Application of ai in english teaching: using elsa pro to improve pronunciation in ielts classes

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Abstract: *This study investigates the integration of AI-powered tools, specifically the ELSA Speak application, in improving English pronunciation among students preparing for the IELTS exam. AI in language learning offers personalized feedback, a crucial aspect often limited in traditional classroom settings. Thirteen students participated in a 3-month study where they used ELSA to practice pronunciation outside of class. Both quantitative and qualitative methods were employed, analyzing students' daily scores and pre- and post-course assessments, alongside teacher observations. Findings showed significant improvements in pronunciation, fluency, and intonation. The personalized feedback from ELSA enabled students to address specific pronunciation challenges, achieving marked progress. This study highlights the potential of AI applications to enhance language learning by providing effective, individualized support, suggesting a complementary role for AI in traditional teaching methods for optimized learning outcomes.*

Keywords: *AI-powered pronunciation training, personalized feedback, Elsa Pro*

1. Introduction

1.1. Application of AI in Language Teaching

In the current digital era, artificial intelligence (AI) plays a pivotal role in innovating and enhancing the quality of education. AI not only helps teachers optimize the teaching process but also provides personalized learning experiences for students. With its ability to analyze data and continuously learn, AI assists teachers in tracking students' progress, identifying weaknesses, and suggesting appropriate teaching methods.

In the field of English language teaching, AI is increasingly asserting its position through applications that support both teachers and learners of the language. AI tools aid English learning by offering personalized exercises on pronunciation, vocabulary, and grammar. These tools help students practice and improve their language skills effectively and flexibly, while also providing immediate feedback so that students can make timely adjustments.

1.2. Introduction to ELSA Pro Application

ELSA (English Language Speech Assistant) was first launched in 2015. The application was developed by Van Dinh Hong Vu, a Vietnamese founder and CEO, along with her colleagues in Silicon Valley. ELSA is an AI-powered English learning app designed to help learners improve their pronunciation and intonation skills. ELSA uses advanced speech recognition technology to analyze and evaluate users' speech.

ELSA provides personalized pronunciation and vocabulary exercises, helping learners identify and correct specific pronunciation errors. The app offers immediate and detailed feedback on learners' pronunciation, allowing them to adjust and improve effectively. With a variety of exercises and flexible learning methods, ELSA helps learners progress quickly and become more confident in using English.

One standout feature of ELSA is its ability to personalize the learning program based on the learner's ability and needs. The app tracks learning progress and continuously adjusts exercises to match the user's improvement level. This optimizes the learning process and ensures that learners achieve the best possible results.

1.3. Using ELSA in IELTS Classes

In the current context of English teaching, teachers often face difficulties in helping students improve their pronunciation skills. For IELTS classes, this challenge becomes even more pronounced due to the complexity of the pronunciation requirements in the exam. Teachers often have to correct individual pronunciation mistakes for students, a time-consuming task that can be difficult to balance with other parts of the curriculum. The limited time and resources in traditional classrooms make it hard to provide detailed, personalized feedback for each student.

To address this issue, teachers have turned to artificial intelligence technology to support the

teaching process, with one prominent solution being the use of the ELSA (English Language Speech Assistant) application. This app allows students to practice and improve their pronunciation effectively outside of classroom hours.

The ELSA application was integrated into a 3-month basic IELTS course. Students were provided with the ELSA app to improve their pronunciation through a personalized learning plan. They submitted their daily practice results to a group, enabling teachers to identify the issues students were facing and provide timely support.

2. Content

2.1. Literature Review

Pronunciation has always been an important yet challenging aspect of language learning, especially in preparation for standardized exams like IELTS. According to Derwing and Munro (2015), accurate pronunciation is essential for comprehension and effective communication. However, traditional classrooms often do not provide enough personalized attention to address pronunciation errors due to time constraints and large class sizes (Levis, 2005). Teachers face difficulties in thoroughly correcting each student's pronunciation mistakes without compromising other important areas of the curriculum, such as reading, writing, and listening skills.

The emergence of artificial intelligence (AI)-based applications offers a promising solution to these challenges. Liakin, Cardoso, and Liakina (2015) emphasize the potential of mobile applications in language learning, particularly their accessibility and ability to offer personalized learning experiences. ELSA, with its advanced AI-based speech recognition technology, is a prime example of this trend, providing instant feedback on pronunciation tailored to the learner's individual needs (Fryer, 2018).

ELSA offers a range of features designed to improve pronunciation skills. The application uses advanced AI algorithms to analyze speech patterns, identify errors, and provide immediate feedback. A study by Neri et al. (2008) highlights that instant feedback is crucial for effective pronunciation learning. ELSA's personalized approach aligns with Vygotsky's (1978) concept of the Zone of Proximal Development, where learners achieve better outcomes when guided through tailored feedback.

Several studies have examined the effectiveness of ELSA in language learning contexts. Research by Luo, Cao, and Zhang (2019) found that students using ELSA showed significant improvement in

pronunciation accuracy compared to those relying solely on traditional methods. Similarly, Nguyễn and Newton (2020) noted that ELSA users demonstrated greater confidence and fluency in communication due to the continuous practice and feedback provided by the app. Becker and Edalatishams (2018) indicated that ELSA helps English learners reduce their local accents. Liakin and Cardoso (2015) pointed out that mobile language learning applications, including ELSA, enhance learners' pronunciation skills through instant feedback and personalized practice.

2.2. Research Methodology

The study was conducted on 13 students over a period of 3 months, from April to June 2024. These students participated in an IELTS course, using ELSA Speak, an AI-powered English pronunciation training application, to improve their pronunciation outside of classroom hours.

This study employs a combinatio n of quantitative and qualitative research methods. For quantitative data, the researcher collected daily practice scores from the students on the ELSA app by asking them to capture and send their daily results, starting from April 1, 2024. Additionally, the researcher gathered data from the students' pre-test and post-test pronunciation assessments on the ELSA platform. The researcher used mean and standard deviation measurements to assess score fluctuations and trends.

For qualitative data, the researcher conducted direct observations during the teaching process to record the students' progress and kept a teaching journal to track each student's daily improvement. This journal helped identify issues that the students were facing, allowing for appropriate support and adjustments.

2.3. Findings and discussion

The study examined the progress of 13 students over three months using the ELSA Speak application, an AI-powered tool for improving English pronunciation, as part of their IELTS preparation. Data collected included daily practice scores and pre- and post-course pronunciation assessments. The results demonstrated significant improvements in students' pronunciation, fluency, and intonation.

2.3.1. Daily Practice Scores

The daily practice scores from April to June showed a consistent upward trend in student performance, with all participants demonstrating steady improvement. Although there were fluctuations in scores, the general trajectory was positive, reflecting the students' persistence and effort. For instance, students like Bao Han and An saw their scores rise

from approximately 50-60% in April to around 90% by June. The improvement across all participants indicates that consistent use of ELSA contributed to their progress.

2.3.2. Pre- and Post - course Assessment Results

The pre- and post-course assessments evaluated students on pronunciation, fluency, and intonation. Pronunciation showed the most significant improvement, with students like An improving from 76% to 90% and Bao Han from 72% to 85%. Fluency also saw marked progress, with students like Phuong and Bao Han increasing their scores by 10-22%. Although intonation improved more slowly, students still made notable strides, such as Minh Ngoc improving from 53% to 82% and Khanh Ngoc from 65% to 85%.

2.3.3. Teacher Observations and Journal Entries

Teachers closely observed students' progress throughout the course, noting improvements in pronunciation confidence and accuracy, particularly with difficult sounds such as /θ/ and /ð/. Days when students scored lower than average were typically linked to struggles with these specific sounds, while higher scores were associated with greater mastery and confidence in pronunciation. Teacher feedback and one-on-one consultations helped tailor instruction to address individual challenges, further enhancing student outcomes.

The use of ELSA Speak, combined with teacher support and daily practice, resulted in significant improvements in students' pronunciation, fluency, and intonation. The personalized feedback provided by the app, along with consistent practice, helped students gain confidence and control over their pronunciation. These advancements reflect the effectiveness of integrating AI tools like ELSA into IELTS preparation and language learning courses.

3. Conclusion

This study highlights the significant impact of integrating AI-powered tools like ELSA Speak into language learning, particularly in the context of IELTS preparation. Over the course of three months, 13 students demonstrated marked improvements in their pronunciation, fluency, and intonation, as evidenced by their daily practice scores and pre- and post-course assessments. The personalized feedback provided by the ELSA app, coupled with consistent practice and targeted teacher support, enabled students to address specific pronunciation challenges and build their confidence in speaking English.

The findings suggest that AI applications like ELSA

offer a promising solution to the challenges faced by traditional language teaching methods, especially when it comes to providing personalized instruction and timely feedback. The consistent upward trend in student performance indicates that technology can effectively complement classroom teaching, allowing students to practice and improve their language skills in a flexible and self-directed manner.

In conclusion, the use of AI-based tools such as ELSA Speak can significantly enhance the learning experience for students, providing them with the resources and support necessary to develop their pronunciation and communication skills. As AI continues to evolve, its role in language education will likely expand, offering further opportunities to optimize the learning process and achieve more personalized and efficient outcomes for students.

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