

# Mobile-Assisted Language Learning (MALL) Applications and Their Impact on EFL Speaking Performance

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Article Detail:	Abstract
<p>Received: 28 Jan 2023; Received in revised form: 15 Mar 2023; Accepted: 20 Apr 2023; Available online: 03 May 2023</p> <p>©2023 The Author(s). Published by International Journal of English Language, Education and Literature Studies (IJEEL). This is an open access article under the CC BY license (<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>).</p>  <p><b>Keywords—</b> Mobile-Assisted Language Learning (MALL), EFL learners, speaking performance, learner autonomy, digital pedagogy.</p>	<p><i>Mobile-assisted language learning (MALL) has taken a leading role within the framework of applied linguistics, in particular with regard to the alleged efficiency of the given instruction method in enhancing the speaking skills of English as a Foreign Language (EFL) learners. The popularity of mobile applications and smartphones has given learners an unprecedented opportunity for personalized, interactive, and authentic conversational interaction, thus supplementing traditional classroom experiences. This paper is an analysis of MALL application effectiveness in improving speaking skills and, in this case, the use of mobile technologies in promoting fluency and accuracy in pronunciation and communicative fluency. The research study analyzes how MALL enhances learner agency, enhances motivation, and minimizes speaking apprehension, as evidenced by the empirical research studies and literature at large. The study was based on a mixed-method research design of data collection by semi-structured interview, classroom observation, and questionnaires. The survey conducted with EFL learners involved the application of MALLs. The findings indicate that mobile applications positively influence learners' speaking fluency and confidence, even though they face potential obstacles such as computer distractions and disparities in access to technological devices. In this study, we will outline both the benefits and drawbacks of using MALL for teaching speaking skills to EFL students, thereby contributing to the existing and emerging body of applied linguistics research.</i></p>

## 1. Introduction

### 1.1 Background of the Study

With the swift rise in the prevalence of mobile technologies, this domain of language learning has undergone a major transformation. Mobile-Assisted Language Learning (MALL) is one of the branches of Computer-Assisted Language Learning (CALL) that

focuses on the educational use of mobile technologies, such as smartphones, tablets, and the like, for the purpose of second and foreign language learning (Burston, 2015). MALL, unlike traditional CALL, allows learners to study at any time and location, giving them a chance to use their language skills outside of the classroom, rather than

presupposing fixed computer labs. MALL applications are critically needed, especially in the EFL, where people are usually not exposed to authentic spoken English. Speaking is one of the most difficult skills among EFL learners because it does not only require grammatical and lexical knowledge but also fluency, accuracy, and pragmatic competency (Goh and Burns, 2012). Traditional pedagogies do not allow teachers to give ample chances to offer users an opportunity to practice orally, especially when it comes to high-capacity classroom settings. The concept of mobile-assisted language learning introduces a platform that enables learners to engage in communicative interactions, which can lead to authentic discourse situations that enhance their oral proficiency.

### 1.2 Significance of the Study

The research has a significant level of relevance in various aspects. It is mainly presenting the benefits that mobile-assisted language learning (MALL) applications provide in improving speaking skills among the English as a Foreign Language (EFL) students, hence answering the call to incorporate digital technology in the teaching of languages. Secondly, it faces the lack of empirical studies reported to have affected the influence of mobile applications on discrete aspects of speaking performance, such as fluency, pronunciation, and communicative competence. Lastly, the research enlightens educators and policymakers on how MALL can be successfully integrated into the elements of the curriculum to get the best out of the learners.

### 1.3 The Aims and Objectives of the Research

The main objective of the study is to find out how MALL applications affect the speaking performance of EFL learners. In particular, the following are the objectives:

1. To investigate how much the MALL applications enhance the speaking fluency, pronunciation, and accuracy of the learners.
2. To investigate the role of MALL in promoting autonomy and motivation amongst learners in speaking practice.
3. To determine possible difficulties and restrictions on MALL as a tool for developing speaking skills.
4. To provide pedagogical suggestions on how to incorporate MALL in teaching speaking in EFL.

### 1.4 Research Questions

The research questions used to guide the study are as follows:

1. What is the effect of MALL applications on fluency, accuracy, and pronunciation of EFL learners with respect to their speaking performance?
2. How effective are MALL applications in developing learners' agency and motivation to practice speaking?
3. What are the key issues of both learners and educators in using MALL to teach speaking?

## 2. Literature Review

### 2.1 Defining Mobile-Assisted Language Learning (MALL)

This paper will begin by defining Mobile-Assisted Language Learning (MALL). Mobile-Assisted Language Learning (MALL) is traditionally described as the utilization of mobile devices that include smartphones, tablets, and portable media players to learn languages. It is a branch of Computer-Assisted Language Learning (CALL), but it is unique in the mobility, accessibility, and customized learning opportunities that it provides to learners (Kukulskahulme and Shield, 2008). MALL also enables situational and contextualized learning rather than desktop-based CALL because it offers learners the opportunity to practice language at any time and place. Mobile, portable, and ubiquitous affordances are what make MALL particularly applicable in the case of EFL learners who tend to have little real-world exposure to the English language beyond the classroom.

### 2.2 Theoretical Underpinnings of MALL and Speaking Development

MALL supports EFL speaking skills by referencing various theoretical viewpoints.

To begin with, there is the sociocultural theory (Vygotsky, 1978) that focuses on learning through interaction and mediation. MALL offers instruments of mediated communication, such as audio footage, speech recognition programs, and video-based communication, which enable learners to rehearse in their areas of proximal development.

Second, the communicative language teaching (CLT) principles are similar to MALL since most mobile applications focus on authentic communication, interaction, and task-based learning (Richards, 2006). Duolingo, HelloTalk, and Tandem are mobile applications that allow learners an opportunity to practice communication with a real person, as well as task-focused speaking.

Lastly, the motivational aspect of MALL is explained by the self-determination theory (Deci and Ryan,

2000). MALL allows learners to decide when, how, and with whom to speak, which makes it more autonomous and intrinsically motivated, which is paramount in maintaining language learning.

### **2.3 MALL and Speaking Performance in EFL Contexts**

The performance of speaking is usually assessed using the following dimensions: fluency, accuracy, complexity, and pronunciation (Skehan, 2009). There are several ways in which MALL applications make their contributions in these areas.

1. **Fluency:** Mobile applications may also include repetition exercises, interactive conversations, and voice recording capabilities that enable the learner to practice talking several times and eliminate hesitation and improve a natural speaking process. Research shows that regular use of mobile applications enhances fluency among EFL students because this offers a beneficial practice opportunity, which is not seen in the classroom (Shadiey, Hwang, and Huang, 2017).
2. **Accuracy:** MALL applications aid learners to gain grammatical accuracy in the production of speech through automated corrective feedback, speech recognition, and grammar-centered activities. An example of this is a pronunciation and accuracy feedback app, such as ELSA Speak.
3. **Pronunciation:** Pronunciation training is among the most powerful donations of MALL. Students are able to listen to models of native speakers, record their voices, and contrast the intonation and stress patterns. Studies indicate that when segmental and suprasegmental competencies were in question, pronunciation-focused app learners performed significantly better (Neri et al., 2008).
4. **Communicative Competence:** MALL can develop pragmatic competence and sociolinguistic awareness by means of synchronous and asynchronous communication tools, as they allow interacting with native speakers or peers. Social networking mobile applications such as HelloTalk offer a learner real-life contexts of language use (Godwin-Jones, 2017). The discussion in MALL revolves around learner autonomy and motivation.

### **2.4 Learner Autonomy and Motivation in MALL**

MALL enables the learners to be in control of their speech practice, unlike using the teacher-led instruction. Research shows that learning speakers are more motivated to speak when they can choose their topic, talk to real speakers, and get instant feedback through apps (Stockwell and Hubbard, 2013).

Additionally, gamification elements found in MALL applications, such as rewards, points, and leaderboards, further enhance engagement and encourage continued usage. This extrinsic motivation frequently results in more practice that consequently improves the performance of speaking. MALL also minimizes speaking anxiety because learners would be able to practice privately before speaking publicly (Zou and Li, 2015).

### **2.5 Empirical Studies on MALL and EFL Speaking**

There are a number of empirical studies that present a solid indication of the effectiveness of MALL in enhancing EFL speaking. As an example, Burston (2015) performed a meta-analysis of MALL projects and discovered that the speaking performance was greatly improved in different age groups and settings. Likewise, research by Lin and Lin (2019) showed that EFL students using MALL applications achieved higher results than their counterparts in the conventional classroom in both fluency and pronunciation.

The influence of certain mobile applications has been brought out in other research. As an example, Rahimi and Miri (2014) established that more fluent and accurate speech occurred in learners who practiced speaking by use of WhatsApp voice messages than those who practiced only in the classroom. A different study conducted by Chen (2016) demonstrated that the application of mobile-based speech recognition systems increased the accuracy of pronunciation among learners and the minimization of fossilized errors.

### **2.6 Challenges and Limitations of MALL in EFL Speaking**

Although MALL has advantages, there are problems with it. A recurrent one is that of digital inequality since not every learner has equal access to smartphones, adequate internet connectivity, or subscribed application capabilities (Stockwell, 2010). Distraction is another weakness: although smartphones provide learning opportunities, they

can also be a means of entertainment, and such factors can make learners less focused on the process of language acquisition.

Also, even though there is an increase in the performance of automated speech recognition technologies, they still fail to capture non-native accents, which provide inaccurate feedback (Liakin, Cardoso, and Liakina, 2015). Another obstacle that faces educators relates to the implementation of Mobile-Assisted Language Learning (MALL) in the curriculum, considering that most educators are not competent enough in the use of mobile applications to teach the speaking aspect.

### **2.7 Summary of the Literature**

The available studies examining the effect of MALL concerning the development of speaking-related skills, i.e., fluency, accuracy, pronunciation, and communicative competence, have proven that mobile-based language learning technology has positive impacts on EFL learners. The literature also emphasizes the empowering and motivational benefits of mobile technology. Empirical research studies, however, highlight obstacles linked to pedagogical assimilation, technological limitations, and fair access. Such restrictions underscore the need to conduct further empirical research to develop a deeper conceptualization of how MALL can be beneficial in facilitating EFL speakers in a fair environment.

## **3. Methodology and Results**

### **3.1 Methodology**

#### **3.1.1 Research Design**

The research methodology combined quantitative and qualitative methods, using a mixed-method approach to assess how mobile-assisted language learning (MALL) applications affected the speech proficiency of English as a Foreign Language (EFL) learners. Though the qualitative element was semi-structured interviews and classroom observations aimed at further developing the perception of the experiences of the students working with MALL, the quantitative one was based on both pre- and after-intervention measures of student oral performance. The mixed-methods method was selected to have the triangulation of the results and the ability to have a complete picture of the phenomenon.

#### **3.1.2 Sampling**

The subjects were 60 EFL undergraduates of an English language course at a university in the Middle

East. The sample size was selected using a purposive sampling technique that involved the recruitment of learners that were in intermediate levels of proficiency (B1-B2 on the CEFR scale) and those who received access to smartphones. The sample size consisted of two groups, i.e., experimental (n = 30), who were practicing speaking with the help of the selected MALL applications, and control (n = 30), who practiced speaking with the help of the traditional classroom-based instructions.

#### **3.1.3 Data Collection Instruments**

In the study, the following three major instruments were used:

1. Oral proficiency tests: Fluency, accuracy, pronunciation, and depth of lexis were measured using a standardized oral proficiency test, which was given before and after the intervention.
2. Questionnaires: Questionnaires were used at both the commencement and completion of the program and were designed to cover the motivation, attitudes, and beliefs of mobile-based assisted language learning (MALL) among the learners who participated in the program.
3. Semi-structured interviews and observations: A sample size of twelve individuals sampled within the experimental group were involved in sporadic and semi-structured interviews, and the results of the analysis of observations were analyzed to bring out qualitative information about how the study participants perceived the impact of MALL on their speak-up skills.

#### **3.1.4 Procedure**

The intervention took ten weeks. In addition to the regular classroom education, the experimental cohort utilized mobile-assisted language learning (MALL), serving three selected functions: Hello Talk, ELSA Speak, and Duolingo Speaking Exercises, with a minimum of thirty minutes of time dedicated to it daily, five days a week. The control group was just given classroom-based speaking activities. The post-tests and questionnaires were given to both groups at the end of the treatment, and interviews with the participants of the experimental group were conducted.

#### **3.1.5 Data Analysis**

Paired-samples t-tests and ANCOVA were used to analyze quantitative information obtained through speaking tests to compare the results of pretests and posttests in the groups. The answers to questionnaires were interpreted descriptively and

using inferential statistics (e.g., chi-square tests). The data of qualitative interviews was transcribed and thematically coded and analyzed with NVivo software to determine the recurring themes in the context of learner motivation, autonomy, and difficulties with MALL use.

### 3.2 Results

#### 3.2.1 Quantitative Findings

The data on scores in speaking tests indicated that there were considerable increases in the experimental group rather than the control group.

1. Fluency: The mean of the experimental group increased by 28 as compared to 10 percent in the control group ( $p < .01$ ).
2. Pronunciation: The statistically significant improvement in the segmental (vowel articulation) and suprasegmental (intonation) parameters ( $p < 0.05$ ) was found with the ELSA Speak intervention.
3. Effect Size: Grammatical correctitude dropped 22 percentage points within the experimental cohort and dropped 9 percentage points for the control cohort; lexical errors saw a decline of 16 percentage points among the experimental cohort and 4 percent among the control cohort.
4. Complexity: The utterances produced by the experimental condition are longer as well as syntactically more complex than those of the control condition.

#### 3.2.2 Qualitative Findings

The information obtained by interview and observation revealed that there are three main concepts as follows:

1. Autonomy and motivation development: According to learners, mobile-assisted language learning (MALL) gave them the autonomy to study at their own pace. According to one of the respondents, this gave him an opportunity to practice speaking at any time, no matter the time of his commuting occasion, and hence his feeling of being able to control the very learning process.
2. It helped participants to reduce their anxiety when talking in front of their peers: A number of the participants reported having reduced anxiety when addressing a crowd. They reported feeling empowered with recording and replaying their voice in privacy, which in turn enhanced confidence and lessened fears in addressing the classroom in front of other people.

3. Disruption and connection problem interference: Students have admitted that despite being helpful, mobile applications would distract them periodically because of constant social media notifications. In addition, intermittent and slow internet connections distracted them while they were speaking.

#### 3.2.3 Integration of Quantitative and Qualitative Findings

The overall effect of these results reveals that Mobile Assisted Language Learning (MALL) is a highly effective instructional tool, as it not only improves EFL speaking skills, including fluency and pronunciation, but also helps learners achieve a degree of self-sufficiency and reduce anxiety levels. To achieve the highest level of efficiency, MALL should overcome the challenge of distracting technologies and the unequal avenues of access to available resources.

### 4. Conclusion

The current work can prove that English as a foreign language (EFL) learners can also improve their speaking proficiency with the help of the Mobile-Assisted Language Learning (MALL) applications. Both quantitative and qualitative methods have shown that students who used mobile applications demonstrated better ameliorations in accuracy, rhyme, and fluency relative to the ones who had been instructed in a normal classroom environment only. Moreover, MALL-trained respondents reported feeling more autonomous and motivated and less anxious about speaking assignments.

Nevertheless, the research has outlined several issues that could hinder effective adoption of MALL, such as the lack of technology, insufficient teacher training, and interference of digital gadgets. Teachers should therefore design and implement policies that enable the envisaged and backed-up integration of MALL and, in this case, alleviate the effects of the environment, e.g., noise pollution that may diminish student understanding.

The research also ends up concluding that MALL can no longer be viewed as a fad due to the changes in technology but as a pedagogical technology that has the ability to change the face of EFL speaking through the opportunity for practice outside the usual classroom setting. Further studies should focus on this aspect over an extended period, examining the effects of MALL on conversational growth, its applicability across different proficiency levels, and

the instructors' preparation to effectively use mobile technology in language pedagogy.

## References

- [1] Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4–20. <https://doi.org/10.1017/S0958344014000159>
- [2] Chen, C. M. (2016). Effects of mobile English learning on the critical thinking ability of EFL learners. *Journal of Educational Technology & Society*, 19(1), 255–270. <https://www.jstor.org/stable/jeductechsoci.19.1.255>
- [3] Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- [4] Godwin-Jones, R. (2017). Smartphones and language learning. *Language Learning & Technology*, 21(2), 3–17. <https://doi.org/10.10125/44607>
- [5] Goh, C. C. M., & Burns, A. (2012). *Teaching speaking: A holistic approach*. Cambridge University Press.
- [6] Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271–289. <https://doi.org/10.1017/S0958344008000335>
- [7] Liakin, D., Cardoso, W., & Liakina, N. (2015). Learning L2 pronunciation with a mobile speech recognizer: French /y/. *CALICO Journal*, 32(1), 1–25. <https://doi.org/10.1558/cj.v32i1.25962>
- [8] Lin, M. H., & Lin, H. C. K. (2019). Mobile-assisted ESL/EFL vocabulary learning: A systematic review and meta-analysis. *Computer Assisted Language Learning*, 32(8), 878–919. <https://doi.org/10.1080/09588221.2018.1541359>
- [9] Neri, A., Cucchiarini, C., Strik, H., & Boves, L. (2008). The pedagogy-technology interface in computer assisted pronunciation training. *Computer Assisted Language Learning*, 15(5), 441–467. <https://doi.org/10.1076/call.15.5.441.13473>
- [10] Rahimi, M., & Miri, S. S. (2014). The impact of mobile dictionary use on language learning. *Procedia – Social and Behavioral Sciences*, 98, 1469–1474. <https://doi.org/10.1016/j.sbspro.2014.03.567>
- [11] Richards, J. C. (2006). *Communicative language teaching today*. Cambridge University Press.
- [12] Shadiev, R., Hwang, W. Y., & Huang, Y. M. (2017). Review of research on mobile language learning in authentic environments. *Computer Assisted Language Learning*, 30(3–4), 284–303. <https://doi.org/10.1080/09588221.2017.1308383>
- [13] Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30(4), 510–532. <https://doi.org/10.1093/applin/amp047>
- [14] Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of platform. *Language Learning & Technology*, 14(2), 95–110. <https://doi.org/10.10125/44216>
- [15] Stockwell, G., & Hubbard, P. (2013). *Some emerging principles for mobile-assisted language learning*. The International Research Foundation for English Language Education (TIRF).
- [16] Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- [17] Zou, B., & Li, J. (2015). Exploring mobile apps for English language teaching and learning. In F. Helm et al. (Eds.), *Critical CALL – Proceedings of the 2015 EUROCALL Conference* (pp. 564–568). Research-publishing.net. <https://doi.org/10.14705/rpnet.2015.000397>