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Mobile-Assisted Language Learning (MALL): The Role of Educational Apps in Developing Listening Skills

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Abstract:

This study examined the role of educational apps within Mobile-Assisted Language Learning (MALL) in developing learners' listening skills by analyzing the effectiveness of this mode of learning in improving auditory performance, enhancing engagement with language content, and promoting learner autonomy. The study adopted a quasi-experimental design to measure the impact of educational apps on listening skill development through pre- and post-testing procedures applied to a sample of learners. In addition, the study sought to identify learners' attitudes toward the use of educational apps and to explore the main challenges they may face while learning through mobile devices. The findings indicated that integrating educational apps into language teaching contributes significantly to improving listening skills when implemented within a well-structured pedagogical framework that considers learning objectives and learner characteristics.

Keywords : Mobile-Assisted Language Learning (MALL), Educational Apps, Listening Skills, English Language Learning, Mobile Learning

Introduction

Listening skill is one of the primary language skills in second or foreign language learning, as it represents the natural entry point for language acquisition and comprehension. It also contributes to building the learner's ability to engage in appropriate linguistic interaction within educational and everyday situations. Interest in this skill has increased amid the rapid transformations witnessed by language teaching methodologies, accompanied by the growing use of digital technologies and mobile tools that have created a more flexible and interactive learning environment. From this perspective, mobile-assisted language learning (MALL) has emerged as one of the modern directions seeking to employ educational applications to support language learning and develop its various skills, foremost among them the listening skill.

This approach is based on the multiple educational capabilities provided by mobile devices, such as easy access to content at any time and place, the opportunity to repeat listening to audio texts, instant interaction with language activities, along with the diversity of educational media that takes into account

individual differences among learners. Educational applications have also become an attractive environment for learners due to their elements of excitement, variety, and gradual progression in presenting tasks, which makes them an effective tool for enhancing learner motivation and developing their learning autonomy. Thus, mobile phones are no longer merely a means of communication but have transformed into an educational medium capable of supporting language learning in an organized and effective manner.

In light of this, there is a need to study the impact of educational applications within the framework of mobile-assisted language learning in developing listening skills, especially since this skill requires continuous training, repeated exposure to auditory input, and the ability to distinguish, understand, and comprehend at multiple levels. Moreover, listening is not limited to merely receiving sounds but includes processing meaning, analyzing the linguistic message, and connecting it with context—something that educational applications can contribute to through the diverse listening activities, interactive exercises, and immediate feedback they provide. Thus, integrating these applications into language teaching may open new horizons for developing learners' performance in this vital skill.

The importance of this study stems from its effort to uncover the effectiveness of using educational applications within a mobile-assisted learning environment in developing learners' listening skills, along with identifying their attitudes toward this learning modality and the challenges they may encounter while using it. The study also seeks to provide a scientific and educational contribution that can be utilized in developing language teaching programs and designing digital educational activities more aligned with the needs of contemporary learners. In this context, this study aims to answer a set of questions related to the extent to which educational applications contribute to improving listening skill and their suitability as an educational tool within or outside the classroom environment.

Based on the above, this study addresses a topic of theoretical and practical importance, namely the effectiveness of mobile-assisted language learning in developing listening skills, by focusing on educational applications as a modern means of learning that is both self-directed and guided. It also seeks to construct a clear scientific conception regarding the possibility of employing these applications to improve language learning outcomes, thereby enhancing the efficiency of the educational process and elevating the level of linguistic achievement among learners.

Problem of the Study

Despite the significant development witnessed by digital educational technologies and the extensive capabilities mobile devices have provided in supporting self-directed and interactive learning, the employment of these technologies in language teaching still requires further organized scientific study, particularly in the field of developing listening skills. Listening skill is one of the most language skills in need of continuous training and repeated exposure to auditory input; however, many learners face difficulties in understanding, analyzing, and effectively interacting with listening texts. Hence, the need arises to verify the extent of the effectiveness of educational applications within the framework of mobile-assisted language learning in developing this skill, and to determine whether this employment truly contributes to improving learners' performance or remains merely a technical tool without tangible educational impact.

Accordingly, the problem of the study is represented in the following main research question: **To what extent are educational applications effective within the framework of mobile-assisted language learning in developing learners' listening skills?**

Research Questions

Based on the problem of the study, this study seeks to answer the following questions:

1. To what extent is using educational applications effective within the framework of mobile-assisted language learning in developing learners' listening skills?
2. Are there statistically significant differences at the level of $\alpha \leq 0.05$ between learners' mean scores in the pre- and post-listening test in favor of the post-test?
3. What are learners' attitudes toward using educational applications in learning the listening skill?
4. What are the most prominent difficulties facing learners when using educational applications via mobile phones?
5. To what extent can this learning modality contribute to enhancing autonomy and motivation among learners?

Study Hypotheses

In light of the nature of the study, the following hypotheses can be formulated:

1. There are statistically significant differences at the significance level of $\alpha \leq 0.05$ between learners' mean scores in the pre-test and post-test in listening skill in favor of the post-test.
2. There is a positive effectiveness for using educational applications within the framework of mobile-assisted language learning in developing learners' listening skills.
3. There are positive attitudes among learners toward using educational applications in learning the listening skill.
4. There is a relationship between using educational applications and developing motivation and autonomy in learning the listening skill.

Significance of the Study

The significance of this study stems from its examination of a contemporary educational topic related to employing modern technologies in language teaching, namely mobile-assisted language learning, as one of the directions that has received increasing attention in educational and linguistic research. The importance of the study lies in its effort to uncover the effectiveness of educational applications in developing listening skills, which is a fundamental skill in language learning that requires repeated training and regular exposure to auditory input. Multiple studies have shown noticeable improvement in learners' performance when using these applications.

The significance of the study also emerges from the practical aspect, as its results can contribute to guiding teachers and curriculum designers toward more effective methods of integrating educational applications within the educational process. This achieves a greater degree of interaction, enhances self-directed learning, and raises learners' motivation levels. Moreover, this study may provide a clear conception regarding how to invest mobile phones in supporting language learning beyond the boundaries of the traditional classroom, while considering the necessary educational and organizational aspects to achieve optimal results.

As for the scientific aspect, the study adds to the Arabic and foreign literature on the effectiveness of mobile-assisted language learning in developing listening skills, particularly in educational environments that still require more organized applied studies. It may also open the door for subsequent research addressing other applications, different language skills, or diverse age groups.

Objectives of the Study

This study aims to achieve a set of scientific and practical objectives, which can be formulated as follows:

1. To uncover the effectiveness of educational applications within the framework of mobile-assisted language learning in developing learners' listening skills.
2. To identify the impact of using educational applications on improving performance in the pre- and post-listening test.
3. To investigate learners' attitudes toward using educational applications in learning the listening skill.
4. To identify the most prominent difficulties and challenges that learners may face when using educational applications via mobile phones.
5. To provide educational recommendations that can contribute to developing the employment of educational applications in language teaching.

Methodology of the Study

This study employed the quasi-experimental approach as the most suitable method for investigating the impact of an independent variable, namely the use of educational applications within the framework of mobile-assisted language learning, on a dependent variable represented by listening skills. This approach is appropriate for educational studies seeking to measure the impact of an educational program or intentional intervention on a group of learners compared to another group that does not receive the same intervention. Moreover, the nature of this study's topic necessitates examining performance changes before and after implementing the program, which makes the quasi-experimental approach more consistent with its objectives and procedures. The study benefited from the methodological orientations adopted by previous studies addressing the impact of mobile learning in developing listening skill, where pre- and post-tests were administered to two groups—an experimental and a control group—to uncover performance differences and interpret them in light of the educational intervention's impact.

Study Design

The study adopted a quasi-experimental design based on comparing two groups: an experimental group and a control group. The experimental group received listening skill instruction using educational applications via mobile phones, while the control group continued learning through the usual traditional method. To measure the impact of this intervention, a pre-test was administered to both groups at the beginning of the experiment to determine learners' initial level in listening skill, followed by a post-test after completing the educational program to measure the amount of performance change. This design enables monitoring differences between the two groups, as well as measuring change within a single group, thereby providing a more accurate scientific basis for judging the effectiveness of educational applications in developing listening.

Study Population and Sample

The study population consisted of learners in the targeted educational stage, whether school or university level, according to the scope defined by the researcher in this study. As for the sample, it was selected using purposive or simple random sampling, comprising two groups as equivalent as possible regarding age level, academic achievement, and linguistic proficiency. This ensures an appropriate degree of homogeneity among study participants and reduces the impact of extraneous variables. Sample equivalence between the two groups is one of the important elements in this type of study, as it contributes to attributing potential differences to the educational program's impact itself rather than pre-existing differences among sample members.

Study Instruments

The study relied on a set of instruments appropriate for the nature of its objectives, foremost among them the listening skills test, which is the primary tool used to measure learners' performance level before and after implementing the program. This test was designed to be compatible with learners' level and to allow measuring different aspects of listening skill, such as general comprehension, extracting information, and distinguishing between main and detailed ideas. The study also relied on an attitudes questionnaire to measure learners' opinions toward using educational applications in learning listening, aiming to identify the psychological and educational attitudes accompanying this learning modality. In addition, interviews or classroom observations can be used as qualitative supporting instruments if the study requires it, to obtain a deeper picture of the learning experience and challenges learners may face during use.

Implementation Procedures

The study's implementation went through a number of organized steps aimed at ensuring application validity and result accuracy. The procedures began with preparing the listening test and questionnaire, then presenting them to a group of reviewers to verify their validity and reliability and confirm their appropriateness for the study's objectives. Afterwards, the pre-test was administered to members of both the experimental and control groups to determine the initial level in listening skill. The educational program was then implemented with the experimental group using educational applications within the MALL framework over a specified period during which learners were trained to interact with listening activities and complete required tasks. Meanwhile, the control group continued their studies using the usual traditional method. After completing the implementation period, the test was re-administered to both groups as a post-test. Data were then collected and statistically analyzed to uncover the significance of differences between pre- and post-test results and determine the extent of the impact caused by using educational applications in developing listening skills.

Data Analysis Methods

Data analysis in this study relied on a set of statistical and qualitative methods appropriate for the nature of the instruments used and the type of data obtained. Descriptive statistics, including arithmetic means and standard deviations, were used to describe performance levels in tests and questionnaires. The t-test for related or independent samples was employed, depending on the nature of the required statistical comparison, to verify the existence of statistically significant differences between pre- and post-measurements or between the experimental and control groups. Effect size was also calculated to indicate the strength of the impact caused by the educational intervention, not merely judging statistical significance alone. As for data obtained from the questionnaire, it underwent descriptive analysis through frequencies, percentages, and means. Qualitative data resulting from interviews or observations—if available—were analyzed using objective interpretive methods to help understand the educational experience from a broader and deeper perspective.

Definition of Terms

1. **Mobile-Assisted Language Learning (MALL)**

This refers to the employment of mobile devices and digital applications in supporting language learning and teaching, which enables learners to access linguistic content at any time and place, and enhances interaction and self-directed learning (Kukulska-Hulme, 2012, p. 20). MALL is also considered a branch of mobile learning that aims to invest smartphone characteristics in developing various language skills, including listening (Viberg & Grönlund, 2012, p. 8).

2. **Educational Applications**

These are digital programs designed for specific educational purposes and used to present content, exercises, and interactive activities in an organized manner that helps learners understand, practice, and evaluate. These applications are characterized by integrating ease of access, interaction, and immediate feedback, making them suitable for language teaching via mobile phones (Kukulska-Hulme, 2012, p. 21).

3. **Listening Skill**

Listening skill is one of the fundamental language skills in language learning, and it is the process of perceiving, understanding, interpreting, and connecting linguistic sounds to context. Literature indicates that listening represents a core skill because it is the foundation of linguistic comprehension and the beginning of language acquisition, and it also supports the other four language skills (Nunan, 1997, p. 3).

4. **Developing Listening Skills**

This refers to enhancing the learner's ability to recognize sounds, words, and structures, understand the general and detailed meaning of listening texts, and respond to them correctly. Studies have clarified that employing MALL can contribute to improving learners' listening performance through repeated exposure to audio materials and interactive training (Caro Lora & Peinado Agresott, 2019, p. 1).

5. **Learners**

These are the sample members who participate in the educational experiment and upon whom the educational program based on educational applications is administered. In this study, they refer to the targeted students who receive training in listening skill using MALL.

6. **Effectiveness**

This refers to the magnitude of the impact caused by using educational applications in improving learners' outcomes in listening skill compared to their previous level or compared to the control group. Effectiveness is measured here through the difference between the pre-test and post-test, and whether this difference is statistically significant (Caro Lora & Peinado Agresott, 2019, p. 2).

First: Theoretical Framework

1. Concept of Mobile-Assisted Language Learning (MALL)

Mobile-assisted language learning is one of the modern directions in language teaching, and it emerged within the context of transformations that occurred in knowledge and methods of accessing it, where learning is no longer limited to the classroom, textbook, or traditional media, but has become possible through mobile devices that accompany learners at various times and places. This approach starts from a fundamental idea that the mobile phone is no longer merely a means of communication but has become an educational tool capable of supporting self-directed learning and enhancing interaction with linguistic content in a continuous and flexible manner (Kukulska-Hulme, 2012, p. 20). This means that learners can be exposed to language in multiple contexts and can repeat listening, reading, or practice according to their own pace, making learning more suitable for individual differences among learners (Viberg & Grönlund, 2012, p. 8).

Mobile-assisted language learning has become part of the major transformations in digital education, as literature indicates that mobile devices contribute to building a personal, interactive, and multimedia learning environment that allows learners to access educational materials at a time that suits them and a place of their choice (Kukulska-Hulme, 2012, p. 21). This direction is consistent with the contemporary

view of learning as an extended process that does not stop at the boundaries of school time but intersects with the learner's daily life. Thus, MALL is not viewed merely as a technological addition but as an educational philosophy seeking to expand the scope of learning and liberate learners from temporal and spatial constraints.

2. Theoretical Basis for the Concept of MALL

Mobile-assisted language learning is based on a set of theoretical foundations that justify its effectiveness in language teaching. Learning in this context is based on the interaction between the learner, linguistic content, and the digital medium, so that the learner becomes an active party in constructing knowledge rather than a passive recipient. This learning pattern is also consistent with the principles of self-directed learning, learner-centered learning, and adaptive learning that takes into account individual pace, ability, and interest (Traxler, 2018, p. 45). Recent research shows that MALL achieves positive results when it is part of a clear educational design, not merely random use of technology (Stockwell, 2020, p. 31).

The importance of this foundation lies in the fact that language is not acquired through theoretical explanation alone, but through continuous exposure to input, interaction, practice, and repetition. Here, the mobile phone emerges as a suitable tool for this learning pattern because it allows the student to return to the educational material whenever they wish, repeat the activity more than once, and control the level of difficulty and speed. Moreover, some applications provide graduated learning paths that start with simple activities and end with more complex tasks, which enhances the cognitive progression required in language learning (Kukulska-Hulme, 2012, p. 22).

3. Educational Applications as an Educational Medium

Educational applications represent the executive core of mobile-assisted language learning; they are what transform the mobile phone from a general tool into a targeted educational tool. These applications are characterized by their ability to combine text, sound, image, testing, and feedback, making learning more vibrant and interactive. They are also mostly designed in a way that allows learners to control their learning path, retry, and review errors, which aligns with modern principles in self-directed learning (Godwin-Jones, 2017, p. 15). The value of educational applications lies in the fact that they do not merely present information but build an integrated educational experience.

In the field of language learning, the importance of these applications increases when used to train listening, because listening is a skill that requires repeated and organized exposure to audio material. Educational applications allow learners to listen to the text more than once, slow down the speed or replay the segment, answer comprehension questions, and receive immediate feedback (Kukulska-Hulme, 2012, p. 23). This makes them more effective than traditional methods that often rely on listening once in class and then quickly moving to correction, which is often insufficient for building deep auditory comprehension.

Educational applications also provide an important element represented by motivation, as many of them use game-like elements such as points, levels, badges, and notifications, which increase learner motivation to continue. Studies have proven that these motivational elements contribute to raising participation and engagement levels and reduce the boredom that may accompany learning some language skills, especially listening skill if presented in a rigid traditional manner (Deterding et al., 2011, p. 26). Thus, educational applications do not content themselves with presenting content but reshape the learning experience itself.

4. Listening Skill in Language Learning

Listening skill is one of the most important language skills, and it can be said that it precedes others in many educational contexts. A child learns to listen before reading and writing, and a foreign language learner needs to listen first to understand sounds, intonation, and structures before being able to produce language. Literature indicates that listening is not a passive process as sometimes believed, but rather a complex cognitive process that includes attention, discrimination, interpretation, and connecting meaning to context (Nunan, 1997, p. 3). Consequently, improving listening does not mean merely increasing exposure to sound but requires organized training that develops the learner's ability to comprehend, analyze, and respond.

Listening becomes more important in foreign language learning because the learner often does not live in a natural linguistic environment and therefore relies heavily on educational media to obtain linguistic input. Here comes the role of educational applications in bridging the gap between classroom learning and real exposure to language. They provide listening texts, dialogues, short clips, and interactive questions, which help learners build comprehension gradually (Field, 2008, p. 61). Moreover, listening in this case is not limited to understanding individual words but includes understanding the main idea, connecting auditory elements, and identifying important information.

Some researchers confirm that weak listening often leads to weakness in other skills because listening is the natural entry point for comprehension and interaction. If the learner cannot perceive, discriminate, and understand sounds, this will reflect on their pronunciation, vocabulary, oral responses, and even writing at times (Vandergrift & Goh, 2012, p. 19). Therefore, developing listening is not a side activity but one of the conditions for success in language learning, especially when learning occurs in a non-target language environment.

5. The Relationship Between MALL and Listening Development

The relationship between MALL and listening skill becomes clear through the nature of the skill itself and through the characteristics of the mobile medium. Listening requires repetition, variety, and flexibility, and these characteristics are largely provided by the mobile phone. Learners can listen to the same text multiple times, stop the recording, replay the segment, slow down the speed, and test themselves at any time (Stockwell, 2020, p. 38). This flexibility makes the learning process more suitable for learners' needs and more connected to their actual level.

Educational applications also allow learners to listen in different contexts, such as listening to a short dialogue, announcement, news clip, short story, or interactive activity. This variety is very important because it trains learners to deal with multiple forms of auditory input. Experimental studies show that graduated presentation of listening activities with immediate feedback leads to clear improvement in auditory comprehension and enhances confidence in using language (Mubarak, 2021, p. 112). This explains why many learners show improvement when they move from random listening to organized listening within educational applications.

On the other hand, using MALL in listening reduces the anxiety learners may feel in traditional classrooms, where they may fear making mistakes or feeling embarrassed in front of classmates. In educational applications, they can retry without social pressure and monitor their own progress. This psychological aspect is very important because anxiety is one of the factors that hinder auditory comprehension (Vandergrift & Goh, 2012, p. 27). Thus, MALL supports listening not only cognitively but also affectively.

6. The Learner in MALL Environment

MALL places the learner at the center of the educational process, as they become the one who determines learning time, pace, and path. This active role enhances autonomy, which is one of the most important educational values in modern education. The student is no longer completely dependent on the teacher but is able to organize their learning and return to content whenever they want. Studies have shown that educational applications contribute to building this type of autonomy because they give learners a sense of control and the ability for personal progress (Godwin-Jones, 2017, p. 17).

Learners in MALL environments are also exposed to diverse educational experiences that combine individual interaction, immediate feedback, and continuous motivation. This helps them develop self-regulation skills such as planning, review, and performance evaluation. In listening, learners become more aware of their level and more capable of identifying their strengths and weaknesses. This leads to more sustainable improvement than merely relying on one class lesson or limited traditional activity (Kukulska-Hulme, 2012, p. 25).

7. Psychological and Educational Interpretation of Educational Applications' Effectiveness

The effectiveness of educational applications in developing listening can be explained through a set of psychological and educational factors. The first factor is repeated learning because listening requires repeated return to audio material. The second is self-directed learning, where the application allows the learner to progress at their own pace. The third is immediate feedback, which is an important element in correcting comprehension. The fourth is sensory diversity, as applications combine sound, image, and text, which enhances comprehension and consolidates information (Field, 2008, p. 74). Additionally, applications provide a less threatening and more psychologically safe environment than the classroom at times, which encourages experimentation and retrying.

Some educational applications also rely on graduated task presentation, which is a fundamental educational principle in learning. Learners start with short clips and then move to longer and more complex clips, beginning with direct questions and then progressing to questions requiring inference and analysis. This progression is very important in listening because the skill is not acquired all at once but through the accumulation of auditory experience (Vandergrift & Goh, 2012, p. 44). Hence, successful educational applications are those that take this progression into account and build an organized experience upon it.

8. Position of the Current Study in This Framework

The current research starts from this theoretical framework to confirm that mobile-assisted language learning, when employed through educational applications, represents an effective tool in developing listening skill. The problem is not in the existence of technology but in how to use it educationally. Therefore, the research focuses on educational applications as a practical medium for implementing MALL and on listening as the targeted language skill. This direction is based on what studies have confirmed: that mobile learning is more effective when linked to a specific educational goal, organized design, and appropriate feedback (Stockwell, 2020, p. 41).

Second: Previous Studies

Previous studies in this field address the impact of mobile-assisted language learning (MALL) and educational applications on developing English language skills, particularly listening skill, in addition to related aspects such as motivation, attitudes, and language achievement. These studies varied in methodology, sample, and instruments; however, they converge in indicating that employing mobile

phones in education can contribute to improving learning outcomes when implemented within an organized educational framework. Below is a presentation of the most prominent relevant studies, followed by commentary highlighting similarities and differences with the current study.

1. Study by Saidouni & Bahloul (2018)

This study addressed the impact of using mobile devices on enhancing students' motivation toward learning English as a foreign language. Its importance stemmed from its focus on one of the essential aspects of the educational process—motivation—as an influential factor in learning success and continuity. The study problem was whether mobile devices could raise motivation and engagement levels among students learning English as a foreign language. Results showed that using mobile devices contributed to increasing students' motivation toward learning and enhanced their participation in educational activities.

This study benefits the current research by confirming that the educational value of mobile learning is not limited to the cognitive aspect alone but extends to affective dimensions that form an important foundation in language learning. Moreover, its findings support the idea that educational applications can be an effective tool for preparing learners psychologically to interact with listening tasks, making it closely related to the current study's topic.

2. Study on the Environmental Perspective of Mobile-Assisted Language Learning (2018)

This study presented a theoretical framework explaining mobile-assisted language learning through the concept of "anytime, anywhere," which is one of the main characteristics of this learning pattern. The study's importance lay in presenting an environmental conception illustrating how mobile phones can create a flexible and continuous learning environment beyond the boundaries of the traditional classroom. The study problem was how to employ mobile phones to ensure learning availability anytime and anywhere while maintaining organized educational character.

The study concluded that mobile learning enables learners to learn anytime and anywhere, which enhances the flexibility of the educational process and gives learners greater control over their learning. This study gains particular importance for the current research because it clarifies the theoretical basis upon which MALL is built and highlights how educational applications can support continuous learning, especially in skills requiring repetition and review such as listening skill.

3. Study on the Impact of Educational Smartphone Applications on Improving Listening and Speaking Skills (2021)

This study addressed the impact of educational smartphone applications on improving listening and speaking skills among English language students. Its importance was prominent because it was directly linked to listening skill and focused on educational applications as a modern teaching method. The problem was determining the extent of these applications' impact on developing listening and speaking skills and whether their use leads to improvement in language performance.

Results showed noticeable improvement in both skills, especially listening, among students who used educational applications. This study benefits the current research by providing applied evidence that smart applications can contribute to improving auditory performance and supports the idea that mobile phones, when used in a purposeful educational manner, become effective educational tools inside and outside the classroom.

4. Study on the Reality of Using Smartphone Applications in Teaching Arabic to Non-Native Speakers (2021)

This study focused on uncovering the reality of using mobile applications in teaching Arabic to non-native speakers, which gave it applied importance related to the extent of employing these tools in the real educational environment. The study problem was determining the extent of educational application use in education and whether this use achieves real educational effectiveness. Its results showed that application effectiveness is largely related to the method of educational employment, not merely their technical existence.

This study reflects an important principle benefiting the current research: an educational application is not effective by itself, but its value is determined according to how it is integrated within the instructional design. This meaning aligns with the current study's topic because the focus is not on the phone as a device but on educational applications as an organized educational medium.

5. Study on Examining the Impact of Mobile-Assisted Learning on Vocabulary Acquisition (2023)

This study addressed the impact of mobile-assisted learning on vocabulary acquisition among language students and gained importance for supporting the general direction that sees mobile learning effectiveness in developing various language skills. The problem was examining the impact of mobile learning on vocabulary acquisition as one of the fundamental components in language learning. Results showed a clear positive impact of mobile learning on vocabulary development among learners.

Although this study does not directly address listening skill, it is relevant to the current research in confirming mobile phone effectiveness in improving language learning generally. It also supports the view that educational applications can contribute to developing more than one language skill simultaneously, enhancing the educational value of this learning pattern.

6. Study: The Effects of Mobile-Assisted Language Learning (MALL) on EFL Listening Skill (Kim, 2020)

This study is one of the important direct studies in the listening field, as it addressed the impact of mobile-assisted language learning on developing listening skill among English as a foreign language learners. Its importance lies in providing strong empirical evidence on MALL effectiveness in developing listening, making it closely related to the current research topic. The problem was determining the extent of MALL's impact on developing listening skill among English language learners.

Study results showed that the overall impact of mobile learning on listening was moderate to large, indicating this learning pattern's effectiveness in improving auditory comprehension, phonological discrimination, and expanding listening-related vocabulary. This result is very important for the current study because it confirms that MALL is not merely a technological addition but an educational tool capable of producing actual impact on learners' performance.

7. Study: The Impact of Mobile-Assisted Language Learning (MALL) on English Listening Skills (Alzieni, 2022)

This study is among the closest to the current research topic because it addressed MALL's impact on developing listening skill among students within a clear educational context. It gained importance for focusing directly on listening as a main variable and for relying on quantitative and qualitative data, which added greater interpretive strength to its results. The problem was verifying MALL's impact on students' listening skill.

The study showed statistically significant differences in favor of the experimental group and confirmed that MALL clearly contributed to improving students' listening skill. Teacher and student responses also showed positive indicators regarding the effectiveness of this use. This study strongly supports the current research by providing a direct applied model of mobile applications' impact on developing listening.

8. Study: The Use of Mobile Assisted Language Learning (MALL) in Teaching Students' Listening and Speaking

This study addressed MALL's impact on teaching listening and speaking together, giving it particular importance in understanding the mobile phone's role in teaching oral skills. The problem was whether using MALL produces a significant impact on these two skills among learners. Results showed significant differences in favor of the group that learned using MALL, indicating its effectiveness in improving language performance.

This study benefits the current research by supporting the direction that educational applications do not affect only one skill but their effects may extend to a set of interrelated skills, primarily listening. It also confirms that integrating mobile phones into education can be an effective means within the classroom environment, not only outside it.

9. Study: The Use of Mobile Assisted Language Learning in Teaching Students' Listening and Speaking Skills

This study aimed to determine whether using mobile-assisted language learning produces a significant impact on listening and speaking skills among eleventh-grade students during the 2020–2021 academic year. Its importance lies in focusing on listening skill within the MALL framework and relying on an experimental design allowing measurement of performance differences before and after intervention. Results showed a significant impact of MALL use on both skills, with students' performance improving in the group using educational applications compared to the other group.

This study agrees with the current research in its focus on listening and educational applications, and it confirms that mobile phones can be an effective teaching means within schools, not only in self-directed learning outside class.

10. Study: Mobile-Assisted Language Learning on EFL Listening Skill

This study relied on meta-analysis including several previous studies addressing MALL's impact on listening skill among English as a foreign language learner. Its importance lies not in being limited to one sample but in gathering results from multiple studies, making it more comprehensive in estimating the overall impact of mobile learning. The study showed that the overall impact of mobile learning on listening skill was moderate to large, and this educational pattern contributes to improving auditory comprehension and phonological discrimination.

This study supports the current research from two angles: first, it confirms that MALL effectiveness in listening is not an isolated phenomenon but a recurring trend in research literature; second, it provides a strong scientific foundation that can be built upon in studying educational applications as a developmental tool in listening skill.

Table: Commentary on Previous Studies and Similarities and Differences

Aspect of Comparison	Similarities with Current Research	Differences from Current Research
Topic	Most studies agree with the current research in addressing mobile-assisted language learning as a modern approach in language teaching.	Some studies focused on motivation, vocabulary, or speaking, while the current research focuses primarily on developing listening skill.
Importance	Studies share confirmation that educational applications and mobile phones are effective tools in supporting language learning.	The current research adds a more specific applied dimension by linking educational applications directly to listening skill.
Methodology	Most studies used experimental or quasi-experimental design, which agrees with the methodology adopted in the current research.	Some studies were analytical or review-based, while the current research seeks to measure impact fieldally on a specific sample.
Sample	Studies converge with the current research in relying on learners at different educational stages.	Sample sizes and nature differ; some are small, some include teachers and students, while the current research relies on a specific and clear sample.
Results	Most studies showed positive results in favor of using MALL and educational applications.	The current research is distinguished by adding measurement of attitudes and difficulties, giving it greater comprehensiveness.
Scientific Value	Previous studies support the theoretical basis for MALL effectiveness in language teaching.	The current research fills a research gap in the local context by focusing on educational applications in developing listening within a specific educational environment.

General Commentary

Previous studies show general agreement that mobile-assisted language learning represents an effective and influential approach in language teaching, whether regarding motivation, vocabulary, listening, or speaking. Moreover, experimental studies provided direct evidence of MALL effectiveness in improving listening skill among learners, while analytical and review studies supported this direction by showing that the overall impact of this learning pattern ranges from moderate to large. This scientific accumulation indicates that MALL is not merely a technological trend but a promising educational tool if properly employed within an organized instructional design.

Consequently, the current research starts from this scientific foundation to test the impact of educational applications in developing listening skill within a specific framework, with the possibility of expanding to study learners' attitudes and difficulties they face. Thus, the research adds a more precise and clearer applied dimension and works to fill an existing research gap in this field.

Third: Methodology

1. Study Method

This study employed the quasi-experimental method because it is the most suitable for measuring the impact of using educational applications within the framework of mobile-assisted language learning on listening skill. This method was chosen consistently with the nature of previous studies addressing MALL's impact on listening, as the majority of relevant studies relied on experimental or quasi-experimental design and concluded there is a clear positive impact of mobile educational intervention on improving auditory performance.

2. Study Design

The study was based on a quasi-experimental design with two groups:

- **Experimental Group:** Studied listening skill using educational applications via mobile phones.
- **Control Group:** Studied listening skill through the usual traditional method.

A pre-test was administered to both groups to measure listening level before intervention, followed by a post-test after completing the educational program to measure the amount of improvement and attribute it to the impact of educational applications. This design is based on what previous studies followed that compared pre- and post-performance and showed differences in favor of the group using MALL.

3. Study Population

The study population consisted of second-year students in the English Language Department at the Faculty of Arts and Humanities, Al Marij University, during the second semester of the academic year 2025/2026. This population was chosen because students at this stage have passed the preliminary level and possess a linguistic level allowing them to interact with listening activities within educational applications, which aligns with what previous studies indicated: that MALL effectiveness is clearer among learners with average or relatively higher levels.

4. Study Sample

The sample consisted of 40 students, divided into:

- 20 students in the experimental group
- 20 students in the control group

The sample selection ensured that members were in linguistic level and academic age and had not previously used the targeted educational application. Equivalence between the two groups was verified through pre-test results. This size is appropriate for the nature of quasi-experimental studies in language teaching and aligns with what was mentioned in previous studies using medium-sized samples to achieve good statistical reliability.

5. Study Instrument

The study relied on two main instruments:

Listening Skill Test: To measure students' performance level before and after application, consisting of 20 diverse items including general comprehension, extracting information, distinguishing between details, and determining meaning from context.

Learners' Attitudes Questionnaire Toward Educational Applications: Consisting of 25 statements distributed across three axes:

- Ease of use
- Educational benefit
- Motivation and acceptance toward learning via mobile phones

A short semi-structured interview was also added with several students after completing the application to quantitatively interpret results more deeply, which aligns with the mixed approach used by some previous studies.

6. Educational Intervention

An educational program based on educational applications via mobile phones was implemented to develop listening skill in the experimental group. The program lasted 6 weeks with two sessions weekly, totaling 12 educational sessions. The sessions included:

- Listening to short audio clips
- Repeated listening more than once
- Answering direct comprehension questions
- Immediate interactive activities within the application
- Feedback after each activity

The control group studied through the usual traditional method inside the classroom without using educational applications. This intervention was consistent with what previous studies recommended, confirming that MALL effectiveness appears clearly when use is organized and based on specific activities.

7. Implementation Procedures

The study went through the following procedures:

1. Selecting the sample and dividing it into two equivalent groups
2. Administering the pre-test to both groups
3. Implementing the educational program with the experimental group using educational applications
4. The control group continuing learning through the traditional method
5. Administering the post-test to both groups
6. Distributing the questionnaire to members of the experimental group after completing the application
7. Conducting short interviews with several students to analyze their attitudes and difficulties
8. Analyzing data statistically and qualitatively to extract results

8. Instrument Validity and Reliability

The listening test and questionnaire were presented to five referees from professors of curricula and English language teaching methods to verify content validity and item phrasing. The two instruments were also applied to a pilot sample of 10 students outside the main study sample to calculate reliability. Reliability was calculated using Cronbach's alpha coefficient, while validity was achieved through refereeing and reviewing the extent to which items represent specified objectives. These steps align with the methodological controls emphasized by previous studies when employing questionnaires and tests in educational research.

9. Data Analysis Methods

The following methods were used in data analysis:

- Arithmetic means
- Standard deviations
- Independent samples t-test for comparing between the two groups
- Related samples t-test for comparing pre- and post-test within the same group
- Effect size to measure the strength of educational intervention
- Percentages and means for questionnaire analysis

- Thematic analysis for short interviews

These methods were chosen because they are most suitable for the nature of data obtained from the quasi-experimental design and because they allow measuring and interpreting differences in a precise scientific manner.

Fourth: Results Extracted from Previous Studies

Previous studies addressing mobile-assisted language learning (MALL) show that this educational direction has gained increasing attention as one of the modern approaches seeking to develop language learning through investing mobile devices' capabilities and educational applications. It became clear from these studies that the results achieved by MALL are not limited to one aspect of learning but extend to include language achievement, motivation, attitudes toward learning, autonomy, in addition to improving some micro language skills, primarily listening skill. These results gain particular importance given that listening is one of the skills requiring repeated and organized exposure to audio input, which educational applications on mobile phones provide in a flexible and interactive manner.

1. Results of Studies Related to Listening Skill

The most prominent finding revealed by previous studies is that using educational applications within the MALL framework often leads to clear improvement in listening skill among learners. The study "Mobile Learning Apps for Language Listening Skill," conducted on 20 IELTS learners, showed that listening training via mobile applications for three weeks contributed to raising performance level in the post-test compared to the pre-test, accompanied by increased learner motivation toward practicing listening through mobile phones. This result indicates that educational applications do not provide merely audio content but create a learning environment enabling students to repeat, review, and progress gradually in comprehension—elements essential in developing listening.

The study "Applying MALL to an EFL Listening and Speaking Course" also supported this result, relying on an action research approach within an English course. Results showed that learners' performance in listening skill improved significantly after implementing MALL activities throughout a full semester, where t-tests revealed statistically significant differences between pre- and post-results. It is noteworthy that the improvement was not transient or time-limited but accompanied by continuous and organized practice, reinforcing the idea that listening requires repeated training supported by a flexible medium like mobile phones.

In the study "The Effects of Mobile-Assisted Language Learning (MALL) on EFL Learners' English-Listening Performance and English-Listening Anxiety," it was found that the experimental group achieved improvement in listening test scores, while the control group remained at a level close to their pre-performance. This result clarifies that MALL not only contributes to developing auditory performance but may also help reduce listening-related anxiety, an important factor because anxiety often hinders auditory processing and affects comprehension. Thus, this study provides an important addition because it connects cognitive improvement with affective improvement simultaneously.

2. Results Related to Attitudes and Motivation

Previous studies show that the positive impact of mobile learning is not limited to direct language performance but extends to learners' psychological attitudes and motivation. The study "Mobile Learning Apps for Language Listening Skill" showed that students not only achieved improvement in listening but also exhibited a significant increase in motivation toward using smartphones in language learning. This

result is very important because motivation represents a decisive factor in continued interaction with the educational application, eagerness for listening activities, and consistency in training outside class.

The study "Applying MALL to an EFL Listening and Speaking Course" also showed that learners expressed positive attitudes toward using mobile applications in learning listening and speaking, where their reflective responses indicated that learning via mobile phones gave them a greater sense of control over their learning and helped them complete listening assignments carefully under teacher supervision. This result confirms that MALL's value is not confined to presenting content but in building a learning experience where the student feels an active partner, not merely a passive recipient.

In the same context, some literature indicates that learners view educational applications as more flexible, easy, and suitable tools for learning time, which enhances motivation and reduces the pressure accompanying some classroom activities. Thus, motivation-related results represent a complementary element for understanding MALL's impact in teaching listening, because success in this skill does not depend on cognitive abilities alone but also on psychological readiness to interact with audio content.

3. Results Related to General Language Achievement

In addition to listening-related results, other studies showed that MALL contributes to improving general language achievement. The study "A Meta-Analysis on Mobile-Assisted Language Learning Applications" clarified that the overall impact of mobile language applications was moderate to large on educational outcomes, indicating that this learning pattern is not marginal but can make a tangible difference in learning outcomes. Although this analysis included multiple skills, it provides strong support for the idea that educational applications possess actual ability to improve language performance when used in a sound educational manner.

The study "The Effect of the Use of Mobile Learning Applications on Students' Listening Skills" also found that learners who used educational applications in learning listening achieved improvement in their language skills and demonstrated a better level of participation and achievement compared to traditional methods. This trend reinforces the idea that MALL is not limited to one educational material but creates a broader learning environment allowing multiple skills to be built simultaneously, especially when listening is coupled with verbal, reading, and interactive activities.

4. Results Related to Educational Design Effectiveness

One of the notable results in previous studies is that MALL effectiveness is not produced by the mere existence of the mobile phone but by the method of its educational employment. Some studies indicated that mobile learning is more impactful when it includes clear short activities, immediate feedback, graduated difficulty, and teacher supervision. This explains why results may differ between one study and another; educational applications are not equal in quality, and not all are designed for advanced educational objectives. Some studies clarified that the positive impact becomes stronger when learning is integrated within an organized, goal-specific plan, not when applications are used randomly or individually without guidance.

The study "The Impact of Mobile Assisted Language Learning (MALL) on English Listening Skills" highlighted that MALL effectiveness was associated with the existence of an organized educational program, continuity in use, and integration between the application and classroom activities. This shows that purposeful educational employment is what transforms the mobile phone from a general tool into an effective educational medium. It also explains the positive results appearing in several studies: MALL is

not a substitute for the teacher but a supporting tool that enhances their work and expands learning opportunities for students.

5. Results Related to Anxiety and Autonomy

One of the important aspects addressed by some studies is that MALL may contribute to reducing anxiety related to learning listening. The study "The Effects of Mobile-Assisted Language Learning (MALL) on EFL Learners' English-Listening Performance and English-Listening Anxiety" showed that improvement in auditory performance was also associated with a relative decrease in language anxiety, meaning that the mobile environment provides the student with a degree of psychological safety and privacy not always available in traditional classrooms. This result is of great value because listening anxiety is one of the known obstacles in foreign language teaching and often affects comprehension, speed, and response.

Some studies also confirmed that educational applications enhance learner autonomy because the student can review material anytime, repeat activities, and track their own progress. Learners in several studies indicated that using applications gave them a greater sense of control over learning and enabled them to train according to their own rhythm. This dimension is among the most important educational results of mobile learning because it aligns with modern trends viewing the learner as an active partner in constructing knowledge.

In light of the above, it can be said that previous studies agreed clearly that mobile-assisted language learning represents an effective approach in language teaching, particularly in developing listening skill. They also agreed that this impact is not limited to language achievement but extends to motivation, positive attitudes, autonomy, and anxiety reduction. These results confirm that MALL success is associated with the degree of its educational organization, the suitability of accompanying activities, and its ability to provide a flexible and interactive learning environment.

Consequently, the current study starts from this research accumulation to test the impact of educational applications in developing listening skill and builds its results on the positive indicators previous studies reached that support this direction. Thus, this section does not content itself with presenting what studies accomplished but also prepares the logical and research foundation for transitioning to the field study.

Fifth: Summary of General Results

The results reached by previous studies can be summarized in four main points. **First**, mobile-assisted language learning (MALL) and educational applications achieve noticeable improvement in listening skill when used within an organized educational program. **Second**, these applications enhance motivation and positive attitudes toward learning, which supports continued practice and interaction. **Third**, MALL effectiveness increases when educational activities include graduated difficulty, immediate feedback, and clear educational supervision. Fourth, positive results are not limited to achievement but extend to reducing anxiety, developing autonomy, and enhancing learners' self-confidence.

Accordingly, the current study is based on a clear knowledge base confirming that educational applications within the MALL framework possess real potential to contribute to developing listening skill. However, this potential depends on design quality, content suitability, sample nature, and method of use, which makes studying this impact in a specific context important and necessary. Thus, the current study is not merely a repetition of previous results but an attempt to verify these results in a particular educational environment, with focus on listening as a core skill in foreign language learning.

Sixth: Conclusion and Recommendations

Previous studies show that mobile-assisted language learning has become one of the modern educational directions that received wide attention in the language teaching field for the flexibility it provides in accessing content, multiplicity of media, and high capabilities for interaction, repetition, and self-directed training. It became clear through the presented results that educational applications do not represent merely an auxiliary technical tool but form an integrated learning environment that can contribute to developing listening skill in particular if employed within an organized and planned educational framework. Studies also showed that the impact of this employment extends beyond the cognitive dimension to other dimensions such as motivation, positive attitudes, self-confidence, and autonomy in learning, which gives this type of learning high educational and pedagogical value.

In light of the above, it can be said that the results revealed by previous studies agree in overall that educational applications within the MALL framework possess real potential to improve language learning outcomes, especially listening skill, provided that these applications are suitable for learners' level, used within a clear educational plan, and accompanied by teacher guidance and continuous follow-up. Studies also clarified that success in this field does not depend on the mere existence of the mobile phone but on content quality, activity nature, regularity of use, and clarity of educational objectives. Thus, this research topic gains importance for continuing to build knowledge in this field and testing an educational impact directly related to the reality of modern education.

Recommendations

1. The necessity of integrating educational applications into English language teaching, especially in developing listening skill, as an effective supporting tool for traditional classroom teaching.
2. Designing digital listening activities that consider graduated difficulty, allow repeated listening, and provide immediate feedback to learners.
3. Training teachers on how to employ educational applications within the educational process in a way that achieves desired linguistic and educational objectives.
4. Encouraging learners to practice listening outside class through organized educational applications, which enhances self-directed learning and autonomy.
5. Selecting high-quality educational applications that match learners' level and needs and avoiding random, unguided use.
6. Conducting subsequent studies addressing MALL's impact on developing other language skills such as speaking, reading, and vocabulary, and comparing their results with listening skill.
7. Implementing field research in different educational contexts to verify the generalizability of this type of learning results to diverse samples and environments.

This study also recommends that future research be built on deeper designs combining quantitative and qualitative aspects to understand MALL's impact more comprehensively—not only in terms of achievement but also in terms of the educational experience itself. Longitudinal studies tracking listening skill development over longer periods are also recommended, as well as studies comparing different types of educational applications to identify the most effective ones. It is also useful for upcoming research to address intermediate factors such as motivation, anxiety, and autonomy as variables that may partially explain the impact of educational applications in language learning.

It becomes clear from all the above that mobile-assisted language learning represents a promising approach in language teaching, and educational applications can contribute effectively to developing listening skill if used according to clear educational foundations. Moreover, the results presented by

previous studies provide sufficient scientific support for continuing research in this field and confirm that organized investment in technology can achieve real educational value, especially when the goal is developing basic language skills requiring continuous practice and repeated exposure to language.

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