

Using an Artificial Intelligence Application Based on Integrating Social-Emotional Learning in Developing EFL Listening

Using an Artificial Intelligence Application Based on Integrating Social-Emotional Learning in Developing EFL Listening and Speaking Skills of Faculty of Education English Majors

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Abstract

The present study aimed at using an artificial intelligence application based on integrating social-emotional learning in developing some listening and speaking skills of first year English majors. A quasi-experimental pre-post control group research design was used to achieve the study objectives. Sixty students from the Faculty of Education first year English majors were randomly chosen and divided into two intact groups: the experimental and the control groups. The experimental group students were trained using an artificial intelligence based mobile application to develop their EFL listening and speaking skills. The control group students were taught the same content through the regular method of teaching. The instruments of the study included two needs assessment questionnaires to determine the EFL listening and speaking sub skills that are mostly needed by first year English majors, a pre-post EFL listening skills test, and a pre-post EFL speaking skills test. Analysis of data obtained by students (using t- test) revealed that the experimental group significantly surpassed the control group in the post-performance of the tests. Discussion of these findings, recommendations and suggestions for further research are presented.

Keywords: Artificial intelligence applications, listening and speaking skills, Social-emotional learning

استخدام احدى تطبيقات الذكاء الاصطناعي القائم على دمج التعلم العاطفي الاجتماعي في تنمية مهارات الاستماع و التحدث لدى طلاب الفرقة الاولى المتخصصين في اللغة الانجليزية

المستخلص

هدفت الدراسة الحالية إلى استخدام أحد تطبيقات الذكاء الاصطناعي في إنشاء تطبيق جوال معتمد على دمج التعلم العاطفي الاجتماعي وقياس أثره في تنمية مهارات الاستماع و التحدث لدى طلاب الفرقة الاولى المتخصصين في اللغة الانجليزية .حيث تم استخدام المنهج شبه التجريبي ذو المجموعتين (ضابطة- تجريبية)، وقد تم إجراء تجربة الدراسة على عينة قدرها (60) طالب من طلاب الفرقة الأولى المتخصصين في اللغة الانجليزية بكلية التربية. و قد تمثلت أدوات الدراسة في استبانتيين واحدة لمهارات الاستماع و الاخرى لمهارات التحدث في اللغة الإنجليزية كلغة أجنبية لتحديد أهم مهارات الاستماع و التحدث المطلوبة لطلاب الفرقة الاولى و اختبارقبلي و بعدي لقياس مهارات الاستماع و اختبارقبلي و بعدي لقياس مهارات التحدث، وقد أظهرت النتائج فعالية استخدام التطبيق كأحد تطبيقات الذكاء الاصطناعي في تنمية بعض مهارات الاستماع والتحدث لدى طلاب الفرقة الأولى، وقد أظهرت تحليل نتائج الدراسة فاعلية استخدام تطبيق الموبايل القائم على الذكاء الاصطناعي في تنمية مهارات الاستماع و التحدث في اللغة الإنجليزية لدى طلاب المجموعة التجريبية .و قد تم عرض النتائج و مناقشتها . كما اشتملت الدراسة على أهم التوصيات و المقترحات لبحوث مستقبلية

الكلمات المفتاحية: تطبيقات الذكاء الاصطناعي، مهارات التواصل الشفهي ، التعلم العاطفي الاجتماعي

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Introduction

English language is one of the most crucial tools for communication and interaction. Nowadays, integrating digital technologies in teaching and learning the English language has become an important issue. This shift has notably altered the roles of teachers and students. It also helps teachers use more recent and modern methods and techniques in teaching their students.

Linguistic communication, with its four skills (listening- speaking-reading -writing), is a process by which meanings and ideas are conveyed among people. Language learning requires acquiring receptive or passive skills (listening and reading) and productive or active skills (speaking and writing). In receptive skills, students receive and process the information but do not need to produce a language to do this. The four language skills should be incorporated to help students have a good command of the English language. The connection between these skills is a complex one, with one set of skills naturally supporting another (Ahmed, 2018, Alodwan & Almosa, 2018, Diab, Abdel-Haq & Aly, 2018,, Zahran, 2018).

Listening and speaking skills represent the most important elements of the communicative process, as they are the basis of interaction between individuals. Language is primarily auditory and oral. The use of listening and speaking skills in teaching the English language has become a basic requirement for teaching advanced courses that impose different roles on students in facing challenges to achieve the vision of Egypt 2030, which requires a conscious generation capable of facing challenges and absorbing developments.

Many conferences have emphasized the importance of learning and mastering English language skills, among which were the conference on the Importance of the English Language in the Humanities at Yarmouk University (2022), the First Saudi international conference for teaching the English Language at King Abdulaziz University (2020) and the UNESCO conference in Beijing (2019). English is the language of communication with the surrounding world and it is the linguistic medium for transferring civilizations and cultures and instruction among peoples. It is a requirement for exchanging knowledge and experiences in a world that has become a small village

due to the presence of modern technologies, including applications of artificial intelligence (AI).

The proficiency of English majors in listening and speaking skills contributes greatly to their interaction and motivation for learning. The development of English language courses in all stages of education has led to fundamental changes in the classroom environment and the roles of teachers and students. The most important of these is the development of listening and speaking skills. Despite the importance of teachers' use of these skills, it is noted that there is still a clear deficiency in the students' level of proficiency which negatively affected their learning and mastery of the English language.

Listening, as a receptive skill, is the skill of understanding spoken language and is very important in learning any language. It is an interactive complex process where the learners interpret what they know and what they hear. It involves decoding and constructing meaning from verbal and non-verbal messages. Listening, as an essential skill, is present in most of the activities we carry out throughout our lives, as Lindsay and Knight show: We listen to a wide variety of things, for example; what someone says during a conversation, face to face or on the telephone; announcements giving information, for example, at an airport or railway station; the weather forecast on the radio; a play on the radio; music; someone else's conversation (eavesdropping); a lecture; professional advice, for example, at the doctor's, in the bank; instructions, for example, on how to use a photocopier or other machinery; directions; a taped dialogue in class (2006: 45).

Besides, listening is a complex process due to its double psychological and social nature: Listening is a psychological phenomenon, that takes place on a cognitive level inside people's heads, and a social phenomenon, that develops interactively between people and the environment surrounding them. It considers listening as a complex process, which needs to be understood to teach it, and subsequently, evaluated before integrating it with phonological aspects and speaking skills (Bueno, Madrid & McLaren, 2006:282).

The aim of teaching listening is (or should be) to help learners of English cope with listening in real life, but there is a large variety of

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different types of listening in real life: (1) Listening to announcements in stations, airports, etc (2) Listening to the radio, (3) Participating in a conversation face-to-face, (4) Watch TV, (5) Participating in a meeting, seminar or discussion, (6) Taking part in a lesson, (7) Participating in a telephone conversation, among others. This process requires engagement in a variety of complicated tasks that range between discriminating sounds and a full understanding of the speaker's message (Mohammadali & Negin, 2014).

According to Nunan, (2001: 23) Listening is a six-staged process, consisting of hearing, attending, understanding, remembering, evaluating, and responding. These stages occur in sequence and rapid succession. When teachers are teaching listening, apart from the purpose, it is very important to follow a pattern. Bueno, Madrid, and McLaren (2006) established the following pattern: 1) Pre-listening would be the first stage, where the context is established. The teacher creates motivation and students do some activities to prepare them for what they will hear. 2) The following stage is listening, where learners do the mentioned tasks or find answers. 3) The last stage is post-listening, the part where students have the opportunity to check their answers about, what they have been listening to, give feedback, and consolidate what they have learned.

Because of the importance of EFL listening skills, as one of the receptive skills, various studies were conducted to develop it at the university level such as Abu El-Magd (2015), Chen (2015), Kim (2017), Mahran (2017) and MohyAldin & Omer (2018). Thus, it can be concluded that EFL listening skill is an important variable that should be developed among prospective teachers.

Many studies discussed the problem of students' oral language skills in Egyptian schools. For example, Abdullah (2008:46-47) studied some difficulties that teachers and learners encounter in teaching and learning English in Egypt. For example, it was difficult for EFL learners to speak a foreign language, the teaching conditions were not suitable, the teaching methods could hinder learners' oral ability, and students had passive attitudes towards English. Besides, they were reluctant to participate in the speaking activities in the classroom, there

are psychological factors that may passively influence the students' performances in speaking

Al-Ghamdi's study (2017) also showed that the student's level was medium in speaking skills, and weak in listening skills. Similarly, a study by Mosa and Kazi (2017), indicated the importance of English language students being able to master listening and speaking skills, as well as the importance of making the most of artificial intelligence applications in education.

Likewise, Al-Sharif (2019) indicated that there was a clear deficiency in the performance of English language students in using listening and speaking skills. The study by Khasawneh (2021) aimed to identify the degree of practicing effective communication skills among teachers of learning disabilities in the English language from their point of view. Results showed that the degree of practicing effective communication skills by teachers was high. As such, the researcher recommended increasing the activation of the use of effective communication skills for teachers.

Teachers can assist learners in mastering various strategies for effective listening. By teaching students how to plan for listening tasks, monitor comprehension, and assess performance, educators enable students to take greater responsibility for their learning. Listening is a complex skill crucial for developing foreign language proficiency. Skilled listeners can understand both the speaker's thoughts and the content of the message. Hence, the ability to comprehend spoken language develops through repetition and imitation, encompassing the immediate understanding of the speaker's accent, pronunciation, grammar, vocabulary, and meaning (Rafie & Nasiri, 2016; Molavi & Kuhl, 2018).

In summary, listening is a multifaceted process involving various sub-skills. Alkhili (2018) identified the essential listening skills for foreign language learners as follows:

The following are some listening skills

- listening for detailed information
- predicting and listening for gist
- predicting and listening for specific information
- listening for context

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- listening for general information
- predicting, and listening for text construction.

Miranda and Wahyudin (2023) stated that speaking skills are among the most crucial skills we acquire, as they enable us to communicate with others and express our thoughts and emotions. Speaking is one of the most challenging skills for language learners to master. It is a productive skill often regarded as the most essential among the four language skills. A common frustration voiced by learners is that despite years of studying English, they still struggle to speak it. Speaking skills can be divided into formal and informal categories, and we utilize both types in various contexts throughout our daily lives.

Additionally, the primary goal of learning a foreign language is to enable meaningful and effective communication both inside and outside the classroom. In foreign-language situations, choosing to communicate or not may be one of the most important decisions a person can make. Language serves as an essential tool for humans to convey thoughts, share emotions and ideas, exchange information, and build networks. Learning a language and communication are closely connected. It is widely accepted that one needs to speak to learn. (Kilag, Pasigui, Malbas, Manire, Piala, Araña, & Sasan, 2024).

Given the growing focus on authentic communication as a vital aspect of learning and teaching, the willingness or readiness to communicate has been suggested as a central concept in learning and instruction. Bukhari, Cheng, and Khan (2015) noted that the desire to engage in discourse at a specific time with certain individuals using a foreign language is critical. Consequently, due to the significance of communication, numerous researchers have conducted studies to enhance speaking skills at the university level, such as Aliakbari, Kamangar, and Khany (2016), Alikhani and Bagheridoust (2017), Papin (2018), Ma, Wannaruk, and Lei (2019).

The following are some speaking skills

- listening and responding to teachers and classmates
 - building vocabulary
 - using spoken language to express feelings, give explanations, and describe
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- asking questions to increase their understanding
- participating in drama, conversations, role play, discussions and debates
- understanding formal and informal speech
- listening and understanding different points of view
- holding the attention of the listener
- interacting with others and information processing
- interacting with others using suitable lexis and grammar
- listening and then responding appropriately to others.
- asking relevant questions to extend understanding and knowledge
- articulating and justifying answers, arguments, and opinions
- giving well-structured descriptions, explanations, and narratives for expressing feelings.
- maintaining attention and participating actively in collaborative conversations, staying on topic, and initiating and responding to comments
- using spoken language to develop understanding through speculating, hypothesizing, imagining, and exploring ideas
- speaking audibly and fluently with an increasing command of Standard English
- participating in discussions, presentations, performances, role plays, improvisations, etc.
- gaining, maintaining, and monitoring the interest of the listener(s)
- considering and evaluating different viewpoints, attending to and building on the contributions of others
- selecting and using appropriate registers for effective communication.

Lobachova (2018) provided several useful suggestions for improving English-speaking skills:

- **Learn vocabulary within expressions:** While it is beneficial to learn new words and their pronunciations, it is often more useful to learn them in the context of expressions or phrases.
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- **Focus on pronunciation:** Acquiring a large vocabulary can enhance English skills, but if the words are not pronounced correctly, communication can easily be misunderstood.
- **Understand the flow of English:** For ESL students, it is crucial to get accustomed to the natural flow of spoken English, as it often differs significantly from their native language.
- **Practice self-talk:** Encourage students to practice speaking English to themselves out loud.

Artificial intelligence (AI) applications and language learning

Recognizing the opportunities and challenges that artificial intelligence (AI) brings, it is essential to explore what AI currently offers and its potential future applications in education. AI applications are among the contemporary technologies widely adopted in education, as they emulate human intelligence by making data-driven decisions. These applications are significant due to their foundation in theories, methodologies, techniques, and simulation systems, all characterized by their modernity and adaptability.

As a result, AI enhances learning opportunities, fostering creativity and innovation, which are crucial for achieving educational goals (Ghoneim & Elghotmy, 2021). Through AI, students gain access to authentic language materials and take greater responsibility for their learning within a meaningful context (Ahmadi, 2018; Murphy, DePasquale, & McNamara, 2003; Parvin & Salam, 2015; Pourhosein Gilakjani, 2017).

Using the mobile model

Incorporating mobile technologies in education impacts learner motivation, collaboration, information sharing, mobility, and interactivity, thus creating opportunities for both learners and teachers. Some significant benefits of mobile learning include enabling data and information collection, enhancing and building knowledge, and offering necessary support by integrating work activities and students' learning experiences. Researchers and educators are actively exploring the potential of mobile technologies to enhance the learning process by suggesting models and frameworks for mobile learning projects (Poçan, Altay & Yaşaroğlu, 2023).

In light of the endless global trends, mobile environments, such as smartphones, tablets, and related applications, are crucial for learners across various cultural, educational, economic, and social backgrounds. Technology has significantly altered communication methods used by teachers and students, presenting a challenge for teachers to quickly identify how to integrate it into teaching and learning effectively (Drigas & Pappas, 2015).

Mobile learning technologies have surged in popularity, with many educational institutions integrating these tools into their teaching practices. Mobile devices like smartphones and tablets offer students the flexibility to access course materials at any time and place, fostering active and personalized learning experiences (Kumar & Vig, 2021). For the successful implementation of mobile learning systems, it is crucial to understand the technology's impact on education and current teaching and learning practices. Identifying critical success factors is essential in developing an effective mobile learning strategy. Emerging mobile learning models, informed by new research findings, address stakeholders' concerns and technological challenges. These models and frameworks are valued for their role in better integrating technology with pedagogy and for pinpointing the critical success factors that facilitate successful implementation (Busaidi, Al-Shihi, & Al-Manthari, 2020).

Loveless (2024) noted that mobile models have evolved significantly from being distractions in classrooms to becoming valuable educational tools. These devices offer several benefits, such as enhancing learning outcomes, boosting student engagement, and facilitating easier connections with students. Nevertheless, teachers must ensure that these devices are used appropriately in educational settings. A prime example of mobile technology is the smartphone, which features portability, connectivity, and robust computing capabilities. These attributes make mobile technologies ideal for creating opportunities for flexible and ubiquitous learning (Looi & Toh, 2014).

Artificial intelligence and Listening

Artificial intelligence (AI) speech synthesis technology significantly enhances English listening skills among students by

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offering accurate pronunciation models, clear and natural-sounding speech, interactive and engaging learning experiences, and personalized practice and feedback. By increasing awareness of language-specific phonetic characteristics, AI simplifies repetition, segmentation, and speed control in listening instruction. Technologies like AI boards allow teachers to extract individual sounds and speech passages from audio materials, control playback speed, and add interactivity to listening processes. Learners can combine audio content with additional information via web pages, integrating various media forms (images, text, audio, video, etc.).

With AI boards, students can click on a word to play its audio pronunciation, view its spelling, access dictionary entries, or engage in specific sound-pronounced exercises. Many studies argued that technology- and online-based devices and programs address time limitations and other speaking challenges faced by EFL learners, both inside and outside the classroom (Rahimi & Fathi, 2022; Liu et al., 2024).

Artificial intelligence and speaking

As for speaking, many people do not speak a language accurately, making it sensible to expose learners to various language forms. By using real objects and contexts, learners can articulate language speech features such as overlapping turns, fillers, and false starts. AI boards can provide valuable resources like online television broadcasts, YouTube videos, magazine articles, blogs, and social media, showcasing different dialects and registers of the spoken language (Matielo, D'Ely, & Baretta, 2015).

Numerous studies have validated the effectiveness of AI applications in teaching and learning. For example, Ali (2020) investigated the impact of an AI application on developing oral language skills, specifically listening comprehension and speaking skills, among sixth-year primary school pupils. The research utilized materials and instruments including a checklist of oral language skills, a listening comprehension skills test, a speaking skills test, a teacher's guide, and a student activity book

based on the AI application. The results demonstrated a significant improvement in both listening comprehension and speaking skills due to the integration of the AI application.

Annamalai et.al. (2023) used them in teaching English language skills to university students. Findings showed their effectiveness in improving students' efficiency in English language skills and increasing their ability to self-learn. In addition, Mohamed and Alian (2023) used (AI) in teaching English language skills and knowing their tendency toward using it. The results of the study showed that the use of artificial intelligence applications encouraged students to self-learn English language skills.

Many studies such as Zitouni's (2022), Chen and Len's (2020), and Lemos & Grzes'(2019) have indicated the importance of using artificial intelligence applications in education. All of them recommended the necessity of adopting artificial intelligence applications in education at all levels and the importance of making the utmost potential to improve the quality of learning and teaching.

The current study was concerned with using artificial intelligence applications as recommended by the results of the previous studies to employ these applications in improving the teaching and the learning processes. Accordingly, the idea of the current study was to use a mobile application based on artificial intelligence and measure its effectiveness in developing EFL listening and speaking skills among first-year English majors at the Faculty of Education.

Social-emotional learning theory

In essence, social and emotional learning (SEL) refers to the process through which individuals acquire and apply a range of social, emotional, and related skills, attitudes, behaviors, and values that support students succeed academically and socially. This includes thoughts, feelings, and actions in ways that enable them to succeed in school. Social-emotional learning Theory (SEL) is a methodology that aims at helping students of all ages to better understand and express their emotions, and foster empathy towards others. These learned behaviors are then used to help students make positive and responsible

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decisions; create frameworks to achieve their goals, and build positive relationships with others. (Espelage Rose, & Polanin, 2016)

Social-emotional learning theory (SEL) can play a vital role in developing English majors' listening and speaking skills. It refers to how individuals can develop the required skills to know how to control their emotions, be involved in positive and fruitful communications, make self-responsible decisions, and show compassion towards others. SEL combines many competencies including self-awareness, self-management, social awareness, communication skills, and responsible decision-making (Elmi, 2020).

Literature Review

The Importance of Listening and Speaking Skills

During college, students experience an essential phase of skill development crucial for their future academic and professional pursuits. Among these vital skills, listening and speaking are crucial for effective communication, critical thinking, and fostering meaningful interpersonal relationships. This research aims to highlight the significance of prioritizing the teaching and development of listening and speaking abilities within the faculty of education. Furthermore, it will explore strategies to effectively integrating social-emotional learning principles into language instruction, thereby enhancing students' linguistic proficiency while also fostering essential socio-emotional competencies.

Listening Skills

Listening skills are vital to academic success. When students have strong listening skills, they are better able to understand and retain information presented in lectures, discussions, and reading materials. Effective listening also enhances students' ability to follow instructions, ask clarifying questions, and engage in meaningful conversations. (Ghoneim & Elghotmy, 2021).

Qobilovna, (2023) stated that listening skills are not limited to the academic realm. They are important for building and keeping interpersonal relationships. Listening encourages compassion, understanding, and effective communication. By listening to others, students can develop solid connections, resolve conflicts, and cooperate more effectively. Additionally, listening skills are closely

tied to critical thinking. When students listen, they can analyze and evaluate information, recognize biases, and make informed decisions. By refining their listening skills, students become more discerning consumers of information and develop a deeper understanding of complex issues.

Essentially, listening helps EFL students to successfully interact with the content and context of a spoken message, either face-to-face conversations or audio-visual recordings. Another issue in listening instruction is the deficiency of guidance on how learners can self-direct and evaluate their efforts to improve their listening. Many learners wish to improve their listening by actively participating in class activities and doing homework in the hope that these will help them become good listeners (Córdoba Zúñiga & Rangel Gutiérrez, 2018, Kazu & DemiralP,2017, Li, 2017).

Teaching Strategies for Developing Listening Skills

To foster the development of listening skills in college students, educators can implement various strategies such as: (Al Ghamdy, 2017).

1. Creating an engaging and inclusive environment:

Create a safe space where students feel comfortable expressing their thoughts and ideas. Encourage open dialogue and provide opportunities for students to share their perspectives, fostering a sense of inclusivity and mutual respect.

2. Promoting listening comprehension:

Emphasize the significance of active listening by teaching students techniques such as maintaining focus on the speaker, asking clarifying questions, and summarizing key information. Introduce strategies like note-taking, paraphrasing, and visual aids to facilitate better comprehension during listening activities.

3. Incorporating multimedia resources:

Integrate audio and video materials into lessons to expose students to various accents, speech patterns, and communication styles. By engaging with multimedia resources, students can broaden their understanding of language in different contexts, thereby refining their listening skills and fostering appreciation for diverse perspectives.

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Speaking Skills

Dauber and Spencer (2023) underscored the importance of speaking skills in college education, highlighting their pivotal role in enabling students to express themselves confidently and articulate their ideas effectively. Strong speaking skills contribute to academic success, self-confidence, and future career opportunities. Proficiency in speaking not only enhances academic success by facilitating active participation in class discussions, debates, and presentations but also fosters critical thinking and effective argumentation.

Moreover, strong speaking skills strengthen students' self-confidence and self-expression, empowering them to engage in social interactions, share their opinions, and advocate for themselves, thereby nurturing a positive self-image and overall well-being. Importantly, these skills are highly valued in the professional realm, spanning various careers such as public speaking, sales, leadership, and teamwork. Thus, by honing their speaking abilities during college, students are better equipped to seize future career opportunities.

Teaching Strategies for Developing Speaking Skills

To cultivate speaking skills among college students, educators can utilize the strategies outlined by Al Shereif (2019):

1. Creating a safe and supportive environment:

Establish a positive classroom environment that encourages students to express themselves freely and without fear of judgment. Foster active listening and provide constructive feedback to promote respectful and constructive communication among peers.

2. Promoting effective communication and public speaking skills:

Teach students the foundational aspects of effective communication, including organizing their thoughts, employing appropriate body language, and captivating their audience. Offering opportunities for students to practice public speaking through various activities such as presentations, debates, and group discussions, allows them to refine their speaking abilities in diverse contexts.

3. Incorporating collaborative projects and presentations:

Allocate group projects that require students to work together and present their findings to the class. This not only improves speaking

skills but also encourages teamwork, problem-solving, and critical thinking.

Speaking is an interactive process where information is shared, and if necessary, acted upon by the listener. So, it is central to develop both speaking and listening skills to communicate successfully.

Artificial Intelligence (AI)

Artificial intelligence (AI) is the science dedicated to creating machines capable of mimicking human-like thinking processes, enabling them to perform tasks traditionally associated with human intelligence. AI technologies excel at processing vast amounts of data in ways that surpass human capabilities, with the ultimate goal of simulating human-like pattern recognition, decision-making, and judgment. The versatile and expansive nature of AI applications has revolutionized various domains, particularly education (Rapaport, 2020).

Numerous studies, including those by Zitouni (2022), Ali (2020), Chen & Len (2020), and Lemos and Gizes (2019), highlighted the significance of integrating AI applications into education. These studies advocated for the adoption of AI across all educational levels, emphasizing its potential to enhance learning quality for both teachers and students. By using AI technologies, educators can access innovative tools and methodologies to optimize teaching practices and facilitate personalized learning experiences, ultimately fostering more effective and engaging educational environments.

The Importance of (AI) in Mobile Apps

Artificial Intelligence (AI) plays a significant role in daily life, enhancing user experiences and providing numerous benefits through its well-designed processes. Unlike conventional machines, AI is capable of dynamic responses based on real-time data, making it a key trend in e-learning, mobile app development, and various other sectors such as manufacturing, education, healthcare, and economics.

Artificial Intelligence incorporated in mobile applications helps education by offering personalized learning experiences, adaptive assessments, and intelligent tutoring systems. It accommodates individual learning styles and speeds, making education more accessible and engaging for diverse learners. AI can analyze student

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performance data to provide targeted feedback and recommendations for improvement, fostering continuous learning and mastery. Moreover, AI-powered mobile apps can facilitate collaborative learning, offer virtual classrooms, and enable seamless access to educational resources anytime, anywhere. Overall, AI enhances the effectiveness, efficiency, and accessibility of education through mobile applications.

Artificial Intelligence in mobile applications is a technological innovation that is emerging lately. The existing mobile applications cannot integrate the trend toward Artificial Intelligence that is gaining so much popularity. It can affect the mobile application development process as follows: (Southgate, 2019).

- **Learning:** Artificial Intelligence tools help in making the learning process easier by correcting mistakes.
- **Reasoning:** Artificial Intelligence tools help users use mobile applications effectively and efficiently.
- **Problem-solving:** This technology analyses the reasons behind interactions based on various software applications and machine learning.

Artificial Intelligence tools for mobile app development

By reviewing the literature that dealt with the use of artificial intelligence applications in making mobile applications, there are a range of technical tools that can be used to make such applications as mentioned by: Chen and Lin (2020), and Lemos and Grześ, (2019).

1. **Core ML:** It is an effective machine learning framework, with a simple drag-and drop user interface and top-notch features:
 - It's a special framework that brings machine learning right to your fingertips. It allows the integration of pre-trained machine-learning models into the app.
 - Sound Analysis Framework is used to analyze audio and it is also used to distinguish between sounds like highway noise and bird songs.
 - The use of speech framework enables the identification of speech in a variety of languages in both live and recorded audio.
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2. **Caffe2:** Facebook has created a scalable, adaptive, and lightweight deep learning framework, the Caffe2 project originated at the University of California, Berkeley. It is designed primarily for mobile development and production use cases. Caffe2 gives programmers more creative freedom in creating high-performance apps. The purpose of Caffe2 is to simplify deep learning experiments and to make use of community contributions to new models and methods.
3. **Tensor Flow:** The open-source machine learning platform, Tensor Flow is built on deep-learning neural networks. It uses a common symbol to integrate deep learning and machine learning techniques. Tensor Flow is built on Python, and is used to run mobile apps. More individuals can create innovative mobile applications based on AI-powered accessible designs. It is an open-source AI library that builds models using data flow graphs. Understanding, prediction, categorization, discovery, creativity, and perception can all be accomplished with Tensor Flow. The design of this framework enables computing on any GPU or CPU. It works with a PC, server, or even a mobile device. For more advanced machine learning models Google uses Tensor Flow for Rank Brain and Google Translate.
4. **Open CV:** Both Android and IOS applications include Open CV. It is a free, cross-platform, and open-source toolkit that is used to create real-time computer vision applications. Additionally, it supports the deep learning frameworks Poarch and TensorFlow. Open CV's primary goal is to create a uniform infrastructure for computer vision applications. Open CV advances the adoption of machine learning.
5. **ML Kit: Google's Top-Notch** Artificial Intelligence Tool; It enables programmers to create intelligent IOS and Android applications.

As far as the current study is concerned, no mobile applications are using artificial intelligence that has been built on social-emotional learning theory. In this study, the Core ML tool was used as an artificial intelligence application, as it is the most appropriate tool for creating a mobile application to develop students' listening and

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speaking skills. It was also suitable for achieving the objectives of the study.

Many studies have used artificial intelligence applications in developing English language skills, such as the study by Annamalai et al (2023) in teaching English language skills to undergraduate students. The results of the study showed its effectiveness in improving students' efficiency in English language skills and increasing learning ability. Self-learning, and the study of Mohamed & Alian (2023) in teaching English language skills and knowing their tendency towards using it. The results of the study showed that the use of artificial intelligence applications has encouraged students to self-learn English language skills.

Hosam (2024) also aimed to identify the effect of some proposed activities based on artificial intelligence applications on enhancing English language skills among female secondary school students. A one-group design was used through applying (pre/posttests). The sample was selected randomly from (74) female students enrolled in 1st year secondary school for girls. The results showed that there are statistically significant differences at (0.05) level between the mean scores of the research sample in both the pre-and post-application of the reading and writing skills performance test, favoring the post-application. The effect size of the independent variable was significant.

In addition, Annamalai and Others (2023) conducted a study that applied self-determination to understand 25 undergraduate students' motivation to learn English via chatbot. The data gathered from interviews were categorized into three emotional needs of learners: autonomy, competence, and relatedness. The findings revealed that chatbots support competence, autonomy, and relatedness. However, they also revealed that chatbots lack emotion. Generally, the current study adds to the body of knowledge on chatbots and English language learning by highlighting their potential as useful teaching aids and providing guidance for researchers, educators, and developers on how to further improve chatbot-based language learning.

Hashmi et.al. (2023) adapted the Push-Pull Mooring-Habit (PPMH) theoretical framework. This mixed-methods study examined Malaysian university students' experience in using Chatbots for English language learning, focusing on four main aspects; Performance Expectancy, Effort Expectancy, Social Isolation, and COVID-19 fear. The sample of the study was 360 undergraduate students from three public universities in Malaysia. They completed the questionnaire after being engaged with chatbots for three months. Analysis of data revealed that both Performance and Effort Expectations contributed to the positive experience of using Chatbots for language learning. In contrast, Social Isolation contributed as the Push Factor in using Chatbots for language learning. Despite the students' disagreements with the social influence of Chatbots on their behavioral intentions, Chatbots are still considered helpful to serve as an interlocutor for English language learning.

Wei (2023) investigated how advances in artificial intelligence will shape e-learning in the coming decades, particularly in terms of Chat-GPT's ability to improve learners' Communicative Competence when English is a second language. The combination of new trends in artificial intelligence, mainly in the case of English as a second language, and, at the academic level, chatbot technology will be the next step in the replacement of the human academic community by virtual assistants. Despite the controversy, this very innovative solution will be able to bridge the gap between technology and education. Moreover, such innovative practices facilitated communication by including it in various applications, including virtual assistants, chatbots, and language education.

Gaiazova (2023) focused on chatbots' application in the educational domain, precisely in learning foreign language. The project's goal was to create a prototype designed to improving learners' English speaking skills by engaging them in conversations on a specific topic. The chatbot would provide Corrective Feedback (CF) on mistakes made during these interactions. The prototype, developed using the RASA Framework, integrated various Natural Language Processing tasks including automatic Grammar Error Correction and Question

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Generation. The presented version of the chatbot was capable of detecting errors made by learners and presenting immediate implicit CF in the form of incorporated interrogative recast.

Ali (2020) aimed to investigate the effectiveness of using an artificial intelligence application to develop oral Language skills (listening comprehension and speaking skills) of sixth-year primary school pupils. The research followed the quasi-experimental research design of two groups. Twenty pupils were selected as the experimental group and another (20) as the control group. The materials and instruments of the research were: a checklist of the oral language skills, a listening comprehension skills test, a speaking skills test, a teacher's guide, and a student's activity book based on using the artificial intelligence application. The results of the study showed the statistically significant impact of integrating the artificial intelligence application on developing listening comprehension and speaking skills.

Han (2020) examined the effects of voice-based Artificial Intelligence (AI) chatbots on Korean EFL middle school students' speaking competence and their related affective domains: level of interest, belief, motivation, and perceived anxiety. The participants of the study were 44 freshmen students. The students were divided into one control group and one experimental group. During the ten-week experimental period, the students were engaged in 10 chat sessions with the voice-based AI chatbot 'Echodot.' To investigate the effects on the students' speaking competence, they took the NEAT speaking test as pre-post-tests. As for the affective factors, structured questionnaire surveys were conducted before and after the treatment to find out if there were any changes in their affective domains. Findings revealed that the AI chatbot effectively contributed to an improvement in speaking ability among EFL students. Accordingly, the study suggested that EFL teachers should try to integrate AI chatbots into their classrooms.

Kim (2019) aimed to explore the effects of using artificial intelligence chatbots on enhancing Korean college students' English

grammar skills. Seventy undergraduate students participated in the current study. They were taking a General English class offered by a university in Korea. There were two groups in this study. Participants in the chatbot group contained 36 students while those in the human group were 34. Over 16 weeks, the chatbot group involved in ten chat sessions with a chatbot while the human group had a chat with a human chat partner. Both pre-and post-tests were performed to examine changes in the participants' grammar skills over time. To compare the improvement between the two groups, an independent t-test was then run. The findings showed that: participants in both groups significantly enhanced their English grammar skills, indicating the beneficial effects of engaging in chat. Also, there was a statistically significant difference between the chatbot and human groups, indicating the superior effects of the chatbot use. This study confirmed the improved grammar skills of the participants in the chatbot group, compared with those in the human group.

Besides, many studies have assured the effectiveness of using artificial intelligence applications in the teaching and learning processes. Ali (2020) aimed to investigate the effectiveness of using an artificial intelligence application to enhance oral Language skills (listening comprehension and speaking skills) of sixth-year primary school pupils. The research followed the quasi-experimental research design of two groups, where (20) pupils were selected to represent the experimental group and (20) to the control group. The materials and instruments of the research were: a checklist of the oral language skills, a listening comprehension skills test, a speaking skills test, a teacher's guide, and a student's activity book based on using the artificial intelligence application. The result showed the significant impact of integrating the artificial intelligence application on developing listening comprehension and speaking skills.

The Social-Emotional Learning Theory

In an increasingly diverse world, classrooms are where students first encounter individuals from various backgrounds, with different beliefs and unique skills. To address these differences and ensure all students have an equal opportunity to succeed, social and emotional learning

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(SEL) aims to help students better understand their thoughts and emotions, become more self-aware, and develop more empathy for others within their community and the world around them. Enhancing these qualities in the classroom helps students become more productive, self-aware, and socially conscious citizens outside of the classroom in the years ahead. The significance of social emotional learning extends beyond the classroom, offering benefits that impact all areas of life (Elmi, 2020).

Integrating Social-Emotional Learning into Teaching Listening and Speaking Skills

Social-emotional learning (SEL) plays a vital role in developing listening and speaking skills in college students. It includes five core competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Educators can enhance students' emotional well-being and interpersonal skills by incorporating SEL into language instruction. When students become more self-aware, they gain better control over their listening and speaking habits. They can be able to identify areas for improvement and actively work on enhancing their communication skills. (Hulvershorn & Mulholland, 2018)

Self-management skills enable students to control and regulate their emotions, thoughts, and actions in various situations, maintain focus, and actively participate in listening and speaking activities. Moreover, social awareness helps students understand and empathize others' viewpoints, put themselves in the shoes of another person who may be from a different background or culture from the one they grew up with, and act with empathy and an ethical manner within their home, school, and community. Relationship skills, such as active listening, conflict resolution, and collaboration, are essential for effective communication and positive interpersonal relationships. These skills emphasize the importance of listening to and being able to communicate with others, peacefully resolving conflict, and knowing when to seek or offer help. (Durlak, 2015)

Finally, responsible decision-making allows students to make ethical choices in their communication, considering the impact of their words

on others. By integrating SEL into language lessons, educators can create a supportive environment that promotes emotional intelligence, empathy, and effective communication.

Practical Strategies for Integrating Social-Emotional Learning into Language Lessons

According to the theoretical framework and previous studies, there is a set of strategies that integrate social-emotional theory that can be used in language teaching (Espelage, Rose & Polanin, 2016). These strategies include:

1. **Incorporating reflective practices:** The activities allow students to reflect on their listening and speaking skills, recognize their strengths and areas needing improvement, and set personal growth objectives. They also encourage self-reflection through journaling, group discussions, and individual meetings.
2. **Teaching and modeling active listening:** Clearly, this involves teaching students active listening techniques, such as keeping eye contact, asking open-ended questions, and summarizing main points. Modeling these skills during classroom discussions and giving students feedback on their listening behaviors is also helpful.
3. **Promoting a culture of empathy and respect:** Designing activities that encourage students to understand and appreciate diverse perspectives. Empathy can be achieved through role-playing, storytelling, and discussions about cultural differences. It is important to encourage students to listen actively and respond respectfully to their peers.

Commentary

Listening and speaking skills are essential for college students' academic success, interpersonal relationships, and future career opportunities. By prioritizing the teaching and development of these skills, educators can empower students to become effective communicators, critical thinkers, and empathetic individuals. Integrating social-emotional learning into language instruction further enhances students' listening and speaking skills by fostering self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The current study benefited from the

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theoretical framework and previous studies in designing the study instruments.

Differences and distinctions

In terms of purpose: Several studies agreed with the current study in that they dealt with the application of artificial intelligence in teaching reading and writing skills in the English language, including the study of Zaytouni (2022), the study of Ghoneim (2021), the study of Al-Sharif (2019), and the study of Al-Ghamdi (2017).

In terms of method: The study agreed with some studies that used the experimental approach, including the study of Ghoneim (2021), the study of Al-Sharif (2019), and the study of Al-Ghamdi (2017), while it disagreed with some studies that used the qualitative approach, including (Zitouni, 2022).

In terms of the sample: The current study differed from previous studies in that the sample was university students (English Majors)

In terms of study instruments and materials: Previous studies differed from the current study in their objectives. Some used interviews and questionnaires, and some used tools for analyzing documents and educational content.

Distinctions: The current study is distinguished from previous studies in that it presented an artificial intelligence application based on integrating social-emotional learning, and finding the extent of its impact on developing the listening and speaking skills of first-year English majors.

Benefits: The current study has benefited from the previous ones in defining the research problem, its objectives, questions, and delimitations, by reviewing the theoretical framework presented by previous studies in the field of research, learning about the procedures followed in implementing experimental research in terms of its methodology, tools, materials, statistical methods, method of presenting its results, and writing recommendations and the formulation of the research elements according to the scientific research

Context of the problem

In light of the researcher's experience as a staff member teaching English language courses to students at the Faculty of Education, she noticed that their level was not satisfactory in EFL listening and speaking skills. In addition, reviewing related studies confirmed the problem. The previous studies revealed that students faced problems in EFL listening and speaking skills. Thus, she could verify the present study problem in that first-year English majors at the Faculty of Education had low levels of oral skills. A random sample of students (n=20) was selected for the pilot study. This revealed that students had low performance in the oral language skills. Moreover, the review of the literature emphasized the importance of using (AI) as an independent variable for improving students' listening and speaking skills.

Accordingly, there was an urgent demand to find effective ways to develop listening and speaking skills. This demand was embodied in the use of artificial intelligence applications and benefits from its uses in developing listening and speaking skills of first-year English majors.

Statement of the problem

Based on the results of the conducted pilot study, and the literature review, the researcher could verify the study problem. The statement of the present study problem could be summarized in first year English majors' lack of oral language skills such as listening and speaking skills. Consequently, this affects their language performance. This requires improving these skills by using modern models as those of the artificial intelligence applications that have proven their impact on developing listening and speaking skills. Therefore, the present study aims to investigate the effect of using an artificial intelligence application based on integrating social-emotional learning in developing EFL listening and speaking skills for English majors. The

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mobile model was suggested to enhance the development of listening and speaking.

Aims of the Study

This study aimed to use an artificial intelligence application to:

1. Develop the EFL listening skills of 1st year English majors.
2. Develop the EFL speaking skills of 1st-year English majors.
3. Reveal the effectiveness of using artificial intelligence applications integrated with social-emotional learning to develop listening and speaking skills for 1st-year English majors.

Questions of the Study

The problem of the study was to answer the following question: What is the effectiveness of using one of the artificial intelligence applications integrated with social emotional learning theory in developing EFL listening and speaking skills among first-year English majors at the Faculty of Education?

This main question can be branched out into the following sub-questions:

1. What are the sub-listening and speaking skills that are mostly needed by first-year English majors?
2. What is the suitable application to be used in developing their listening and speaking skills?
3. Are there any statistically significant differences in the mean scores of both the experimental and the control groups in the post-application of the EFL listening and speaking skills tests?
4. What is the effectiveness of the proposed model based on an application of artificial intelligence in developing listening and speaking skills among first-year English majors?

Significance of the study

The current study could be significant to EFL teachers, pupils, curriculum designers and researchers in the following aspects:

1. The study goes in line with the country's directions and Egypt's Vision 2030 of causing advancement in the education sector and

the use of artificial intelligence applications to improve the teaching of language skills.

2. As for teachers, the current study could provide teachers with an artificial intelligence-based program that helps them improve their students' EFL listening and speaking skills.
3. As for students, it might help them to gain confidence while listening and speaking in English and be able to use the artificial intelligence applications to listen and speak freely and interactively in everyday life environments.
4. The current study could help in developing EFL listening and speaking skills among first-year English majors through the use of artificial intelligence applications.
5. The current study could draw curriculum designers' attention to the importance of technology and artificial intelligence in teaching EFL listening and speaking skills. Hopefully, it might direct their attention to the steps of integrating artificial intelligence activities during the planning, and implementation stages of the curriculum.

Delimitations

This study was delimited to:

1. Only the following listening skills were included in the program:
 - a. Listening skills are delimited to:
 1. Listening for specific information/details
 2. Listening for gist
 3. Listening to attitudes
 4. Listening for greetings and conversation endings
 5. Listening for reactions
 6. Listening to plans
 7. Listening for certainty
 8. Listening for sequence
 9. Listening for similarities and differences
 10. Identifying the pronunciation of some words.
 11. Listening for opinions and advice
-

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12. Listening to preferences
- b. Speaking skills are delimited to:
 1. Giving a summary of a specific topic
 2. Describing people/locations/places
 3. Asking appropriate questions
 4. Using appropriate language functions. (i.e. Greeting, apologizing, thanking, etc.)
 5. Starting a communicative situation
 6. Taking turns
 7. Confirmation checks
 8. Using speech fillers and hesitations
 9. Politeness skills of aural-oral communication
 10. Using attention-getting skills
 11. Use communication repairs
 12. Use approximation
 13. Use topic Shift
2. Sixty English majors enrolled in the first year English Department at Minia Faculty of Education participated in the study. This year, the students are supposed to enhance their listening and speaking skills for better communication purposes throughout their academic study in the upcoming years before and after graduation.
3. The study was carried out at the Faculty of Education, Minia University.
4. The study was conducted during the first term of the academic year 2023/2024 in the Listening and speaking course.

Definitions

Artificial intelligence applications

Khare & Steart (2018: 67) defined artificial intelligence as a part of computer science concerned with designing intelligent systems that mimic the characteristics of humans in dealing with all life situations. Shaaban (2021:8) defined it as “machines that perform tasks that require intelligence that mimics human intelligence, through special

programs that allow for the process of simulating most of the functions performed by humans.”

Operationally defined, artificial intelligence applications are special programs that depend on computers and smart devices to simulate student’s way of dealing with the data of the different situations. It is an intelligent board framework that perceives its environment and adopts activities that increase learner’s chances of success.

Listening skills

Idrissovaa et al. (2015); Rukthong and Brunfaut (2019) defined listening as a process of getting what the speakers say; processing information; and enhancing meaning with the speaker, and reacting through involvement, creative mind, and sympathy. Listening, then, consists of complex and dynamic procedures of understanding in which listeners coordinate what they hear with what they know.

According to (Barjesteh & Ghaseminia, 2023), listening is a vital skill that provides the basis for successful communication and a successful professional career. Effective listening skills enhance the ability to learn and adapt new information, knowledge, and skills. Listening comprehension is more than extracting meaning from incoming speech. It is a process of matching speech with background knowledge, i.e. what the listeners already know about the subject.

Operationally, it was defined as skills that promote 1st year English majors' ability to exactly receive, learn, and adapt information through communicating with others. These skills are considered a central and effective part of effective communication in everyday life.

Speaking Skills

Indriyani (2020) defined speaking as a gifted human skill where it is used to interact and communicate anywhere at any time. In learning English, the foremost skill is speaking because it enables learners to express their ideas, feelings, or opinions in a particular situation.

Operationally, speaking is defined as the skill that refers to using the language to communicate effectively through using verbal or

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nonverbal symbols in different contexts that can be enhanced through acquiring and learning the language. It is the ability to convey information verbally and in a way that the listener can understand.

Social-emotional learning

Weissberg et al., (2015) defined Social and emotional learning (SEL) as a strengths-based, developmental process that begins at birth and evolves across the lifespan. It is the process through which children, adolescents, and adults learn skills to support healthy development and relationships.

Basically speaking, social and emotional learning (SEL) refers to the process through which individuals learn and apply a set of social, emotional, and related skills, attitudes, behaviors, and values that help direct students. This includes thoughts, feelings, and actions in ways that enable them to succeed in school. However, SEL has been defined in a variety of ways (Humphrey et al., 2011).

Operationally, Social-emotional learning is defined as students developing better self-control, empathy, and other positive qualities. Learning positive behaviors that extend beyond a purely academic level of achievement can help these students develop the “soft skills” required of many jobs, such as teamwork, the ability to understand others, and problem-solving. This can help set these students up for success throughout their school years and beyond.

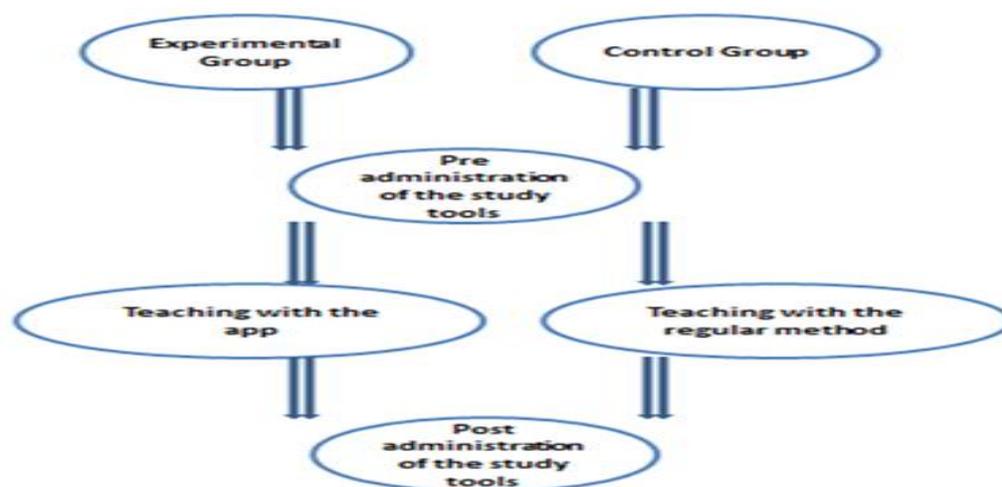
Method

Research Design

The present study adopted the quasi pre- post experimental group design to measure the effectiveness of using the mobile application as one of the artificial intelligence applications for developing EFL listening and speaking skills of first year English majors. (See Figure 1). The material of the sessions was derived from the topics of the (Listening and speaking course) that was being taught during this term. Participants were examined using EFL listening and speaking tests (see Appendix 2).

Figure (1)

The quasi-experimental design



Participants of the study

The participants were (60) first-year English majors chosen randomly from Minia Faculty of Education during the first term of the 2023 – 2024 academic year. The students were divided into two intact groups of 30 students each. The study group was trained through a program based on artificial intelligence applications and the control group followed the regular method of teaching.

EFL listening and speaking pre-post tests were prepared by the researcher. They were constructed and validated by five TEFL jury members. They were conducted before the implementation of the program to ensure the equality of both groups. As post-tests, they were used to identify the effectiveness of the (AI) program. (Appendix 2 a. listening b. speaking).

Duration

The training began in October 2023 and ended in December 2023 (first term). The total sessions covered the objectives of the program, two hours a week including the mobile model application training.

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Role of the Instructor

During the training, the researcher used a mobile application, created by AI, to provide students with ample opportunities to practice their EFL listening and speaking skills.

The researcher used speech that was suitable to the student's language level. She spoke slowly and, repeated more frequently, and adjusted her speech as needed. She avoided the use of idioms and used body language, gestures, and pictures to accompany spoken language.

Role of the Students

Student roles included cooperating with peers and receiving feedback from the instructor and peers. Their participation included listening and speaking activities such as asking and answering questions, giving a summary of a specific topic, describing people/locations/places, adding new ideas to a text, and using appropriate language functions (i.e. greeting, apologizing, thanking, etc.), starting a communicative situation, taking turns, guessing the meaning of unfamiliar vocabulary, and discussing with their groups during activities. They also gave their reflections on the program language.

Evaluation Techniques

Short Answer Questions, MCQ questions,

Variables of the study

Independent variable:

A mobile application created by Artificial Intelligence based on integrating social-emotional learning.

Dependent variables:

1. Developing EFL listening skills
2. Developing EFL speaking skills

Instruments of the study

To fulfill the purposes of the study, the following instruments were designed by the researcher.

- 1. A needs assessment questionnaire of EFL listening subskills
(See Appendix 1a)**

Objectives:

1. To determine the belongingness of each sub-skill to the main skill.
2. To identify the listening sub-skills that are most needed.

Construction of the questionnaire

- Stating the objectives
- Stating the sub-skills through reviewing the related literature, and investigating the opinions of the jury members.
- The final version of the questionnaire consists of 12 skills after the consultation of the jury members.

Validity

Five TEFL jury members approved the face validity of the questionnaire. The final version of the questionnaire consisted of (12) statements to include all study variables.

**2. A needs assessment questionnaire of EFL Speaking subskills
(See Appendix 1b)**

Objectives:

1. To determine the belongingness of each sub-skill to the main skill.
2. To identify the speaking sub-skills that are most needed.

Construction of the questionnaires

- Stating the objectives
- Stating the sub-skills through reviewing the related literature, and investigating the opinions of the jury members.
- The final version of the questionnaire consists of 13 skills after the consultation of the jury members.

Validity

Five TEFL jury members approved the face validity of the questionnaire. The final version of the questionnaire consisted of (13) statements to include all study variables.

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3. The EFL Listening test (See Appendix 2 a)

a. Objectives

This pre-posttest was used to assess first-year English majors' performance in EFL listening skills. It was administered as a pretest to ensure the equality of the two groups before the (AI) program. As a post-test, it was used to show the effect of the (AI) application on students' listening skill levels.

b. Construction

This test consisted of 25 multiple-choice items representing the most important objectives of the program. The test items covered the sub-skills of listening. (Appendix 2a).

c. Timing the test

The time taken by each student was recorded and divided by the total number of students. Answering the test items lasted 60 minutes.

Scoring: the total score is 25 marks.

Instructions:

They are written in English. They are brief, easy to understand and free from any possible ambiguities. They contain information about the purpose of the test, time allowed to complete the test, and how to record the answers.

d. Validity:

The validity was determined by computing the internal consistency of each item. This was calculated by using (the Pearson correlation formula). The Correlation coefficient ranged from 0.63 to 0.84.

Table (1).
Internal Consistency of The Listening Test Items

No. of Item	Corr.	No. of Item	Corr.	No of items	Corr.
1	0.82	10	0.80	19	0.77
2	0.81	11	0.81	20	0.71
3	0.73	12	0.82	21	0.72
4	0.74	13	0.84	22	0.63
5	0.73	14	0.76	23	0.65
6	0.82	15	0.71	24	0.82
7	0.73	16	0.72	25	0.66
8	0.74	17	0.63		
9	0.71	18	0.65		

e. Reliability:

Alpha Cronbach formula was used. The reliability coefficient was 0.72. It can be concluded that the test has an acceptable reliability level.

Piloting the Test: twenty (20) first-year English majors were randomly selected. Piloting helped to correct unclear and ambiguous items. It helped also to determine whether the items were functioning for use in the main study or not.

4. The EFL Speaking test (See Appendix 2 b)

a. Objectives:

This pre-posttest was used to assess first-year English majors' performance in EFL speaking skills. It was administered as a pretest to ensure the equality of the two groups before the (AI) program. As a post-test, it was used to show the effect of the (AI) application on students' speaking skill levels

b. Construction:

The test consists of (13) Questions. Part I consists of 3 situations. Students listen to the situations and say what would they do if they were in the same situation. Part II contains 10 role-play/ work in pairs situations representing the most important objectives of the program.

Item Type: The items are situations and role play/work in pairs.

c. Timing the test

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Time taken by each student was recorded and divided by the total number of the students. Answering the test items lasted 60 minutes.

Scoring: Five points for each situation in part I. One point for each question in Part II. The total score of this test is (15+10 = 25 marks). A speaking rubric was used to score students' responses in part I of the speaking test. (Appendix 3)

Instructions:

They are written in English. They are brief, easy to understand and free from any possible ambiguities. They contain information about the purpose of the test, time allowed to complete the test and how to record the answers.

d. Content validity

Seven TEFL staff members approved the content validity of the test and its suitability for the group. They also approved the questions and confirmed the suitability of the test to assess students' speaking skills level. They stated that the items were inclusive, easy to respond to, varied, and focused. Their suggestions were taken into consideration.

The test was piloted by administering it to 20 first Year English majors. to measure its validity, reliability, appropriateness to students' level, and test timing. Students who shared in the pilot study were excluded from the main experiment.

The Internal Consistency

The correlation between the score of each item and the total score of the test ranged from (0.45) to (0.89). This indicates that the test has a high degree of validity. See table (2)

Table (2)

The Internal Consistency of the Speaking Test

Item	consistency	Item	consistency	Item	consistency
1	0.71	11	0.66	21	0.78
2	0.65	12	0.52	22	0.45
3	0.45	13	0.65	23	0.87
4	0.48	14	0.46	24	0.56
5	0.66	15	0.45	25	0.76
6	0.56	16	0.58		
7	0.45	17	0.89		

e. Reliability

The test was administered to (20) first-year English Majors. Alpha Cronbach formula was used. The reliability coefficient is (0.80). It can be concluded that the test has an acceptable reliability level. Table (3) shows the reliability coefficient of the test. It can be concluded that the test has an acceptable reliability level.

Table (3)

The Cronbach Alpha's Reliability Coefficient of the Speaking Test

No. of Items	Cronbach's Alpha
25	0.80

The final versions of the tests

This was decided after taking into account the modifications and comments given by the jury members and also in light of the pilot study and the statistical treatment that was carried out on the data, which confirmed the validity of the tests for application, as the listening skills test in its final form consisted of (25) items, and the speaking skills test consisted of (13) items.

Experimental Procedure

Pre-Testing

Students were pre-tested to measure their listening and speaking skills levels on the EFL listening and speaking skills tests before conducting the AI program and to identify the degree of improvement in both instruments.

The design of the mobile application

To ensure the preparation and design of the application by good educational design standards, the study followed a specific methodology for the design process after reviewing many different design models. The international standard model (ADDIE) was chosen, which consists of five successive stages: Analysis, Design, Development, and Implementation. and Evaluation. The current study justified its use of this model for its flexibility, as the details of the model are left to the designer's experience and vision and what the

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educational situation needs. The model was built according to the following steps:

- **Analysis stage:**

Determining the general goal of the model, which is to develop the listening and speaking skills of first-year English majors at the Faculty of Education through artificial intelligence applications.

Identifying students' characteristics and educational needs: such as similar cognitive levels and their possession of some mobile phone skills.

Identifying sources: to ensure that students' mobile phones are ready to use the application.

- **Design phase:**

Formulating educational objectives: The theoretical framework and previous studies were relied upon to determine the list of skills required to be developed and the procedural objectives required to be achieved through the teaching and learning processes. It was developed in the form of a questionnaire and presented to a group of TEFL experts to determine its suitability. The list in its final form consisted of (30) skills, including (15) listening skills and (15) speaking skills, as shown in the following table:

User interface: A simplified graphical interface and navigation methods in the application and communication instruments were created for students to deal with easily and conveniently, as the application was supported with links to video clips, text or audio files, as shown in Figure (2).

Figure (2)

Application user interface



- **Development stage:**

The steps of the design process were translated into the form of a mobile application using an artificial intelligence application, which allows each student to proceed in the learning process according to his abilities.

- **Implementation**

The mobile application was presented to a group of TEFL experts to give their opinion on the suitability of the mobile application and its suitability to the goal of the study, which is developing the listening and speaking skills of first-year English majors.

- **Evaluation**

The jury members suggested a set of modifications that were taken into consideration, such as reducing multimedia for some skills and increasing the number of enrichment activities. A pilot study was also conducted on a sample of first-year English majors who were excluded from the basic experiment to ensure that the application was appropriate for their level and that there were no obstacles in the implementation. Without applying it as required, and after conducting

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statistical analysis of the piloting application of the model, the current study confirmed the validity of the application.

The Experimentation

Sixty first year English majors at the Faculty of Education participated in the study. The experiment was conducted during the first term of the academic year 2023/2024. An orientation session was given to clarify the purpose of the experiment and ensure that students have the basic competencies to use the application.

Steps in constructing the AI based program:

1. Reviewing the literature related to EFL listening and speaking skills
2. Preparing a list of the listening skills.
3. Preparing a list of the speaking skills.
4. Evaluating the list by a panel of (7) TEFL experts.
5. Stating the main objectives of the program and having them evaluated.
6. The whole program was evaluated by the same panel to judge the stating of the items, verification of the content, and whether the activities were appropriate to the group of study.

Material

The AI-based program aimed at achieving the objectives of the study. The program consists of ten sessions each having several behavioral objectives, and different listening and speaking activities, and ends with evaluation questions of different types to assess the students' listening and speaking skills.

Content of the AI based program

The program consists of the following sessions:

Session (1) An orientation on the mobile application and the meaning of AI (lasted for one week)

Session (2) Introductions and names (Greetings)

Session (3) Describing people (Physical Appearance)

Session (4) Clothes (Describing clothes)

Session (5) Routines (Time and numbers)

Session (6) Dates (Calendar)

Session (7) Jobs (Job types)

Session (8) Favorites (favorite things)

Session (9) Locations (Objects around the house)

Session (10) Hopes and plans (The future)

Steps in implementing the AI based program:

- Each session started with face-to-face interaction to arouse participants' interest in the program.
- The researcher made an overview of the content of the sessions.
- The researcher made sure that each one of the participants had a smartphone.
- They are given the objectives and the content of the program.
- Each session lasted approximately two hours.
- **Activities**

The program includes the following types of activities:

1. Listen and drag the answer
2. Take pictures from the video and complete the task
3. Click on the button and choose the correct answer
4. Listen and match the sentence with the picture
5. Match the sound with the right word
6. Answer information questions
7. Move into different directions
8. Fill in the gaps
9. Roleplay
10. Listen to a text and guess the answer

The procedures of the mobile application used to teach listening and speaking skills:

1. **Selecting the Relevant Application:**
 - Designing the application specifically for listening and speaking practice in English.
 - Making sure it has audio recordings, speaking exercises, and interactive listening activities.
2. **Setting Clear Learning Objectives:**
 - Defining the learning objectives for each activity or lesson, focusing on specific listening and speaking skills to be practiced and improved.
3. **Introducing the App:**

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- Introducing an overview of the selected app to the students, explaining its features, functionalities, and how it would be used to enhance their listening and speaking skills.

4. **Guided Practice:**

- Demonstrating how to use the app through a guided practice session.
- Students go through accessing listening materials, completing speaking exercises, and navigating the app's interface.

5. **Modeling:**

- Modelling proper pronunciation, intonation, and speaking techniques for students to emulate.
- Encouraging students to listen carefully to native speakers and mimic their speech patterns.

6. **Engagement Activities:**

- Designing interactive activities that require students to actively engage with the app.
- This could include listening comprehension quizzes, dialogue practice, or role-playing exercises.

7. **Feedback and Assessment:**

- Providing timely feedback on students' speaking performances, focusing on pronunciation, fluency, and accuracy.
- Using the app's built-in assessment tools or provide personalized feedback during speaking activities.

8. **Pair and Group Work:**

- Facilitating pair or group work activities where students can practice speaking with each other using the app.
- Encouraging peer feedback and collaboration to foster a supportive learning environment.

9. **Monitoring Progress:**

- Monitoring students' progress and tracking their performance within the app.
 - Reviewing their listening comprehension scores, speaking proficiency levels, and areas for improvement.
-

10.Reflection and Review:

- Encouraging students to reflect on their learning experiences and discuss their progress in developing listening and speaking skills.
- Reviewing key vocabulary, phrases, and pronunciation tips learned from the app.

Pre-experimentation

Administration of the pre-test

The researcher administered the EFL listening and speaking pre-tests. The t-value proved that there were no significant differences between the mean scores of the control and the experimental groups on the pre-tests. The two groups were homogenous in their EFL listening and speaking skills. The following table (4) shows the means and the standard deviation of the scores of both groups on the EFL listening and speaking skills pre-tests according to the sub-skills and the total score.

The pre-application of the study instruments was done by calculating t-value as shown in the following table:

Table (4)

Means, Standard Deviations, t-values, and Significance of the pre-tests of the Listening and Speaking skills.

Main Skills	Groups	Independent Samples T-test				
		No.	Mean	SD	t value	Sig. level
Speaking skills	Experimental group	30	19.10	5.01	0.18	0.86
	Control group	30	18.37	6.31		
Listening skills	Experimental group	30	13.53	3.23	1.55	0.13
	Control group	30	11.93	4.64		

By examining table (4), it becomes clear that the difference between the two groups (control and experimental) in the pre-measurement of the tests is not statistically significant at the level of (0.05), and this is

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an indication of the equality of the two groups before the start of the study experiment.

Ensuring the homogeneity of the two study groups (control and experimental), the experiment lasted for ten weeks. When training was over, the post-tests were administered to answer the study questions.

Post Testing

At the end of the program, students were post-tested in the EFL listening and speaking skills. They were asked to write their reflections on using the AI based program. Data were treated statistically and the findings are described below.

Results

This study explored the effect of using an artificial intelligence application based on integrating social-emotional learning in developing EFL listening and speaking skills of Faculty of Education English Majors. The "t-test" was utilized for the analysis of data. Scores on the pre-post performances were analyzed and compared.

Question One

To answer the first question, "What are the listening and speaking skills that are needed to be developed among first-English majors?", the needed skills were approved in light of the theoretical framework and previous studies. Then it was presented in the form of two needs questionnaires to a group of TEFL jury members and their views were taken into consideration. Accordingly, the final form of the listening and speaking skills list was formulated, and the first question was answered.

Question Two

To answer the second question, "What is the suitable application based on artificial intelligence to be used in developing the listening and speaking skills of first-year English majors?" and in the light of the theoretical framework and previous studies, the suggested application based on artificial intelligence was created and presented to a group of TEFL jury members, and their modifications were taken into consideration. Thus, the second question was answered.

Question Three

To answer the third question, "Are there any statistically significant differences in the mean scores of both the experimental and the control

groups in the post-application of the EFL listening and speaking skills tests?”, analysis of data using t- test was utilized as shown in table (5)

Table (5)

Means, Standard Deviations and t-value of of the post tests of the EFL listening and speaking skills

Main Skills	Groups	Independent Samples T-test				
		No.	Mean	SD	t- value	Sig. level
Speaking skills	Control	30	31.43	4.26	8.63	0.001
	Experimental	30	49.53	10.66		
Listening skills	Control	30	13.53	4.05	8.08	0.001
	Experimental	30	21.63	3.71		

By examining Table (5), it is clear that the difference between the two groups (control and experimental) in the post-measurement of the tests is statistically significant at the level of (0.01). This indicates that there are statistically significant differences between the average scores of the control and the experimental groups in the listening and speaking tests. t-values (8.63) and (8.08) are significant at 0.01 level in favor of the experimental group. Thus the third question was answered.

Question Four

To answer the fourth question: ‘‘What is the effectiveness of the proposed model based on an application of artificial intelligence in developing listening and speaking skills among first-year English majors?’’, the effect size was calculated by calculating the Eta squared value as shown in the table (6).

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Table (6)

The Effect Size for the post-application of the listening and speaking tests on the control and experimental groups

Group	Test	Average	Percentage	Std. Dev.	t-value	η^2 value	D value	Effect size	Significance
Control	Listening	66.9	44.08%	5.03	2.55	0.91	4.95	High	0.05
Experimental	Speaking	132.25	88.16%						
Control	Listening	64.45	42.64%	4.02	2.41	0.81	4.47	High	0.05
Experimental	Speaking	119.02	85.12%						

By examining Table (6), it becomes clear that the effect size of the post-application of the listening and speaking tests on the control and experimental groups is high, in favor of the experimental group in both listening and speaking tests, and thus the fourth question has been answered.

Discussion of the Results

The purpose of the present study was to develop EFL listening and speaking skills of faculty of education English majors through using an artificial intelligence application based on integrating social-emotional learning.

Students' scores on the pretest of the EFL listening and speaking skills were unsatisfactory. Before implementing the program, the researcher noticed, as a staff member in the Faculty of Education, that they were in bad need of improving their EFL listening and speaking skills. Therefore, training through an AI-based program gave them

enough opportunity to fill in the gap in their listening and speaking performance.

At the beginning of training, the researcher made clear the objectives of the AI-based program of listening and speaking skills and acquainted them with the necessity of shifting from the regular methods used in teaching both listening and speaking skills to using modern AI technologies to cope with the modern educational system of Egypt's vision 2030.

The program included a variety of tasks and activities to help students develop their EFL listening and speaking skills. The results of the study revealed that the program proved to be statistically and educationally significant in developing student teachers' EFL listening and speaking skills. It can be clarified that using a mobile application based on artificial intelligence, online task activities in particular helped to increase student teachers' EFL listening and speaking skills. In addition, the program highlighted the role of various activities in developing EFL listening and speaking skills. The use of the mobile application and the activities particularly in language classrooms provided a non-threatening and motivating learning environment which is considered one of the essentials of language learning. The mobile application offered various means such as animations, and pictures when presenting the information. This made learning more interactive, interesting, and fun.

It can be noted that students' EFL listening and speaking skills were developed through participating in the AI-based program. Students became able to recognize and understand the main idea and the specific details of the listening text. First, they think about the topic they listened to. They began to ask themselves what they knew about it. Through participating in the program, the students also performed speaking tasks based on the listening texts to check whether they understood the tasks correctly. Thus, their ability to identify the main idea of the listening text is developed. After, participating in the

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suggested program, their ability to communicate in English improved. Students participated in various mobile tasks that helped them to predict upcoming events. First, they thought about the topic of the listening text, focused on the title, and began to use their prior knowledge to predict what they expected to listen to.

In addition, the students used different activities such as social networking especially (Facebook, WhatsApp, and sometimes Microsoft Teams). The researcher constructed WhatsApp, and Facebook, groups for the students to collaborate. She also constructed a group for all the participants to present their opinions about the application and its usage freely. Through social networking sites, they could share and transfer files easily. They also could divide the tasks between them. Then the researcher encouraged her students to use social networking sites to monitor their learning by receiving feedback from their colleagues. Before participating in the AI based program, the students found it difficult to communicate with their peers. They were afraid of making mistakes. They had poor listening and speaking skills. After the implementation of the AI based program, they were confident enough and began to communicate with their peers easily and freely.

The results of the current study indicated that there were significant differences between the mean scores of the control and experimental groups in the application of the listening and speaking tests in favor of the post-application. This result may be attributed to the well-designed artificial intelligence application (mobile application). The application helped in developing listening and speaking skills among first-year English majors, as it contains interactive activities that led to increased student interaction with the application. This result is consistent with the study of Ghoneim, & Elghotmy, (2021), the study of (Gayazova, 2022), and the study of (Han, 2020), all of them confirmed that employing artificial intelligence applications has an effective role in developing the language skills of students.

The results also indicated the effectiveness of the proposed model based on the use of artificial intelligence applications in developing the listening and speaking skills of first-year first year English majors at the Faculty of Education. This result can be attributed to the high-size effect of using the proposed model based on the use of artificial intelligence applications and to the inclusion of a large number of interactive activities that allowed students to see how to implement and simulate skills. This result is consistent with the results of (Hosam, 2024), (Ali, 2020), and that of (Kim, 2019). All of them demonstrated the effectiveness of using applications of Artificial intelligence in developing students' listening and speaking skills.

Integrating social-emotional learning into teaching listening and speaking skills has a very great effect on the students who felt anxious, at the beginning, about their listening and speaking abilities. Social-emotional learning (SEL) plays a crucial role in developing listening and speaking skills in college students. It encompasses five core competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The researcher could create an AI based program that fosters students' emotional well-being and interpersonal skills by integrating SEL into language instruction. When students develop self-awareness, they become more agreed with their own listening and speaking habits. They can identify areas for improvement and actively work towards enhancing their communication skills (Hulvershorn & Mulholland, 2018).

Through self-management skills, students could manage to control and regulate their emotions, thoughts, and actions in various situations, stay focused, and actively engage in listening and speaking activities. In addition, social awareness allows students to act with empathy and in an ethical manner within their college community. Relationship skills, such as active listening, conflict resolution, and collaboration, all contribute to effective communication and positive interpersonal relationships. This competency focuses on listening to and being able to communicate with others, peacefully resolving conflict, and

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knowing when to ask for or offer help. Finally, responsible decision-making allows students to make proper choices in their communication, considering the impact of their words on others. By integrating SEL into language lessons, educators can create a supportive environment that promotes emotional intelligence, empathy, and effective communication.

The current study agreed with the results of the previous studies conducted by (Espelage, Rose & Polanin, 2016). The strategies followed, while implementing the AI based program, to integrate social-emotional learning into the sessions included: Firstly, incorporating reflective activities: such as providing opportunities for students to reflect on their listening and speaking skills, and identify their strengths and areas for improvement. Secondly, teaching and modeling active listening: explicitly, this helps in teaching students the skills and techniques of active listening, such as maintaining eye contact, asking open-ended questions, and summarizing key points. Modeling these skills during classroom discussions and providing feedback to students on their listening behaviors is also helpful. Thirdly, Fostering a culture of empathy and respect: such as creating activities that encourage students to understand and appreciate diverse perspectives. Besides, they help promote empathy through role-playing, storytelling, and discussions on cultural differences and encourage students to actively listen and respond respectfully to their peers.

In addition, the present study agreed with Tan, et.al., (2020) who stated that teachers aim to produce students who can communicate competently in authentic situations. Getting one's message across effectively is an overall objective in speaking classes. The achievement of this objective is affected by students' willingness to communicate, which is defined as their free choice to initiate communication when the occasion arises. Increasing EFL learners' desire and passion to communicate orally has always been a concern to teachers. Learners' in-class is affected by a variety of factors including classmates, instructional methods, teacher, atmosphere, materials, class size, motivation, fear of being ridiculed, language anxiety, fear of making mistakes, topic interest, topic familiarity, shyness,

introversion, vocabulary knowledge, pronunciation, practice and past communication experience. Moreover, students participated in different tasks that helped them to reflect on the listening texts form their opinions. These results are consistent with Beheery (2016) , Lashin (2016) and AbuShosha (2017) who clarified that English department students need to train in listening skills to be able to communicate confidently and give opinions. To enhance their listening skills and the desire to communicate. They also participated in online audio chat sessions to develop their listening skills and speaking skills in general.

Through the program, the participants involved and participated in various audio/video-based tasks and activities that helped them to develop their listening skills. In the same context, Sarani, Behtash & Arani (2014) clarified that participating in tasks helped them to improve their listening skills. In the pre-task phase, the researcher played the video or audio clip first for general comprehension to allow students to get the main idea or the general story. Then, replayed it several times for students to clutch more details. The instructor used the pause button as needed to focus on those sections students had difficulty in understanding. Next, students were asked to complete an exercise on the corresponding activity while they were listening and watching. In the review, post-task phase, the researcher asked students comprehension questions and testified that they had understood the gist of the video/audio clips. Questions included a variety of question types – yes / no questions, and simple wh- questions. In addition, through participating in the suggested program, the participants became motivated to communicate and had the desire to communicate and interact. Furthermore, it helped them to practice English in an anxiety-free classroom. In the task-cycle phase, the students worked together and they shared their ideas and exchanged information. Moreover, the students provided feedback by saying that they enjoyed learning the language through the activities.

The researcher's sociable manner helped the participants feel comfortable and relaxed about their mistakes. The researcher should provide a learning environment for the students that is free from stress and relaxed to support students' learning and be more tolerant towards

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students' mistakes emphasizing that making mistakes is usual in the learning process. It can be concluded that using activities provided students with a safe and friendly environment where they interacted with each other, brainstormed ideas, and commented on various writings. As the students had very limited contact hours in the lecture, these activities gave them extra time to practice using English outside the classroom. Students also felt very comfortable and confident enough.

Students' Reflections

Students were asked to give their reflections on the whole experiment.

The following are examples of these reflections:

- *"This course made me learn how to communicate in English"*
- *"This course is so beneficial because we learned a lot about AI and its applications"*
- *"The mobile application gave us the chance to receive tasks and see the material of the next lecture".*
- *"The instructor was really helpful, sociable, and active".*
- *"The listening and speaking activities helped me to practice conversations with peers".*
- *"I can speak with others confidently.".*

Implications

The significant gains obtained by the participants of the study group on post-testing could be attributed to the use of the AI-based program which is mainly based on the idea of developing some EFL listening and speaking skills.

Some factors may have helped to enhance the positive effect of the program on developing students' EFL listening and speaking skills such as the in-class activities, the discussions between groups, the material presented in an organized way, and the interest and enjoyment of students and the new technology.

Challenges

The researcher encountered some challenges throughout the implementation of

the AI based program. These include:

1. Some students were not willing to participate because they did not have enough smartphones or available wifi.
2. Being reluctant at the beginning of the program lest it should affect the time allotted to the other subjects.
3. Some of them were unable to attend the class.
4. Some of them could not speak/ communicate in English.

To overcome such challenges, the researcher did the following:

1. Every two students shared the same mobile.
2. The researcher explained the importance of both being updated with modern technology and using them in real life situations.
3. The orientation session made students eager and ready to participate.

Conclusion

The results of the study revealed that the participants' EFL listening and speaking skills developed after the implementation of the activities. The effectiveness of the activities may be due to the various tasks, and strategies the researcher presented to the students. Moreover, students emphasized certain personal developments such as thinking, self-confidence, communication skills, and team spirit, and they considered the instructor's role as a guide for learning. The advent of information technology has improved the quality of language education and language learning. These capabilities include rapid global access at any time from any smart device with Internet access, and integration of graphics, audio, and text. In addition, their listening and speaking skills are developed. They clarified that using their mobile phones in learning helped them to perform the tasks easily and interestingly.

To conclude, EFL listening and speaking skills can be developed in case of supplementing them with modern technologies that enable teachers to easily instruct their students. Learning positive behaviors that extend beyond a purely academic level of achievement can help students develop the "soft skills" required of many jobs, such as teamwork, the ability to understand others, and problem-solving. This can help set these students up for lifelong success throughout their academic years and beyond when confronting real-life situations.

Recommendations

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Based on the results of the current study, the following recommendations can be presented:

1. Adopting the proposed application in developing listening and speaking skills among first-year English majors at the Faculty of Education. .
2. Holding training courses for faculty members on how to use artificial intelligence applications in the teaching and learning processes.
3. Designing educational environments and models similar to the current application to benefit from them within the level and needs of students and teachers.

Suggestions for Further Research

Based on the findings of the present research, the following implications for further research are suggested:-

1. Conducting a similar study to identify the effectiveness of the application in developing reading and writing skills of first-year English majors.
2. Researching to identify the effectiveness of the model in developing literacy skills of first-year English majors
3. Conducting a study on the effectiveness of using artificial intelligence applications in teaching English language courses in Faculties of education.
4. Using artificial intelligence applications to enhance the communication skills of secondary school learners.
5. Using Social Emotional Learning Strategies to develop productive skills.

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