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THE IMPACT OF MOBILE-ASSISTED LANGUAGE LEARNING (MALL) ON STUDENTS' SPEAKING FLUENCY AND AUTONOMY

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Abstrak *- Penelitian ini bertujuan untuk menganalisis pengaruh Mobile-Assisted Language Learning (MALL) terhadap kefasihan berbicara (speaking fluency) dan kemandirian belajar (autonomy) mahasiswa Program Studi Pendidikan Bahasa Inggris di Universitas PGRI Palembang. Perkembangan pesat teknologi mobile telah mengubah praktik pembelajaran bahasa, memberikan fleksibilitas, aksesibilitas, serta pembelajaran yang lebih personal bagi peserta didik. Penelitian ini menggunakan pendekatan kuantitatif dengan melibatkan 150 mahasiswa semester dua yang dipilih melalui teknik convenience sampling. Data dikumpulkan melalui kuesioner daring menggunakan Google Forms. Hasil penelitian menunjukkan bahwa smartphone merupakan perangkat yang paling sering digunakan mahasiswa untuk belajar bahasa Inggris secara mandiri, sedangkan aplikasi seperti Duolingo, Cake, dan ELSA Speak menjadi alat paling populer dalam meningkatkan kemampuan berbicara dan penguasaan kosakata. Temuan juga menunjukkan bahwa penerapan MALL secara signifikan meningkatkan kefasihan berbicara, ketepatan pelafalan, serta motivasi belajar mahasiswa melalui pembelajaran interaktif dan mandiri. Selain itu, MALL terbukti mendorong kemandirian belajar dengan menumbuhkan kemampuan regulasi diri, kepercayaan diri, dan kebiasaan berlatih bahasa Inggris secara berkelanjutan. Meskipun demikian, beberapa tantangan masih dihadapi, seperti keterbatasan akses teknologi, inkonsistensi keterlibatan belajar, dan perlunya integrasi pedagogis yang tepat. Secara keseluruhan, penelitian ini menegaskan bahwa MALL, jika diimplementasikan secara efektif, dapat menjadi pelengkap yang kuat bagi pembelajaran bahasa tradisional, sekaligus meningkatkan kompetensi komunikatif dan kemandirian belajar di era digital.*

Kata kunci: Mobile-Assisted Language Learning (MALL); Kefasihan Berbicara; Kemandirian Belajar; Pendidikan Bahasa Inggris; Pembelajaran Digital.

Abstract - This study investigates the impact of Mobile-Assisted Language Learning (MALL) on students' speaking fluency and autonomy among English Education students at Universitas PGRI Palembang. The rapid development of mobile technology has reshaped language learning practices, offering learners greater flexibility, accessibility, and personalization. Using a quantitative research design, data were collected from 150 second-year English majors through a structured questionnaire distributed via Google Forms. The findings reveal that smartphones are the most frequently used devices for autonomous English learning, while applications such as Duolingo, Cake, and ELSA Speak are the most preferred tools for enhancing speaking skills and vocabulary development. The study further shows that MALL significantly improves students' speaking fluency, pronunciation accuracy, and learning motivation by providing interactive and self-paced learning opportunities. Additionally, students reported that MALL fosters learner autonomy by encouraging self-regulation, independent practice, and confidence in speaking English. Despite these advantages, challenges such as inconsistent learner engagement, limited technological access, and the need for pedagogical integration remain. Overall, the study underscores that MALL, when effectively implemented, can serve as a powerful complement to traditional language teaching, promoting both communicative competence and autonomous learning in the digital era.

Keywords: Mobile-Assisted Language Learning (MALL); Speaking Fluency; Learner Autonomy; English Language Education; Digital Learning.

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1. INTRODUCTION

In today's rapidly advancing educational landscape, technology has profoundly transformed traditional approaches to learning. Once limited to physical classrooms and fixed schedules, language education has evolved into a more flexible, technology-driven process with the integration of digital and mobile tools (Jenny et al., 2013; Shortt et al., 2023; Sari & Octaviani, 2022). The emergence of Mobile-Assisted Language Learning (MALL) represents one of the most influential developments in foreign language education, significantly reshaping how learners acquire and practice language skills particularly speaking fluency (Sherine et al., 2020; Azli et al., 2018). Through the use of mobile technologies such as smartphones, tablets, and laptops, learners now have the opportunity to engage in real-time communication, access diverse learning resources, and practice speaking English in authentic contexts anytime and anywhere (Dash, 2022; Loewen et al., 2019). This mobility fosters learner autonomy by allowing students to take control of their learning pace, choose relevant materials, and monitor their own progress. As Pourhossein Herdina and Ningrum (2023) note, technology empowers learners to manage their learning independently, breaking free from the constraints of traditional classroom instruction.

Recent studies have further highlighted the positive influence of MALL on language skill development, emphasizing its potential to enhance learners' speaking proficiency and overall communicative competence (Ginting & Fithriani, 2021; Shortt et al., 2023; Yundayani et al., 2023). These studies suggest that mobile applications, interactive platforms, and AI-driven speech tools can provide instant feedback on pronunciation, fluency, and accuracy helping students refine their oral communication skills in engaging and self-directed ways. Moreover, MALL encourages authentic language use through digital conversation partners, voice recognition technologies, and virtual speaking communities, which simulate real-world communication experiences (Ahn & Lee, 2016). Such interactive opportunities not only strengthen linguistic performance but also build learners' confidence and motivation to communicate in English (Akram et al., 2022; Shi et al., 2024; Al-Bahadli et al., 2023).

Despite these promising developments, the extent to which MALL effectively promotes learner autonomy and sustained speaking fluency still requires further exploration. While many students use mobile applications to support their language learning, the diversity of available tools and the varying degrees of user engagement suggest that MALL's impact can differ depending on individual learning styles and goals. Therefore, understanding how learners utilize mobile technologies to enhance their speaking performance and manage their own progress is essential. This study aims to investigate the implementation of MALL and its impact on students' speaking fluency and autonomy, particularly among university-level English majors.

Specifically, the study seeks to identify which mobile applications and tools students prefer for improving their speaking skills, as well as how frequently and effectively they use them (Saraswati et al., 2021). It also explores how MALL fosters independent learning behaviors, such as self-assessment, goal setting, and time management in language study. In addition, the research examines students' perceptions of MALL as a supportive medium for developing oral proficiency and self-directed learning habits. By analyzing students' experiences and reflections, the study aims to provide empirical insights into how MALL contributes to speaking fluency development and learner independence in English language education.

The findings of this study are expected to enrich the understanding of how mobile technology can be leveraged to cultivate both communicative competence and autonomous learning. Moreover, as technological innovation continues to evolve, integrating MALL into English language curricula is becoming increasingly vital to align with learners' digital lifestyles. The insights gained from this research will not only inform educators about effective pedagogical strategies for incorporating mobile tools but also encourage the design of more interactive, student-centered approaches that enhance speaking proficiency and empower learners to take ownership of their language learning journey.

2. METHOD

2.1 Pedagogical Setting and Participants

his study was conducted among second-year students enrolled in the Bachelor of English Education program at Universitas PGRI Palembang, Indonesia. The institution offers a comprehensive curriculum that emphasizes the development of key English language competencies, including speaking, listening, reading, writing, grammar, and pronunciation. As part of their coursework, students are required to engage in independent learning activities designed to enhance their communicative competence and linguistic autonomy. Mobile devices such as smartphones, tablets, and laptops are frequently used by students as supplementary tools to practice English outside the classroom. However, the extent to which Mobile-Assisted Language Learning (MALL) contributes to the improvement of students' speaking fluency and autonomy remains underexplored in this context.

To address this gap, the study involved 120 second-year English majors from the Faculty of Teacher Training and Education. Participants were selected using convenience sampling, as they all possessed at least one Internet-connected mobile device and were familiar with self-directed learning activities. Prior to participation, the students were informed about the research objectives, their anonymity was guaranteed, and their participation was voluntary. This group was considered suitable for the study as they represented an active generation of learners who regularly integrated technology into their language learning practices.

2.2 Design of the Study

The research employed a quantitative descriptive design to systematically analyze the effects of MALL on students' speaking fluency and learning autonomy. This approach was chosen to obtain measurable and generalizable findings regarding the participants' perceptions, usage patterns, and experiences with mobile-assisted speaking practice. A structured questionnaire was developed based on an extensive review of previous studies on MALL, speaking fluency, and learner autonomy. The instrument was validated through expert judgment from two lecturers specializing in English language teaching and technology integration. A pilot test involving five students was conducted to ensure clarity and reliability before full deployment.

Data collection was facilitated through Google Forms, enabling participants to complete the survey online at their convenience. This digital platform ensured efficiency, accessibility, and accuracy in data gathering while accommodating participants' familiarity with mobile-based tools. The questionnaire was divided into four sections:

1) demographic information,
2) frequency and purpose of MALL usage,
3) perceived impact of MALL on speaking fluency, and
4) perceptions of MALL's role in fostering learner autonomy.

2.3 Data Collection

The survey combined multiple-choice, checkbox, and Likert-scale items to collect both categorical and ordinal data. The Likert-scale section used a five-point scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5), to measure students' attitudes toward the effectiveness of MALL in enhancing their speaking fluency and autonomy. Responses were automatically compiled through Google Forms and subsequently analyzed using Microsoft Excel for descriptive statistics, including percentages, means, and frequency distributions.

The quantitative data were then presented in tables and graphs to illustrate key patterns and trends. Findings were interpreted in relation to existing literature to identify similarities, differences, and new insights specific to the context of Universitas PGRI Palembang. This analytical process provided a comprehensive understanding of how MALL contributes to both the development of speaking fluency and the cultivation of autonomous learning behaviors among English majors in the post-pandemic higher education landscape.

3. RESULT AND DISCUSSION

3.1 Result

3.1.1 Mobile Devices and Applications Used by Students

The bar chart illustrates the types of mobile devices used by English Education students at Universitas PGRI Palembang in their independent English learning. The results indicate that smartphones were the most commonly used devices, chosen by 76% of respondents. Laptops ranked second, used by 45% of students, while tablets accounted for the lowest proportion, at 30%. These findings suggest that smartphones are the most preferred tools for autonomous English learning due to their portability, multifunctionality, and easy internet access. Students can conveniently use their smartphones anytime and anywhere, which supports continuous learning and speaking practice. Similar to findings from Ahn and Lee (2016), mobile phones remain the most popular learning tools among students, while Rokhayati and Widiyanti (2022) also confirmed that mobile technology effectively enhances learners' communication abilities. Moreover, recent studies Kusumadewi and Widyastuti (2018) have demonstrated that mobile-based learning tools significantly improve learners' speaking confidence and listening comprehension. Although laptops are still essential for academic work, their larger size and limited mobility make them less favorable for spontaneous speaking practice or quick learning sessions.

Table 1. Types of Mobile Devices Used by Students in Independent English Learning

No	Type of Device	Number of Students	Percentage (%)	Description
1	Smartphone	114	76%	The most preferred device due to portability, easy access, and ability to support learning anytime and anywhere.
2	Laptop	68	45%	Commonly used for academic tasks and broader access to materials, though less practical for spontaneous study.
3	Tablet	45	30%	Used by a smaller number of students, mainly for reading or watching learning videos.
	Total	**150**	**100%**	-

The second chart presents the mobile applications most frequently used by the students in their speaking and vocabulary development. Duolingo was identified as the most popular app, used by 60% of participants, followed by Cake (55%) and ELSA Speak (50%). These three applications were favored for their interactive and user-friendly features that support speaking fluency improvement. Duolingo provides personalized learning paths with repetitive vocabulary training, which helps students retain new words efficiently. Cake enhances learners' speaking reflexes through short video dialogues, while ELSA Speak powered by artificial intelligence analyzes users' pronunciation accuracy and provides instant corrective feedback. Other applications such as LingoDeer (20%), Memrise (18%), HelloTalk (13%), Drops (12%), FunEasyLearn (10%), and Bravolol (9%) were also used, though less frequently. Interestingly, MochiMochi was the least preferred, selected by only 1% of students, due to its less engaging interface.

Table 2. Mobile Applications Used by Students in Independent English Learning

No	Mobile Application	Number of Students	Percentage (%)	Main Function in Language Learning
1	Duolingo	90	60%	Enhances vocabulary and grammar through adaptive and repetitive learning activities.
2	Cake	83	55%	Improves speaking fluency using short and interactive conversational videos.
3	ELSA Speak	75	50%	Develops pronunciation and speaking fluency with real-time AI feedback.
4	LingoDeer	30	20%	Provides interactive sentence structure and vocabulary practice.
5	Memrise	27	18%	Builds vocabulary through repetition and memory-based games.
6	HelloTalk	20	13%	Connects learners with native speakers for real-time conversational practice.
7	Drops	18	12%	Focuses on vocabulary mastery through visuals and word associations.
8	FunEasyLearn	15	10%	Teaches vocabulary and common expressions through quizzes.
9	Bravolol	13	9%	Provides phrasebooks and vocabulary for everyday conversations.
10	MochiMochi	2	1%	Supports vocabulary learning with spaced-repetition reminders (less preferred due to interface design).
	Total	**150**	**100%**	-

Table 3 illustrates the frequency and preference of website usage among EFL sophomores at Universitas PGRI Palembang in their independent English learning through Mobile-Assisted Language Learning (MALL). The findings reveal that YouTube was the most popular platform, with 58% of students utilizing it for language practice. This preference is attributed to YouTube's vast collection of diverse and authentic video materials that support listening comprehension, pronunciation improvement, and cultural exposure. These findings align with Bravo et al. (2011), who argued that video-based content significantly enhances learners' motivation and engagement in language learning.

Following YouTube, Oxford Online English (44%) and British Council (42%) were also highly utilized by students. These two platforms are recognized for their structured lessons, interactive exercises, and skill-based modules, which help learners improve grammar, vocabulary, and communication systematically. This finding supports previous studies (Perez Paredes et al., 2018) suggesting that structured online resources foster greater learner autonomy by providing targeted practice and feedback mechanisms.

In contrast, websites such as BBC Learning English (36%), Quizizz (36%), and Quizlet (30.7%) were moderately used. Students reported using these platforms to reinforce vocabulary, test grammar knowledge, and practice comprehension in an engaging, game-like format. The gamification elements of Quizizz, for instance, have been shown to increase learners' motivation and enjoyment during practice sessions. ELLO (15.3%), which offers audio lessons and listening exercises by native speakers, was less frequently used, possibly due to its limited interactive features.

Finally, Ngoaingu24h.vn (0.7%) appeared as the least used website, reflecting students' preference for global, English-only platforms over local or bilingual alternatives. Overall, the data indicate that learners favor multimedia-rich, flexible, and interactive tools that allow them to manage their learning autonomously. This trend highlights the growing importance of digital literacy and learner independence in the MALL environment, reinforcing that mobile-assisted platforms serve not only as supplementary tools but as integral components of modern English language learning.

Table 3. Websites Used by EFL Sophomores for Independent English Learning

No	Website Name	Number of Participants	Percentage (%)	Description
1	YouTube	87	58.0%	The most widely used website; learners prefer it for its variety of video content that enhances listening skills and cultural awareness.
2	Oxford Online English	66	44.0%	Popular among students for its well-organized lessons focusing on grammar, pronunciation, and conversation.
3	British Council	63	42.0%	Valued for its structured exercises and materials targeting all four language skills (listening, speaking, reading, and writing).
4	BBC Learning English	54	36.0%	Frequently used for authentic news-based listening and vocabulary practice.
5	Quizizz	54	36.0%	Interactive platform used to test and reinforce vocabulary and grammar knowledge through gamified quizzes.
6	Quizlet	46	30.7%	Employed for independent vocabulary learning through flashcards and collaborative study sets.
7	ELLO	23	15.3%	Provides audio materials from native speakers to improve listening comprehension.

8	Ngoaingu24h.vn	1	0.7%	Rarely used, mostly by students seeking Vietnamese-based English learning support.
	Total	**150**	**100%**	-

3.1.2 How EFL students have implemented MALL in their autonomous EFL learning

The data in Table 4 present the distribution of time that second-year English majors at Universitas PGRI Palembang spend each day using MALL for autonomous English learning. The results indicate that a majority of students dedicate a moderate amount of time to self-directed practice using mobile applications. Specifically, 28% of participants reported studying for more than 50 minutes per day, suggesting a strong commitment to language development and self-improvement. Meanwhile, 24% of students spent 41–50 minutes, and 22% devoted 31–40 minutes daily to practicing English through mobile platforms. However, 18% of the respondents studied for 21–30 minutes, and a smaller group (6%) for 11–20 minutes, while only 2% allocated less than 10 minutes a day. These findings demonstrate that although most students engage with MALL regularly, the duration of learning time still varies significantly depending on individual motivation and schedule flexibility.

Table 4. Time Spent on Daily Autonomous English Learning via MALL

Duration of Daily Learning	Number of Students	Percentage (%)
Less than 10 minutes	3	2.0%
11–20 minutes	9	6.0%
21–30 minutes	27	18.0%
31–40 minutes	33	22.0%
41–50 minutes	36	24.0%
More than 50 minutes	42	28.0%
Total	**150**	**100%**

Chart 1. presents the results of students' self-reported improvements in different areas of English skills through the use of Mobile-Assisted Language Learning (MALL). The data were collected from 150 second-year English majors at Universitas PGRI Palembang, who actively used mobile devices and applications to enhance their speaking fluency and overall language autonomy. The results reveal that the majority of students perceived vocabulary and listening as the skills that benefited most from mobile-assisted learning.

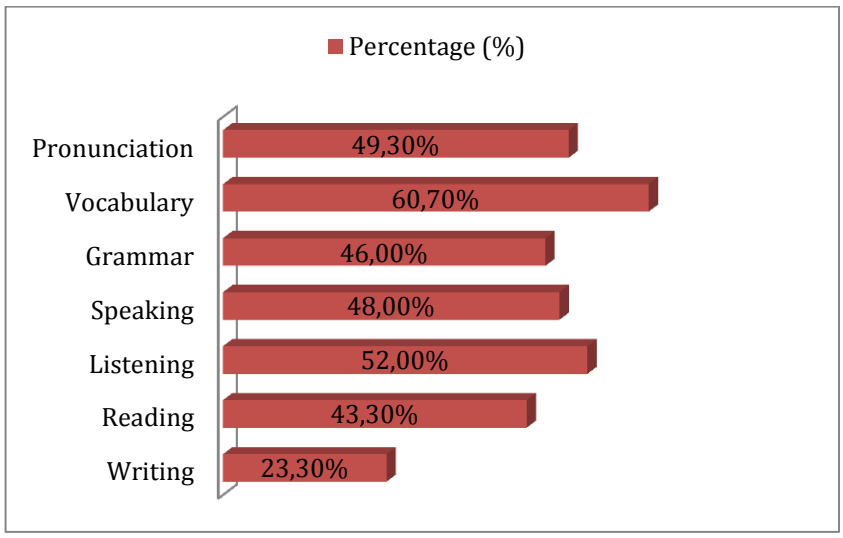

Chart 1. English Knowledge and Skills Improved through MALL

The results in Table 6 indicate that students generally have positive perceptions toward the implementation of MALL in improving their speaking skills. The highest-rated statement was "I can practice speaking English anytime and anywhere through mobile learning" (Mean = 4.37), emphasizing the flexibility and accessibility that MALL provides.

Students also strongly agreed that MALL enhances their pronunciation and speaking accuracy (Mean = 4.17) and builds their confidence (Mean = 4.13). These findings align with studies by Benlaghrissi & Ouahidi (2024) and Jawad (2024), which revealed that mobile-based learning tools effectively improve oral fluency and reduce speaking anxiety.

Although a few participants remained neutral regarding interaction with native speakers (Mean = 3.82), the overall data show that MALL significantly fosters autonomous learning, confidence, and speaking proficiency among EFL learners.

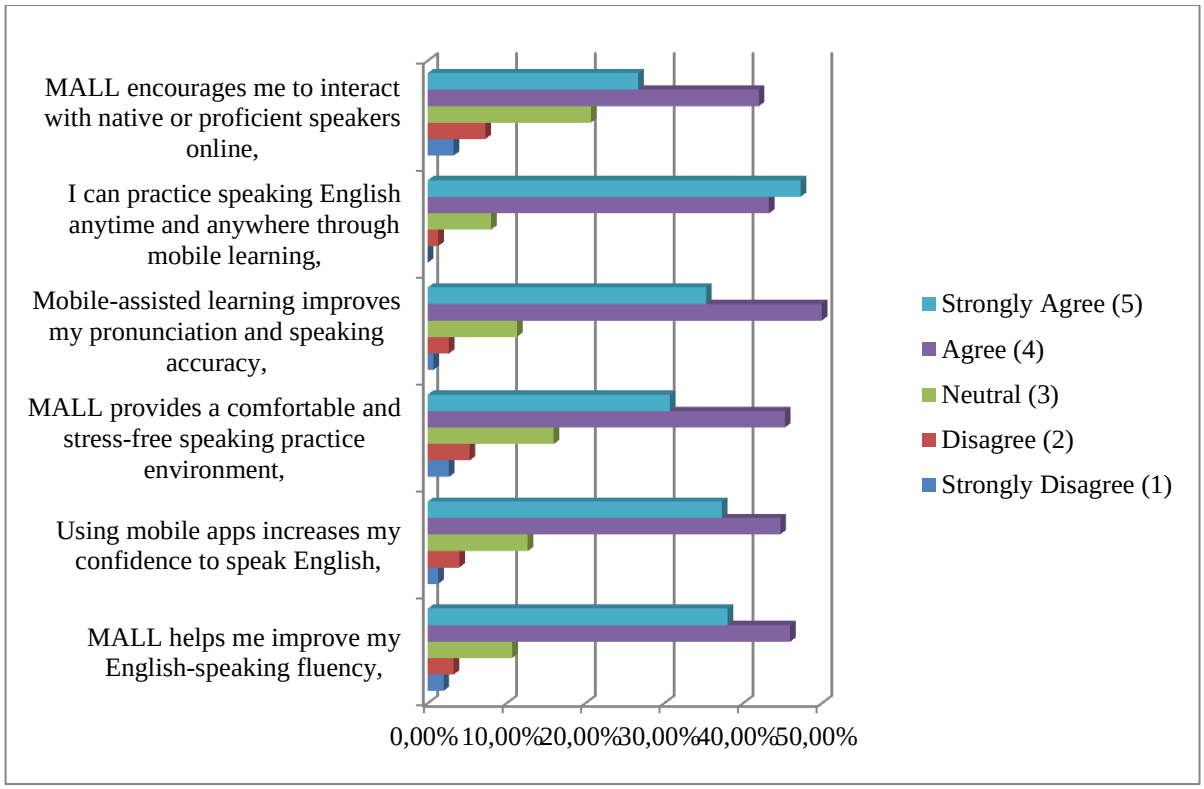

Chart 2. Benefits of Implementing MALL in Speaking

3.2 Discussion

The findings of this study reveal that the implementation of Mobile-Assisted Language Learning (MALL) has a significant impact on improving students' speaking fluency and learning autonomy among English Education students at Universitas PGRI Palembang. The questionnaire results indicate that the majority of students use smartphones (76%) as their primary device for autonomous English learning, followed by laptops (51%) and tablets (30%). This suggests that accessibility and portability are key factors driving the widespread use of mobile technology for language learning. These findings align with Chen et al. (2020) and Bai (2022), who emphasized that mobile devices are effective tools for language learning as they allow learners to study anytime and anywhere.

In terms of applications used, Duolingo (56%), Cake (52%), and ELSA Speak (49%) were identified as the most frequently utilized apps. Students found these applications engaging and interactive, offering vocabulary reinforcement and pronunciation practice through artificial intelligence (AI) features. This supports the findings of Apoko et al. (2023), who reported that Duolingo enhances learners' motivation and vocabulary retention significantly. Likewise, ELSA Speak contributes to the improvement of pronunciation accuracy and speaking fluency by providing instant speech analysis and feedback. These applications help learners self-correct and gain more confidence in spoken communication.

Regarding web-based resources, YouTube (56%) emerged as the most popular platform due to its wide range of authentic and diverse video content, which facilitates both listening and speaking comprehension. Other resources such as Oxford Online English (43%) and British Council (41%) were also frequently accessed because they offer structured and professional speaking materials. These results are consistent with Chien et al. (2020), who argued that video-based learning increases student motivation, and with Becerra-Posada et al. (2022),

who found that web-based environments foster autonomous language learning and meaningful input exposure.

In terms of time spent on MALL-based learning, most students (27%) spent more than 30 minutes per day, while 22% dedicated over 50 minutes daily to English practice. However, around 28% reported studying less than 30 minutes per day. This variation suggests differing levels of learner motivation and self-regulation. According to Ginting and Fithriani (2021), the success of MALL depends not only on technological availability but also on learners' consistency and long-term motivation to engage with mobile tools for language development.

When examining which language skills improved the most through MALL, the results show that vocabulary (63%), listening (52%), and pronunciation (47%) developed more significantly compared to other skills. Applications like Duolingo and ELSA Speak play a crucial role in expanding vocabulary and refining pronunciation accuracy. This finding corresponds with Jin (2023), who observed that sustained use of MALL fosters speaking fluency and learners' confidence in using English for communication. The increase in listening ability also demonstrates that mobile-based learning provides a multimodal learning experience integrating audio, visual, and textual input, enhancing comprehension and retention.

The benefits of MALL in improving speaking skills, based on the Likert-scale responses, also indicate highly positive perceptions. Most respondents agreed or strongly agreed that MALL helped them enhance their speaking fluency, confidence, and ability to practice English anytime and anywhere (average score 4.15–4.37). This finding aligns with Li (2024), who asserted that mobile learning not only improves speaking performance but also creates a flexible and low-anxiety learning environment that encourages active engagement and communication.

Overall, the study demonstrates that MALL implementation strengthens learner autonomy, enhances speaking fluency, and promotes intrinsic motivation for continuous language practice. Through mobile technology, students can control their learning pace, style, and environment according to their individual needs. This supports Godwin-Jones (2018), who emphasized that mobile learning aligns with 21st-century educational paradigms focusing on personalization, autonomy, and lifelong learning.

4. CONCLUSION

This study concludes that Mobile-Assisted Language Learning (MALL) plays a transformative role in enhancing English language proficiency, particularly in improving speaking fluency and learner autonomy among university students. The findings reveal that most students actively engage in autonomous learning through mobile applications such as Duolingo, Cake, and ELSA Speak, which provide interactive features that support pronunciation, vocabulary expansion, and oral fluency. The integration of MALL allows learners to practice English flexibly beyond classroom boundaries, enabling them to access authentic materials and real-time feedback at their own pace. Moreover, the study highlights that MALL encourages self-regulated learning, where students take greater responsibility for their progress, leading to increased motivation and language confidence.

However, the research also identifies certain challenges that need to be addressed. Limited internet connectivity, unequal access to mobile technology, and the lack of digital literacy

among some learners can hinder the effective implementation of MALL. Additionally, while students generally perceive MALL positively, the duration and consistency of their engagement still vary significantly. Therefore, for optimal outcomes, educators must integrate mobile learning strategically into formal instruction, ensuring that it complements rather than replaces face-to-face interaction.

For future research, it is recommended to expand the scope of investigation across different levels of education and regions to determine how MALL functions in diverse learning environments. Further studies should also explore the long-term impact of MALL on learners' communicative competence, pronunciation accuracy, and intercultural awareness. Another important direction is to examine the role of Artificial Intelligence (AI) within MALL platforms such as personalized feedback systems and adaptive speaking modules in shaping learner autonomy and engagement. Additionally, qualitative approaches such as interviews and classroom observations could provide deeper insights into students' experiences, perceptions, and challenges when using MALL. In conclusion, the successful implementation of MALL depends on the balance between technological innovation and pedagogical design. Educators and institutions must work collaboratively to integrate MALL not merely as a digital tool but as an integral component of modern language pedagogy that fosters communication, creativity, and lifelong learning in the digital age.

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