Review research paper

THE IMPACT OF MOBILE ASSISTED LANGUAGE LEARNING (MALL) IN DEVELOPING THE SPEAKING SKILL: AN EMPIRICAL STUDY IN THE UNITED ARAB EMIRATES

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Abstract. *Mobile technology and its applications are among the technologies in education developing the fastest. They present an alluring chance to access numerous information sources at any time and location. In the study context, students who enrol on the Foundation program at Dubai Men's College in the United Arab Emirates (the UAE) suffer from a cumulative lack of language proficiency in general and speaking proficiency in particular. The study's primary purpose was to examine the impact of Mobile Assisted Language Learning (MALL) on students' English language speaking skills. The study also examined how teachers perceived MALL's effect on students' speaking skills. The research question was: To what extent did students' speaking skills in the experimental group develop through MALL compared to those in the control group? This subject was addressed using a mixed-method approach, including qualitative and quantitative data collection and analysis. A quasi-experiment of 66 students formed an experimental and a control group, and 20 teachers were involved. The results showed that the experimental group had statistically significant differences from the control group. The study emphasised the advantages of adopting MALL to develop students' speaking skills, particularly those unmotivated.*

Key words: *MALL, EFL Learners, Speaking Skills, EFL Teachers' Perspectives 1*

1. INTRODUCTION

Integrating Mobile Assisted Language Learning (MALL) in education has garnered significant attention recently, reflecting a paradigm shift towards more adaptive and personalised pedagogical approaches. This evolution in educational technology, particularly in language learning, is driven by rapid technological advancements and the changing educational landscape that demands accessible and individualised learning experiences (Hwang & Lai, 2020). MALL, which involves using mobile devices like smartphones and tablets for educational purposes, is increasingly recognised for its potential in enhancing language proficiency, especially in English as a Foreign Language (EFL) contexts. This is particularly relevant when language skills are crucial for academic and professional success.

In the United Arab Emirates (UAE), proficiency in the English language is a pivotal requirement for academic advancement, especially in higher education institutions like the Higher Colleges of Technology (HCT). HCT, a premier educational institution in the UAE, mandates a minimum English language proficiency for admission, typically evaluated through standardised tests like the International English Language Testing System (IELTS), with a benchmark score 5.0. This policy underscores the critical role of English in the UAE's academic and professional sectors and highlights the need for effective language teaching methodologies.

The challenge of enhancing English speaking skills among students at HCT is exceptionally pressing. This demographic exhibits challenges in language proficiency, characterised by low motivation, learner autonomy, and retention issues (Alzieni, 2020). Here, MALL offers a promising solution. According to Cochrane et al. (2022), MALL facilitates real-world interaction and immersive learning experiences, potentially improving language skills and performance. The rationale for using MALL in this context is its ability to provide a more engaging, flexible, and contextually relevant learning environment compared to traditional methods, which can be particularly effective in addressing the specific challenges faced by the students at HCT.

This study evaluates MALL's impact on students' speaking skills in the Foundation Program at HCT. It seeks to compare the development of speaking skills between students engaged in MALL (experimental group) and those in traditional learning settings (control group). Additionally, the study explores teachers' perspectives on the efficacy of MALL in enhancing English speaking skills, providing insights into the practical application of this technology in an educational setting.

The significance of this research lies in its potential to inform decision-makers at HCT and similar institutions about the effectiveness of MALL in language education. By assessing the benefits and barriers of MALL, this study contributes to the broader discourse on integrating technology in language education and its implications for future pedagogical strategies.

2. LITERATURE REVIEW

MALL represents a dynamic shift in educational paradigms, leveraging the ubiquity and technological capabilities of mobile devices such as smartphones and tablets to facilitate language learning. The core advantage of MALL lies in its ability to provide learners with the flexibility to access educational content anytime and anywhere, which is instrumental in creating a learner-centric environment (Kukulska-Hulme & Shield, 2008). This flexibility is not just about spatial and temporal convenience but also encompasses the adaptability of learning experiences to individual learner needs, preferences, and learning styles. Studies have shown that MALL can significantly enhance learner engagement and motivation, critical factors in language acquisition (Burston, 2015). The interactive nature of mobile technologies, including multimedia capabilities and gamified learning elements, contributes to this heightened engagement.

Furthermore, the cost-effectiveness of MALL is a notable consideration, especially in contexts where access to traditional educational resources is limited or expensive. Peters (2011) highlights that MALL reduces the reliance on physical infrastructure and traditional instructional materials, presenting a more economical alternative to conventional language education settings. However, the implementation of MALL is not without challenges. Technical issues, such as device compatibility and internet connectivity, alongside concerns regarding content quality and pedagogical effectiveness, require ongoing attention (Hockly, 2013). Despite these challenges, the potential of MALL to revolutionise language education is immense. It facilitates a more personalised, interactive, and contextually relevant learning experience, significant for language learners who require frequent and meaningful interaction with the target language (Rosell-Aguilar, 2018). As such, MALL is increasingly recognised not just as a tool for language learning but as a transformative approach that reshapes how languages are taught and learned.

By reviewing educational and psychological schools of thought, significant connections can be drawn between these theories and Mobile Assisted Language Learning (MALL). For instance, behaviourism is a psychological theory pioneered by figures like B.F. Skinner focuses on observable behaviours, positing that all behaviours are learned through environmental interaction (Skinner, 1957). This theory is particularly relevant to MALL, as mobile learning environments are designed to provide stimuli and immediate feedback, which are critical components in behaviourist learning.

In MALL, learning activities often involve repetitive practice, immediate reinforcement, and interactive tasks that align with behaviourist principles. For example, language learning apps frequently use drill-and-practice exercises, which mirror the behaviourist approach of reinforcing correct responses through repetition and positive feedback (Stockwell, 2007). This method is effective in helping learners acquire new language structures and vocabulary, akin to how behaviourist techniques shape desired behaviours.

Furthermore, the behaviourist theory's emphasis on observable and measurable outcomes aligns with the data-driven nature of MALL. Many mobile learning applications are equipped with tracking and analytics features, allowing for the measurement of learner progress and engagement, an aspect that resonates with behaviourist approaches to education (Lefrançois, 2019). Therefore, understanding behaviourism provides valuable insights into how and why certain aspects of MALL are practical in language learning, illustrating the intersection between psychological theories and educational technology. "In mobile learning, Behaviourism can be applied by using technology to track and reinforce desired behaviours in learners. For example, a mobile learning app might use rewards or incentives to encourage students to engage with educational content on their mobile devices. Studies have shown that behaviourist principles can effectively improve learning outcomes in mobile learning environments. For example, using rewards and feedback in a mobile learning game enhanced students' motivation and performance (Xiao et al., 2014).

Examining some well-known theories on second language acquisition makes it possible to see a connection between them and MALL (Mobile Assisted Language Learning). Krashen (1998) proposes two ways to develop language skills: acquisition and learning. The acquisition involves unconsciously internalising knowledge through communication, similar to how a person learns their first language. On the other hand, learning is the conscious acquisition of knowledge about a language (e.g. grammar or form), often resulting from formal language instruction. According to Krashen's theory, natural communication is the most effective way to learn a language. MALL supports and

encourages authentic, real-world language use, which can help learners "acquire" the language rather than "learn" it. Additionally, Krashen's Comprehensible Input Hypothesis suggests that learners must understand the input they receive to produce comprehensible output. MALL is easily understandable and engaging, making it relevant to the learner.

Furthermore, MALL has the potential to improve speaking skills by providing learners with opportunities to practice speaking and receive feedback on their performance. Studies have shown that MALL can be effective in enhancing speaking skills. For example, a study has shown that mobile devices to support speaking practice improved students' pronunciation and fluency in English as a second language (ESL) (Lin et al., 2014). Another study found that mobile technology in a blended learning environment improved students' speaking skills and language proficiency (Kukulska-Hulme et al., 2009).

In another English Language Acquisition setting, Palfreyman (2012) conducted a study at Zayed University in the UAE on how available mobile technology (students' camera phones) can be used to enhance learners' input into the curriculum, to promote intercultural learning among teachers and students, and to improve students' productive skills; speaking and writing. Students also used their phone cameras to give insight into their culture. They made videos using mobile apps such as iMovie. They also used some other apps to reflect on these photos and videos. These pictures and movies encouraged dialogue between students and their teachers. This study showed that MALL creates a relaxing atmosphere of intercultural learning and promotes discussion. Palfreyman (2012) asserts that using MALL provides a simple, sustainable way for students to generate meaningful content that contributes to the learning goals. He also points out that the results show some improvement in students' productive skills.

In conclusion, most of the research that studied the effect of MALL on English language skills in general and on speaking skills, in particular, showed a positive impact as these devices open the doors to the learner for more practice and exposure to the language.

3. METHODOLOGY

Quantitative and qualitative data were collected to achieve the purpose of this study. Data were collected from multiple sources, including quasi-experimental and descriptive research methods, to triangulate data collection. The IELTS (International et al.) speaking test was used as a pretest and post-test for the experimental and control groups. IELTS seems to be a reliable measure of language proficiency. IELTS has a high relevance in structure, criteria and content. The researcher had permission to access some of her IELTS resources and exams used at DMC.

The experimental group was two third-year classes (33 students) from Dubai Men's College. The researcher was tasked with teaching them. Another two sections were used in the control group. The researcher ensured that the main characteristics of the two groups were as similar as possible. Table (2) shows the essential features of the experimental and control group. The following table shows the baseline characteristics of the experimental and control groups.

Table 1 Baseline Characteristics of the Experimental Group and the Control Group

Area	Experimental Group	Control Group
Age Factor	17-21	17-20
Sex	Males	Males & Females
Language Level CEPA Score	L3 Foundations Program (164-170)	L3 Foundations program (164-170)
CEFR Level (Common European Framework of Reference)	B1	B1
IELTS Score	3.5-4.0	3.5-4.0
Curriculum Used	IELTS Skills Preparation_B1 (CEFR)	IELTS Skills Preparation_B1(CEFR)
Nationalities	UAE	UAE + Arabs
Number of students	33 (3 excluded as they did not sit for the post-test)	33
Age Factor	17-21	17-20
Sex	Males	Males & Females
Language Level	L3 Foundations Program	L3 Foundations program
CEPA Score	(164–170)	(164–170)

The pretest was done in the first week of the study, and the post-test was in the last week for both the control and experimental groups. The pretest's objectives were to prove that the experimental and control groups had no significant difference in these tests' results. In contrast, the post-tests examined the effect of MALL on the students' speaking skills.

The researchers in this study used purposeful sampling to select five teachers, two males and three females, with more than three years of experience in teaching using MALL—this qualitative method aimed to determine knowledgeable and experienced participants in the topic of the study. The researchers then interviewed these teachers, asking them questions about the impact of MALL on students' speaking skills. These interviews provided the researchers with valuable information about the topic of the study. These are the major interview questions:

- Do you think that MALL has developed students' language skills? How?
- Do you believe that MALL has developed students' speaking skills? How?
- What is essential for implementing a successful MALL in an institution? i.e. IT Support, …….
- What issues are barriers to implementing a booming MALL in an institution?
- Please Feel Free to Add Any Additional Comments

4. FINDINGS

The study's findings answered the main two research questions. The results of the speaking pretest showed that there was no significant difference in the Speaking scores between the Experimental Group (M=55.00, SD=6.5 and the Control Group (M=65.82, SD=6.5) conditions; t (64) = -1.139, p = 0.13. The following table represents the Speaking Scores of the pretest.

Table 2 The Speaking Scores of the Pretest:

The Speaking Scores/Group Statistics

	Group Name	N	Mean	Std. Deviation	Std. Error Mean
Speaking	Experimental Group	33	55.0000	6.49519	1.13067
	Control Group	33	56.8182	6.47328	1.12685

The Speaking Scores/Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Speaking	Equal variances assumed	.584	.448	-1.139	64	.259	-1.81818	1.59631	-5.00718	1.37082
	Equal variances are not assumed			-1.139	63.999	.259	-1.81818	1.59631	-5.00718	1.37082

For the post-test, the results show a highly significant difference in mean scores of the Speaking post-test in favour of the Experimental Group. [Experimental Group (M=75.17, SD=7.13) and Control Group (M=58.79, SD=5.16) conditions; t (61) = 10.515, p = 0.000 which is ≤ 0.05.]

The research results show that the MALL model succeeded in developing the speaking skills of the experimental group (M=75.1). The options that this model provides for speaking-based projects are noticeable. The collaboration opportunities are motivating, and they could inspire students. Many educational apps that promote speaking and communication skills are provided to the experimental group. For example, TED Talks, Keynote, Zaption, Haiku Deck, and interactive digital books have offered fruitful ground for these students to practice speaking. However, the control group did not provide these options (M=58.8). Consequently, the fourth hypothesis is accepted. The following table shows the statistical results of the speaking post-test.

Table 3 The t-test results of differences between the experimental group and the control group about the Speaking post-test

Group Statistics

	Group Name	N	Mean	Std. Deviation	Std. Error Mean
Speaking	Experimental Group	30	75.1667	7.12975	1.30171
	Control Group	33	58.7879	5.15847	.89797

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Speaking	Equal variances assumed	1.224	.273	10.515	61	.000	16.37879	1.55762	13.26412	19.49345
	Equal variances are not assumed			10.357	52.412	.000	16.37879	1.58139	13.20608	19.55149

The results of the qualitative analysis of the interviews showed a range of opinions on the topic of the study. Most teachers favoured MALL and believed it positively impacted students' speaking skills. Some teachers favoured MALL under certain conditions, while others did not like the MALL strategy. For example, a female teacher said in an interview, "MALL gives [students] various ways to practice speaking through effective apps and websites: Keynotes, iMovie, e-texts, and Spark Video."

In conclusion, this significant improvement in speaking skills is attributed to using MALL. The impact of these ubiquitous devices is noticeable. These devices are easily portable, facilitate social collaboration, and enhance authenticity and connectivity. Stimulating learning in a real-world context motivates students to learn and practice the skills they need once they enter the job market. However, the traditional method is not a complete failure as the post-test results also show improved student language skills. Still, it could not be compared with the impact that MALL has on the language skills and the autonomy of the learners, which was significant.

5. DISCUSSION

Results correspond with what is available in the literature. For example, the quantitative data from the study indicated a significant difference in the mean speaking scores in favour of the experimental group. This result agrees with the related studies of Cochrane et al. (2022), who concluded that "Mobile language learning led to increased reading and speaking proficiency." (p. 3). In addition, the study agrees with what Kadhim et al. (2022) found. They studied the impact of mobile learning on Iraqi learners' oral performance and motivation. They ensured that MALL significantly affects speaking ability and has primarily improved the students' oral performance.

Significantly, MALL enables learners to engage in various activities, such as using language learning apps, participating in online language exchange programs, and listening to language learning podcasts. MALL can be a valuable tool for improving speaking skills, as it allows learners to practice their speaking skills in various contexts and receive feedback from native speakers. According to Kadhim et al. (2022), "using mobile learning as a strategy to enhance EFL learners' speaking skills has a significant effect on enhancing the learners' speaking competence." (p. 39).

In discussing the enhancement of speaking skills through technological means, the importance of mobile applications and online platforms cannot be overstated. Tools like Duolingo, Babbel, and Rosetta Stone offer an array of activities and exercises specifically designed to aid in the improvement of pronunciation and fluency in a new language. These applications are tailored to meet the needs of learners at various proficiency levels, providing an accessible platform for a broad audience. The interactive nature of these tasks, coupled with the benefit of regular practice, contributes significantly to reinforcing and developing language patterns essential for spoken proficiency.

Furthermore, in the context of practical language application, online language exchange platforms such as Tandem and HelloTalk play a crucial role. These platforms facilitate direct interaction with native speakers, providing learners with a genuine language immersion experience. This form of engagement is invaluable for practising conversational skills and receiving immediate feedback on aspects like pronunciation and grammatical accuracy. Echoing this sentiment, Alzieni (2021) underscores the effectiveness of mobile learning in

offering personalized learning experiences. He argues that engaging in learning activities from any location at any time allows for contextualisation (p. 86). This adaptability and contextual relevance of mobile learning are pivotal in enhancing language learning, particularly in developing and using mobile apps and online platforms. Many other strategies can help improve your speaking skills. For example, practising speaking with a language partner or tutor can be a valuable way to get personalized feedback and support. You can also try listening to recordings of native speakers and repeating what you hear to improve your pronunciation. Finally, participating in conversation groups or joining a language club can provide opportunities to practice speaking in a social setting and build confidence.

Furthermore, Mobile Assisted Language learning or MALL effectively improves speaking skills. A study by Chen et al. (2021) found that learners who used mobile devices for language learning significantly improved their speaking abilities. The study found that learners who used mobile devices for language learning were more likely to participate in speaking activities, receive corrective feedback on their speaking, and engage in collaborative learning with other learners. These factors all contributed to their improved speaking skills. In addition, Lisana, L. (2022) found that MALL interventions resulted in higher levels of student engagement and motivation, which are essential factors in language learning and speaking skill development. The research suggests that MALL can be a valuable tool for improving speaking skills.

6. CONCLUSION

In conclusion, MALL is effective in improving speaking skills. Research has demonstrated that learners who use mobile devices for language learning are more likely to participate in speaking activities and receive feedback on their speaking, which can help improve their proficiency. MALL can also increase student engagement and motivation and is essential for language learning and speaking skill development. Overall, mobile devices can be a valuable tool for improving speaking skills in language learning.

Furthermore, the flexibility and accessibility of mobile learning make it an attractive option for language learners. With mobile devices, learners can practice their speaking skills anytime, anywhere, and at their own pace. This can be particularly useful for learners who may not have access to traditional language learning resources or have busy schedules. As such, the use of mobile devices in language learning has the potential to expand access to language learning opportunities and improve speaking skills for a wide range of learners.

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