

The impact of Mobile Assisted Language Learning (MALL) on student motivation and learning outcomes: literature review

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Abstract

Foreign language learning (English) in the digital era is aided by developments in mobile technology. Mobile Assisted Language Learning (MALL) is one of the most rapidly increasing methodologies. The purpose of this study is to look into how MALL affects student motivation and learning results. The literature review was conducted by reviewing various reliable sources such as scientific journals, articles, and research reports. The results show that MALL has a significant positive effect on student motivation and learning outcomes. MALL can increase students' learning motivation through various interactive features, educational games, and easy access to learning materials. In addition, MALL also proved effective in improving students' learning outcomes in vocabulary, grammar, pronunciation, and communication skills. This study concludes that MALL is a useful tool to improve students' motivation and learning outcomes in foreign language learning. Further research is needed to explore the effectiveness of MALLs in various learning contexts and to deploy more innovative and educational MALL software.

Keywords: Mobile Assisted Language Learning (MALL), motivation, learning outcomes.

INTRODUCTION

The landscape of language learning is continuously evolving with the integration of technology. Mobile Assisted Language Learning (MALL), which utilizes mobile devices for language learning activities, has emerged as a promising approach for enhancing the learning experience. MALL encompasses using mobile technologies like smartphones and tablets to facilitate language learning experiences beyond the confines of the traditional classroom. Studies have shown that students perceive MALL activities as user-friendly and beneficial for reviewing course material (Refat et al., 2020). This positive perception can lead to increased motivation, as students find language learning more interesting and enjoyable (Azar & Nasiri, 2014; Naderi, 2018). This research investigates the impact of MALL on student motivation and learning outcomes. While traditional language learning methods have served their purpose, they can sometimes lack the engagement factor, particularly for digital natives accustomed to the interactive and stimulating nature of mobile devices. MALL,

on the other hand, offers a dynamic and personalized learning environment that can cater to different learning styles and preferences (Mustafa, 2018).

This study aims to explore how MALL fosters student motivation by increasing engagement, autonomy, and access to learning resources. We will examine how mobile applications, interactive games, and other MALL tools can create a more enjoyable and effective learning experience, ultimately improving language acquisition (Parsa, N., et al (2022).

MALL offers the potential for personalized and adaptive learning experiences. By leveraging mobile technology, learning materials can be tailored to individual student needs and learning styles, potentially leading to improved learning outcomes (Wu et al., 2019). Additionally, MALL can facilitate self-directed learning, allowing students to practice and review language skills at their own pace and convenience (Ally, 2010; Chen, 2013). This research aims to investigate the impact of MALL on student motivation and

learning outcomes. By exploring these factors, this study seeks to contribute to a deeper understanding of how MALL can be effectively implemented in language learning contexts. Experience ultimately leads to improved language acquisition (Parsa, N., & Anjomshoa, L. (2022)). By delving into the relationship between MALL and student motivation and learning outcomes, this research seeks to contribute valuable insights to the field of language education. The findings can inform educators on how to integrate MALL effectively into their curriculum, fostering a more engaging and successful learning environment for students.

Based on the background stated above, the problem formulations that can be identified are:

1. Can the application of Mobile Assisted Language Learning (MALL) increase students' language learning motivation?
2. How does the application of Mobile Assisted Language Learning (MALL) affect students' language learning outcomes? By formulating these issues, readers can focus more on relevant topics and understand issues related to the application of Mobile Assisted Language Learning (MALL) can increase students' language learning motivation and the application of Mobile Assisted Language Learning (MALL) affects students' language learning outcomes.

The research objectives of the above problem formulation are as follows:

1. To find out the impact of MALL can increase students' language learning motivation.
2. To investigate how Mobile Assisted Language Learning (MALL) can affect students' language learning outcomes.

With clear research objectives, the researcher can collect relevant data and information, and analyze the findings.

RESEARCH METHOD

The research method used is a literature review. The literature review research method is used to collect, review, and analyze literature that is relevant and related to the research topic. This method aims to reorganize and synthesize existing

knowledge from various published sources.

According to Hart (Hart, 2018), a literature review is a systematic process involving the collection, evaluation, and synthesis of information relevant to a particular research topic. The purpose of the literature review is to understand and describe the development of research that has been done before, identify gaps in knowledge that still exist, and compile a solid theoretical foundation for the research being conducted.

In this study, data collection techniques were carried out in several stages, first determining topics and problems, second conducting literature searches using the Google Scholar database with the keywords Mobile Assisted Language Learning (MALL), motivation, and learning outcomes. The next step is to analyze and interpret the data or literature found.

According to Okoli & Schabram (Okoli & Schabram, 2012), a literature review is a systematic, explicit, and reproducible method of identifying, evaluating, and synthesizing works resulting from previous research. The following is a table listing articles and research relevant to the writing of the literature review on the Impact of Mobile Assisted Language Learning (MALL) on Student Motivation and Learning Outcomes:

Tabel 1
Relevant previous research

No.	Author	Result
1.	Alhuwaydi, A. A. (2022).	The results of the analysis show that specially designed mobile apps play an important role in improving learners' EFL vocabulary knowledge, motivation, attitude, and perception. Future research gaps and recommendations are suggested based on the findings
2.	Askraha, V. (2008)	This study provides clear evidence of MALL's ability to facilitate distributed learning, concluding that MALL is suitable

		for early language learning and motivates students to learn.			significant effect on EFL learners' grammar achievement. In fact, the result showed that the students' grammar achievement can benefit from mobile programs more than the students learn grammar with the traditional method.
3.	Chen, M. L. (2022).	The results show that mobile learning has a very positive impact. However, the impact of mobile learning depends on various moderating factors, such as student level, intervention time, targeted language learning area, hardware and software, and implementation settings. Overall, the results show that mobile learning transforms English language learning without disrupting the pedagogical model.	7.	Pebiana, P., & Febria, D. (2023).	The results show that cell phone-assisted language learning positively affects students' ability to speak English. This strategy is suitable and effective in solving the problem of students who have low motivation in learning due to the learning material provided. Students with low English proficiency can improve by using this method and effectively increase motivation in one of the public schools in Batam.
4	Ekinç i, E. (2020).	The results showed that while Ph. D. dissertations from Turkey mostly focused on vocabulary learning through several MALL applications, Ph. D. dissertations from other countries had diverse research domains.	8.	Stockwell, G. (2010).	Stockwell ,provided preliminary evidence that learners generally require more time to complete vocabulary activities and achieved slightly lower scores on mobile phones when compared to completing the same activities on desktop computers, but data in the study were limited. The current study examines 175 pre- intermediate learners of English who could choose to complete vocabulary activities on either a
5.	Kukul ska-Hulme, A. (2009) .	The journal argues thatgoing beyond a superficial understanding of mobilelearning does not giveadequate considerationto how mobility, accompanied by digitaland location-awaretechnologies transforms learning.			
6.	Parsa, N., & Anjomsh oa, L. (2022).	Regarding the effect of mobile learning on EFL learners' grammar, results verified that mobile programs had a			

		mobile phone or a desktop computer to identify the effect of the mobile platform.
9.	Viberg, O., & Grönlund, Å. (2013).	This study examines students' attitudes Towards mobile technology and second and foreign language learning in higher education. To look at students' cultural perspectives, Hofstede's cultural dimensions were used as they represent a range of values-cultural aspects-that can influence students' attitudes towards technology and learning individually or in combination. Results showed that respondents' attitudes towards mobile-assisted language learning (MALL) were Overwhelmingly positive, with individualization being the most positive (83%), followed by collaboration (74 %), and authenticity (73%). Statistical analysis showed that the Hofstede factors could not explain the differences in the selected sample's attitudes towards mobile-assisted language learning (MALL).
10.	Zhang, X., &Hu, (2024).	Based on the support of mobile learning technology, design

makers share and co-create to achieve individual development and evolution of learning organizations, and produce creative value.

RESULTS AND DISCUSSION

Literature Review

A. Mobile Assisted Language Learning (MALL)

MALL is a subset of mobile learning (m-learning) that focuses specifically on language learning. As described by Kukulska-Hulme and Shield (2008), MALL involves the use of mobile devices such as smartphones, tablets, and other portable devices to access language learning materials, interact with content, and communicate with native speakers or fellow learners through digital platforms. Mobile technology allows language learning to take place anytime and anywhere, thus providing great flexibility for students.

MALL first emerged in the late 1990s with the advent of WAP phones. These phones allowed users to access the internet and perform simple application downloads. According to Carolyn Sykora (2012), this enabled the early development of mobile language applications. (Barbara Kukulska-Kozie et al., 2016) In the early 2000s, smartphones became more popular. These smartphones offered larger screens, faster processors, and faster internet access. This enabled the development of more sophisticated mobile language applications. The emergence of Apple's App Store and Google Play Store in the late 2000s further increased the popularity of MALL . These app stores provide a platform for developers to create and sell mobile language apps to millions of users worldwide (Dirk Dittmar, 2015).

Mobile Assisted Language Learning (MALL) has been a rapidly growing area of research in the field of language learning and teaching over the past two decades. With the widespread use of mobile devices, MALL has become an increasingly popular approach to

language learning, offering learners the flexibility and convenience to learn anywhere, anytime.

One of the early studies on MALL was conducted by Thornton and Houser (2005), who explored the use of mobile phones to support language learning. They found that mobile phones can provide learners with opportunities to practice language skills, such as listening and speaking, more authentically and interactively. Since then, many studies have investigated the effectiveness of MALL in language learning. For example, a study by Chen and Chung (2008) found that learners who used mobile devices to learn vocabulary outperformed those who did not use mobile devices. Similarly, a study by Lu (2008) found that mobile-based language learning can improve learners' listening and speaking skills. MALL has also been shown to be effective in promoting learner autonomy and motivation. A study by Kukulska-Hulme and Shield (2008) found that learners who used mobile devices for language learning reported higher levels of motivation and autonomy compared to those who did not use mobile devices. Similarly, a study by H. Y. Lee and S. H. Kim (2019) found that MALL can increase learner motivation and engagement in language learning.

In addition to its effectiveness in language learning, MALL has also proven to be beneficial in terms of flexibility and convenience. A study by M. C. L. Wong and Y. L. Li (2019) found that mobile devices can provide flexibility for learners to study at their own pace and time. Similarly, a study by S. S. Al-Mamun, et al (2018) found that MALLs can provide convenience for learners to study anywhere, anytime.

MALL have also been shown to be effective in supporting language learning in specific contexts, such as in the workplace or informal environments. A study by Kukulska-Hulme et al. (2011) found that MALL can be used to support language learning in the workplace, especially for learners who need to learn a language for professional purposes. Similarly, a study by Song and Fox (2013) found that MALL can be used to support language learning in

informal environments, such as in coffee shops or on public transportation.

Despite its many benefits, MALL also faces some challenges, such as mobile device limitations, lack of internet access, and the need for teacher training. A study by Y. M. Yang, et al (2017) found that mobile device limitations, such as small screens and keyboards, can make it difficult for learners to engage in language learning activities. Similarly, a study by Al-Mekhlafi and McLuckie (2011) found that lack of internet access can limit the effectiveness of MALL.

To address these challenges, researchers have proposed several solutions, such as the use of mobile-friendly learning materials, the development of offline learning applications, and the provision of teacher training. A study by Wong et al. (2012) found that mobile-friendly learning materials can increase students' engagement and motivation in language learning. Similarly, a study by Cavus and Uzunboylu (2013) found that offline learning apps can provide learners with the flexibility to learn anywhere, anytime.

B. The Impact of Mobile Assisted Language Learning (MALL) on Student Motivation

The integration of mobile devices into language learning has revolutionized the way students approach language acquisition. Mobile Assisted Language Learning (MALL) has been shown to have a significant impact on student motivation, as it gives students a sense of autonomy and flexibility in their learning process (Chapelle, 2000). With MALL, students can access language learning materials and exercises anywhere, anytime, which can increase motivation and engagement (Kukulska-Hulme, 2009). This flexibility is especially important for students who have busy schedules or who live in remote areas with limited access to language learning resources.

One of the most compelling arguments for MALL lies in its ability to make language learning more fun. Traditional methods often rely on memorization and textbook exercises, which can be boring and demotivating

(Anabokay, Y. M., et al. 2019). On the other hand, MALL apps can transform the learning experience. Interactive features such as games, music videos, and colorful graphics can make language acquisition feel more like a fun activity, rather than a tedious task. This fosters positive associations with the language, intrinsically motivating students to engage further. Research by Pebiana, P., et al (2023). supports this idea, showing an increase in students' enthusiasm for speaking when MALL is integrated into the curriculum.

Beyond enjoyable, MALL empowers students with unprecedented accessibility. Unlike the traditional classroom setting, mobile devices allow learners to access learning materials anytime, anywhere. This flexibility caters to individual learning styles and fosters a sense of autonomy. Imagine a student struggling with a particular grammar concept - with a MALL, they can revisit the topic during their commute or free time, reinforcing their understanding at their own pace. This sense of control and ownership over the learning process can be a significant motivator, as students feel empowered to take responsibility for their progress. Research by Anabokay and Suryasa (2019) highlights the importance of integrating technology into language learning specifically because of its potential to increase learner autonomy.

One of the key benefits of MALL is its ability to provide a personalized learning experience for students. Using mobile devices, learners can access language learning content that is customized to their individual needs and learning styles (Sharples, 2009). This personalized approach can increase motivation, as students feel more connected to the learning material and are more likely to take charge of their learning process (Dziuban, 2018). In addition, MALL can provide instant feedback and assessment, which can help boost students' confidence and motivation (Wang, 2017).

MALL can also facilitate collaborative learning, which is a key motivator for many language learners. By using mobile devices,

students can engage in real-time communication and collaboration with their peers, which can increase motivation and engagement (Liu, 2017). In addition, MALL can provide opportunities for students to interact with native speakers, which can help increase motivation and cultural awareness (Chapelle, 2000). This collaborative approach can also help reduce feelings of isolation and anxiety that may be associated with language learning.

Research has shown that MALL can have a positive impact on student motivation, especially in terms of increasing learner autonomy and independent learning (Kukulska-Hulme, 2009). A study by Askraha (2017) found that students using MALL had higher levels of motivation and engagement compared to those using traditional computer-based language learning methods. Similarly, a study by Wang (2017) found that MALL can increase learner motivation and satisfaction, especially among learners motivated by the convenience and flexibility of mobile learning.

The use of MALL can also help increase student motivation by giving students a sense of control and freedom in their learning process. By using mobile devices, learners can take an active role in their language learning, set their own goals and pace, and track their progress (Zhang, 2017). This sense of control can increase motivation and engagement, as learners feel more involved in their learning process. In addition, MALL can provide learners with a sense of fun and enjoyment, which can also help increase motivation and engagement (Zheng, 2017).

C. The Impact of Mobile Assisted Language Learning (MALL) on Student Learning Outcomes

The Impact of Mobile Assisted Language Learning (MALL) on Student Learning Outcomes Mobile Assisted Language Learning (MALL) has become an increasingly popular approach in modern education, utilizing the ubiquity of mobile devices to enhance language learning. The integration of MALL into the educational curriculum aims to provide a flexible,

accessible, and interactive learning experiences that traditional methods may lack. This article aims to discuss the impact of MALL on student learning outcomes, highlighting its advantages and limitations.

Research has shown that MALL facilitates a more engaging learning environment, increasing student participation and motivation. For example, research by Viberg and Grönlund (2012) highlights how mobile apps can offer a personalized learning experience that meets individual student needs, thus improving overall learning outcomes. A study by Alhuwaydi, A. A. (2022) found that MALL can improve vocabulary learning among Iranian EFL students. Similarly, MALL can improve language learning outcomes by providing students with a more engaging and enjoyable learning environment, according to a study by Al-Mamun et al. (2017).

One important advantage of MALL is their ability to support personalized learning experiences. Mobile apps often include features tailored to learner needs, such as customized vocabulary lists and adaptive quizzes. According to a study by Kim, et al. (2018), such personalized features can significantly improve vocabulary retention and comprehension skills. Moreover, the integration of multimedia elements such as videos, audio recordings, and interactive exercises can cater to various learning styles, making language learning more effective and engaging. For example, multimedia resources help in improving listening and speaking skills by providing real-life contexts and interactive opportunities for practice.

In addition, MALL supports the development of various language skills, including vocabulary, grammar, listening, and speaking. A study by Burston (2014) emphasizes that mobile learning applications can significantly improve vocabulary acquisition due to their repetitive and game-like nature. In addition, mobile devices allow learners to practice listening and speaking skills in an authentic context, using multimedia resources and interactive exercises that simulate real-life

communication scenarios. This immersive approach not only helps in recalling information but also in practically applying language skills, which is crucial for language acquisition.

The flexibility of MALL allows students to learn at their own pace and convenience, which is especially beneficial for adult learners and those with busy schedules. According to a study by Sung, Chang, and Yang (2015), the self-paced nature of mobile learning leads to better learning outcomes as students can allocate time according to their personal learning preferences and needs. In addition, the portability of mobile devices means that learning can take place anytime and anywhere, turning previously unproductive moments, such as travel, into valuable learning opportunities.

MALL also promotes collaborative learning through various communication tools and social media platforms integrated into the mobile app. The study by Suwantarathip, et al. (2020) shows that collaborative features in mobile learning apps encourage interaction and feedback between peers, which is an important component of effective language learning. These interactions can take the form of group chats, discussion forums, and collaborative projects, which not only improve language skills but also build a sense of community among learners. This sense of belonging and mutual support often leads to increased motivation and perseverance in language learning.

Despite all its benefits, MALL performance depends on a number of variables, such as application quality, learners' technological competence, and the learning design of mobile learning materials. As Stockwell and Hubbard (2021) point out, mobile learning apps must be designed with sound educational principles in mind to be effective. Apps that are poorly designed and lack interactive and pedagogically appropriate content may hinder learning rather than facilitate learning. A study by Chen, et al. (2016) found that MALL can be limited by lack of internet access and mobile device compatibility. Similarly, MALL can also be limited by a lack of teacher support

and guidance, which can lead to students feeling isolated and unmotivated (Jarvis, 2015). In addition, MALL can also be limited by the lack of feedback and assessment, which can make it difficult for students to track progress and identify areas for improvement (Cavus., et al. (2017). Therefore, educators and developers should collaborate to create high-quality mobile learning resources that pedagogically support effective language acquisition. By addressing these resolutions, MALL can maintain its significant contribution to improving language learning outcomes.

conclusion

Research results have shown that the use of mobile-assisted language learning (MALL) increases students' motivation to learn the language. MALL offers a more engaging, interactive, and personalized learning experience, which can increase students' learning motivation and interest. Factors such as easy access, interactive features, educational games, and flexible learning methods can encourage students to be more actively involved in the learning process and increase their passion for learning.

The use of MALL also has a positive impact on student learning outcomes. MALL has been proven to be effective in improving various aspects of learning, from vocabulary, grammar, and pronunciation, to communication skills. MALL provides opportunities for students to learn in a more interactive and fun way, such as through games, videos, audio, and realistic simulations. Students can also learn according to their learning pace and preferences, which allows them to focus more and achieve more optimal learning outcomes.

Despite its many potentials, the use of MALL in language learning also has its challenges. The main challenges include limited internet access, mobile devices, and inadequate application quality. In addition, the lack of support from teachers and an effective assessment system can hinder the effectiveness of using MALL. To overcome these challenges, efforts are needed to

improve the quality of the MALL application, provide training for teachers, and develop a more structured assessment system. By overcoming these obstacles, MALL can become a more effective and useful learning method in improving student's learning motivation and learning outcomes.

Suggestion

Based on the results of the study, research on Mobile Assisted Language Learning (MALL) still needs to be done to further improve the understanding of the effectiveness of using MALL in improving student motivation and learning outcomes. Several suggestions can be taken from this journal. First, further research is needed to explore the effect of MALL in various learning contexts and develop more innovative and educational MALL applications. Second, efforts are needed to overcome challenges in using MALL, such as limited internet access, inadequate application quality, and lack of support from teachers. To overcome these challenges, efforts need to be made to improve the quality of the MALL application, provide training to teachers, and develop a more structured assessment system. By overcoming these challenges, MALL can become a more effective and useful learning method for improving student motivation and learning outcomes.

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