new pedagogical approaches emerged as significant challenges. Despite these hurdles, the resilience and creativity demonstrated by both lecturers and students in overcoming these obstacles underscored the transformative potential of MALL in language education.

Looking to the future, this research opens up numerous avenues for further investigation. There is a pressing need for longitudinal studies to assess the long-term impact of MALL on language proficiency and retention, as well as comparative analyses of different MALL strategies across various demographics. The integration of cutting-edge technologies such as artificial intelligence and augmented reality within MALL frameworks presents an exciting frontier for research, potentially revolutionizing personalized language learning experiences. Additionally, the emergence of Hybrid MALL approaches necessitates studies comparing their effectiveness to traditional MALL methods. Other critical areas for future research include the development of standardized assessment methods for MALL-based learning, exploration of MALL's role in fostering intercultural competence, and investigations into the psychological and cognitive effects of extensive mobile device use in language learning. As MALL continues to evolve, research must also address ethical considerations such as data privacy and screen time management, as well as the economic implications of widespread MALL adoption for educational institutions. These future research directions will be crucial in shaping the continued development and implementation of MALL, ensuring its effectiveness and sustainability in English language education.

Data availability

Not applicable.

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