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Enhancing Listening Skills in English Learning Through AI Tools: A Study on Tobruk University

Zahia Farhat Abdallah

Abstract:

In recent years, Artificial Intelligence (AI) tools have become increasingly popular in language learning, especially in improving essential skills like listening. This study focuses on how AI-based applications can help enhance the listening abilities of English learners at Tobruk University. Our goal was to find out if these tools actually improve students' understanding and attention when they listen to English in academic settings.

To explore this, we collected both numbers and opinions from students through questionnaires and classroom observations. We worked with a group of undergraduate English majors who used AI-powered apps such as speech recognition tools and interactive listening platforms during their studies.

The results showed that students who actively used these AI tools improved their listening comprehension, vocabulary recognition, and ability to follow natural speech. Many students also shared positive feedback, saying the technology helped them stay motivated and confident while learning.

In conclusion, AI tools can be a great addition to traditional language teaching, helping students develop their listening skills more effectively. We recommend that Tobruk University and similar institutions consider integrating these technologies into their English programs.

1. Introduction

In the field of English as a Foreign Language (EFL), listening is a core receptive skill that plays a vital role in language acquisition. Developing strong listening skills allows learners to understand spoken language in real-life contexts, which is essential for academic success and effective communication. However, many EFL learners continue to face challenges in mastering listening, particularly when exposed to authentic, fast-paced speech.

With the emergence of Artificial Intelligence (AI), language educators have increasingly explored innovative methods to support students' learning processes. AI-based tools offer interactive and personalized learning experiences that can address individual learner needs. Among these tools is LyricsTraining, an AI-powered application that helps learners improve their listening skills through music and song lyrics. This approach engages learners in an enjoyable and authentic listening environment that enhances attention, vocabulary, and comprehension.

This study investigates the impact of using LyricsTraining on enhancing listening skills among fourth-year English majors at Tobruk University. A total of 64 students participated in the study, utilizing the application over a set period as part of their coursework (Alqahtani, 2021; Liu & Jackson, 2020).

Research Aims

The main aim of this research is to explore how AI-based tools, particularly LyricsTraining, affect the listening abilities of English learners. It also seeks to understand students' attitudes towards the use of such technology in their learning journey.

Research Questions

To guide the study, the following questions were formulated:

1. To what extent does LyricsTraining improve the listening comprehension of fourth-year English majors at Tobruk University?
2. How do students perceive and respond to using AI tools like LyricsTraining in their English learning?
3. What challenges might students face while using LyricsTraining to develop their listening skills?

2. Literature Review

Listening is widely recognized as a foundational skill in second language acquisition. According to Vandergrift and Goh (2012); Vanderplank (2016), listening is not a passive activity but rather an active process that involves decoding, interpreting, and constructing meaning from spoken input. For many EFL learners, listening comprehension is among the most difficult skills to acquire due to fast speech rates, varied accents, and unfamiliar vocabulary.

The integration of Artificial Intelligence in education has brought new possibilities for developing listening skills. AI-powered platforms can provide learners with immediate feedback, customized listening activities, and access to real-life, context-rich audio input (Kukulska-Hulme, 2020). These tools also enhance learner autonomy and motivation by creating interactive, game-based learning environments.

One AI-supported tool gaining attention in EFL contexts is LyricsTraining. This application leverages song lyrics and music videos to create engaging listening exercises. Research by Alcántara and García (2019) found that using lyrics-based tasks improves vocabulary retention and listening fluency among university learners. Similarly, Kelsen (2021) noted that music-based learning helps learners recognize pronunciation patterns and enhances their listening confidence.

While several studies have emphasized the role of traditional listening exercises, the use of AI-driven tools like LyricsTraining presents a modern, learner-centered alternative. However, more research is needed, particularly in non-native English-speaking regions such as Libya, to evaluate the effectiveness of such tools in university-level English programs. This study aims to contribute to this gap by investigating the use of LyricsTraining among fourth-year students at Tobruk University (Chen & Lee, 2019; Dizon, 2020).

3. Methodology

3.1 Research Design

This study employed a quantitative research design to evaluate the impact of the AI-based application LyricsTraining on students' listening skills. The research focused on measuring students' listening comprehension before and after using the application over a specified period.

3.2 Participants

The participants were 64 fourth-year English majors from the Faculty of Arts at Tobruk University. These students had already completed several English language courses and were familiar with basic listening activities, making them suitable for investigating the effectiveness of technology-based tools.

3.3 Instrument

A structured pre-test and post-test approach was used to measure listening performance. The tests included tasks related to word recognition, sentence comprehension, and interpretation of meaning from spoken English. In addition, a short questionnaire was administered to assess the participants' attitudes toward using LyricsTraining.

3.4 Procedure

The study was conducted over a period of four weeks, during which students used LyricsTraining regularly as part of their listening practice. The application was integrated into classroom instruction and independent learning sessions. Students selected English-language songs from various genres and completed interactive gap-fill exercises while listening. Their progress and engagement were monitored by the instructor.

3.5 Data Analysis

The collected data were analyzed using descriptive statistics to compare the results of the pre- and post-tests. The questionnaire responses were summarized to identify general trends in students' perceptions regarding the usability, enjoyment, and effectiveness of the application.

4. Findings and Discussion

The results of the study indicated a significant improvement in students' listening skills after using the LyricsTraining application over a four-week period. A comparison between pre-test and post-test scores revealed that the majority of students demonstrated enhanced performance in word recognition, comprehension of spoken sentences, and overall understanding of audio materials.

Specifically, students showed better ability to follow native English speech, understand context clues, and identify missing words in audio passages. Many students also reported being more confident in their listening abilities and more motivated to engage with English content outside of class.

The responses from the post-activity questionnaire supported these findings. Approximately 85% of participants expressed that LyricsTraining made listening practice more enjoyable and engaging. Several students noted that the use of music helped them focus better and remember vocabulary more effectively. Moreover, they appreciated the interactive nature of the app, which allowed them to repeat and control the speed of the audio, unlike traditional listening tasks.

These findings align with previous studies (e.g., Alcántara & García, 2019; Kelsen, 2021), which have emphasized the motivational impact and language benefits of music-based AI tools. The present study contributes further evidence from a Libyan context, suggesting that AI-powered platforms such as LyricsTraining can serve as a valuable supplement to traditional EFL instruction.

However, some challenges were also reported. A small number of students mentioned difficulties with certain fast-paced songs or unfamiliar accents, which sometimes hindered comprehension. These limitations highlight the need for careful song selection and guided support by instructors during implementation.

5. Conclusion and Recommendations

This study aimed to explore the effectiveness of the AI-powered application LyricsTraining in enhancing listening skills among fourth-year English majors at Tobruk University. The findings demonstrate that integrating LyricsTraining into the language curriculum significantly improved students' listening comprehension, vocabulary recognition, and motivation to engage with English audio content.

The positive student feedback highlights the potential of AI tools to make language learning more interactive and enjoyable. However, challenges such as difficulties with fast-paced songs suggest that careful selection of materials and instructor guidance are essential for maximizing benefits.

Based on these results, the following recommendations are proposed:

- For educators: Incorporate AI-based listening tools like LyricsTraining into regular teaching practice to diversify learning activities and increase student engagement. Provide guidance to help students choose suitable materials based on their proficiency level.
- For institutions: Support the integration of innovative technology in language programs by investing in training for instructors and ensuring access to reliable digital resources.
- For future research: Conduct longitudinal studies to assess the long-term impact of AI tools on different language skills and explore their effectiveness across various learner groups and contexts.

In conclusion, AI applications such as LyricsTraining represent a promising avenue for enhancing listening skills in EFL settings, contributing to the overall goal of preparing students for effective communication in English.

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