The Application of Elsa Speak Software in English Teachingat Can Tho University of Technology – A Case Study

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ABSTRACT: This paperdelves into the effectiveness of the Elsa Speak software in improving English pronunciation and speaking-listeningskills among English-majored freshmen and sophomores at Can Tho University of Technology (CTUT). The study was conducted with63 students ina three-month experimental usage phase (where students learned the basics in class and practiced at home using ELSA). The results showed that during this phase, students using ELSA Speak had noticeable improvements in pronunciation and communication confidence. ELSA Speak helps students recognize and correct their pronunciation errors, thereby improving the quality of their speaking and listening skills. However, challenges such as dependence on technology and the necessity of skills to use the software were also noted. Our study concludes that integrating assistive technology such as ELSA Speak into the curriculum can have positive effects and should be considered for widespread application.

KEY WORDS: Elsa Speak, software, English, English teaching,Can Tho University of Technology (CTUT)

1.   INTRODUCTION

Elsa Speak was founded in 2015 with the target "Anyone can speak English." The primary function of this application is to accurately detect and correct pronunciation errors, helping users elevate their English speaking skills. Some of the notable features of Elsa Speak include: comparing English pronunciation with that of native speakers, receiving guidance to correct mistakes in English communication, getting feedback on different sounds in English pronunciation through the IPA transcription chart with the Advanced Feedback feature, and watching instructional videos on how to pronounce difficult English sounds. With these advanced features, Elsa Speak is well-suited for research and application in teaching English to first-year students in the English Language program at CTUT.

2.   LITERATURE REVIEW
1.1.   Previous Research on the Effectiveness of Elsa Speak in English Teaching

Globally, several studies have demonstrated that using Elsa Speak significantly improves learners' pronunciation skills. According to research conducted by Stanford University, students who regularly used Elsa Speak saw their pronunciation skills improve by 30% to 40% within three months. However, these studies mainly focus on individual learners and have not extensively explored the application of Elsa Speak in a university teaching environment.

Rismawati, Suryana and Agustiana (2021) explored how well Esla speak could assist high school students pronounce the words correctly and showed students' attitudes of using the application. 30 tenth graders were the participants of the study and they were divided into two groups. Pre-test, post-test and questionnaire were utilized in the research. The study concluded that students' attitudes of using Elsa application for pronunciation skill were positive.

Kholis (2021) conducted an action research in an Indonesian university. The study investigated the implementation of Elsa speak and the impact of the application on students. 18 students participated and studied pronunciation, phonetics and phonology in the study. The study included three cycles with 15 meetings in total. Checklist of observation, test, questionnaire and interview were used in the research. The result showed that the pronunciation skill of students was developed by using Elsa speak.

In Vietnam, Nguyen Thanh Mai Thy, a lecturer at the Department of Foreign Languages at Van Lang University, conducted a study titled "Evaluating the Effectiveness of Mobile Applications on Students' English Speaking Skills." In this study, the author emphasized thatthe target of teaching speaking skills should be to enhance students' English communication skills. This is crucial because only in this way can students express themselves and learn to adhere to appropriate social and cultural norms in various

communication contexts. To teach second language learners to speak as effectively as possible, mobile applications like Elsa Speak can be integrated into classroom environments, along with recommendations for English language instructors.

Additionally, a team of authors including Nguyen DuyKhang and Phan ThiTuyet Van from Can Tho University published an article titled "The Solutions for Practicing English by Using the ELSA Speak Software" in the journal of Social Science Education in 2021. In this study, the authors provided an initial overview of the benefits and activities related to pronunciation practice supported by ELSA Speak software at Can Tho University.

The studies listed above are pioneering works and valuable resources for the authors to learn from and build upon. However, these works are primarily published as scientific articles and have not yet conducted an in-depth exploration of the application for the specific research group of English-majored students at CTUT.

1.2. The Overview of English Teaching - Learning for English-Majored Students' at Can Tho University of Technology

CTUT's mission is to educate high-quality human resources to serve for the socio - economic development of Can Tho City and the Mekong Delta. To achieve its missions, CTUT's training activities aim to provide high qualification human resource for the course of industrialization, modernization and international integration of Vietnam.

In the context of international integration, particularly following the establishment of the ASEAN Economic Community (AEC) on December 31, 2015, the demand for foreign language training and the enhancement of English proficiency has become a top priority. This shift presents numerous opportunities but also significant challenges for higher education in providing "English-specialized" graduates who possess both professional expertise and strong English communication skills. These graduates are expected to play a key role in the mission of training, developing, and standardizing English proficiency for the workforce in the Mekong Delta region and neighboring areas.To address this goal, CTUT has launched an English Language program aimed at training high-quality human resources for the Mekong Delta region.

In 2021, recognizing the need to establish a new training program and the capacity to ensure quality standards, CTUT initiated a Bachelor's program in English Language. This program aims to produce graduates with a Bachelor of Arts in Social Sciences and Humanities who possess political qualities and social responsibility, as well as the necessary knowledge and professional skills.

Graduates are expected to be dynamic, creative, disciplined, and in good health, ready to serve the industrial society. This initiative contributes to training a skilled workforce for Can Tho City, the Mekong Delta region, and the entire country, effectively meeting societal demands during the process of integration and economic development.

1.3. The Need of Implementing Elsa Speak Software in English Teaching at CTUT

After three years of training students, we have identified that one of the biggest challenges English-majored freshmen face is a lack of confidence in pronunciation and the use of standard phonetics. Many students come from rural areas or have limited exposure to native speakers, which affects their listening and pronunciation skills. Additionally, traditional teaching methods at high schools often focus on grammar and vocabulary, with less emphasis on speaking and pronunciation skills. This further complicates students' ability to use English in real-life communication.

With the advancement of technology, many English learning applications have been developed to help learners improve their language skills, particularly pronunciation. These applications utilize speech recognition technology, artificial intelligence (AI), and big data to analyze and provide feedback on learners' pronunciation. This allows learners to practice and adjust their pronunciation in real-time, effectively enhancing their communication skills.

Among these, Elsa Speak stands out as a prominent tool for supporting English learners in improving their pronunciation. Developed AI technology application, Elsa Speak can analyze users' speech and provide accurate feedback on pronunciation errors, enabling learners to adjust and enhance their speaking abilities. The software offers numerous lessons with real-life communication scenarios, helping learners to develop their language skills more comprehensively.

In conclusion, integrating Elsa Speak into the English curriculum at CTUT can significantly enhance students' pronunciation skills, boost their confidence, and better prepare them for effective communication in English.

3. METHODOLOGY
3.1. Research Methods

To complete this study, we employed quantitative and logical research methods.

Quantitative Methods: We used statistical methods such as the Paired T-test to compare the differences in scores between the students' Pre-test and Post-test: before and after the use of Elsa Speak. The aim is to determine whether there is a significant improvement in students' pronunciation skills during the experimental phase.

Logical Methods: The application of Elsa Speak has proven to be highly effective in enhancing English pronunciation skills. The combination of AI technology and data analysis enables students to quickly identify and rectify pronunciation errors, thereby improving their ability to communicate in English more naturally and confidently.

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This methodological approach ensures a robust analysis of the impact of Elsa Speak on students' pronunciation development.

3.2. Research design

This study is designed as experimental research to evaluate the effectiveness of using Elsa Speak software in improving English pronunciation skills among English-majoredfreshmen at CTUT. To ensure objectivity and reliability of the results, the research was conducted with 63 students in a three-month experimental phase using Elsa Speak along with employing traditional teaching methods.

Experimental Stage: 63 students were required to use the Elsa Speak software during three months in the second semester of the 2023-2024 academic year, from March 25th to June 25th.

3.3. Setting and Partipants
3.3.1. Setting

The setting of this study was at CTUT, a public university in Can Tho city. CTUT was responsible for training students at undergraduate level. Currently, there are over6.000students of 22 engineering, economic and social majors taking part in courses at this university.

3.3.2. Participants

Lecturers

Two lecturers interviewed were those who were teaching Listening and Speaking skills for English-majored students at CTUT. One had been teaching EFL for more than twenty years, and the other for over two years. Both obtained a Master's degrees in teaching English.

Students

The study involved 63 English-majored freshmen from theFaculty of Social Sciences at CTUT. These students were selected based on their relatively uniform English proficiency, determined through an English placement test organized by the research team.

3.4. Research instruments

To measure and assess the effectiveness of using Elsa Speak, the study employed the following tools:

Table 1: Instruments used in the study

Instruments	Functions	Elicitation Format	Response Format	Qualitative or Quantitative
1. Pronunciation Tests	To evaluate students' pronunciation levels before and after the study period	These tests were designed based on international phonetic criteria (IPA - International Phonetic Alphabet) and were evaluated by a team of experienced English instructors.	Listened Spoken	Quantitative
Elsa Speak Software	- To support students in the experimental group.	This was the primary tool. Elsa Speak provided pronunciation lessons, feedback on pronunciation errors, and practice exercises using AI voice recognition technology.	Listened Spoken	Quantitative
Semi-structured interviews	- To collect students' feedback on their experience using Elsa Speak, their challenges encountered during the learning process. - To gather additional qualitative insights - To clarify changes in pronunciation skills and other influencing factors	- Five open-ended questions for Elsa Speak users. - Two open-ended questions for lecturers	Written Spoken	Qualitative

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This comprehensive research process aimed to assess the impact of Elsa Speak on students' pronunciation abilities, providing valuable data to enhance English language teaching methodologies at the university.

3.5.   Implementation Process

Step 1: Preparation

Before commencing the study, 63 English Language majors at CTUT participated in a preliminary pronunciation test to assess their current proficiency levels. Based on the results, the research team implemented measures to enhance students' ability to effectively use the Elsa Speak software.

Step 2: Deploying Elsa Speak Software

The students in the experimental phase were introduced to and guided in the use of the Elsa Speak software. They utilized this software during official English classes as well as during their self-study time at home. Elsa Speak was used continuously for over 90 days duringthesecond semester of the 2023-2024 academic year.

**Table 2. Results of Initial Pronunciation Assessment for 63 Students**
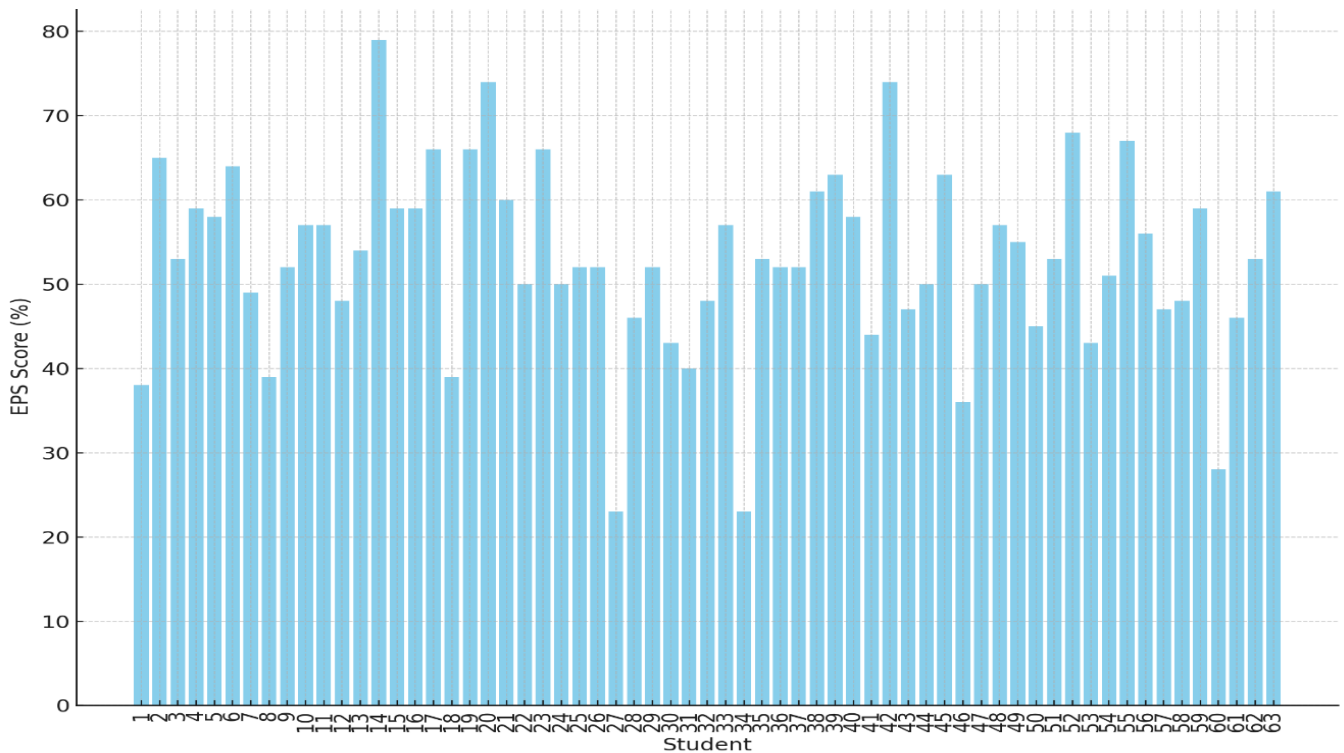
Source: Research team conducting the survey

Step 3: Assessment and Data Collection After the Study

At the end of June 2024, after three months using Elsa Speak, the 63 students participated in a final pronunciation test to evaluate their progress. Additionally, in-depth interviews were conducted with selected studentsand instructors.

After one semester of using the Elsa Speak software, the results are quite promising. Several students demonstrated significant improvement, with two students notably enhancing their pronunciation scores from 74% to 79%.

Table 3. Results of Final Pronunciation Assessment for 63 Students
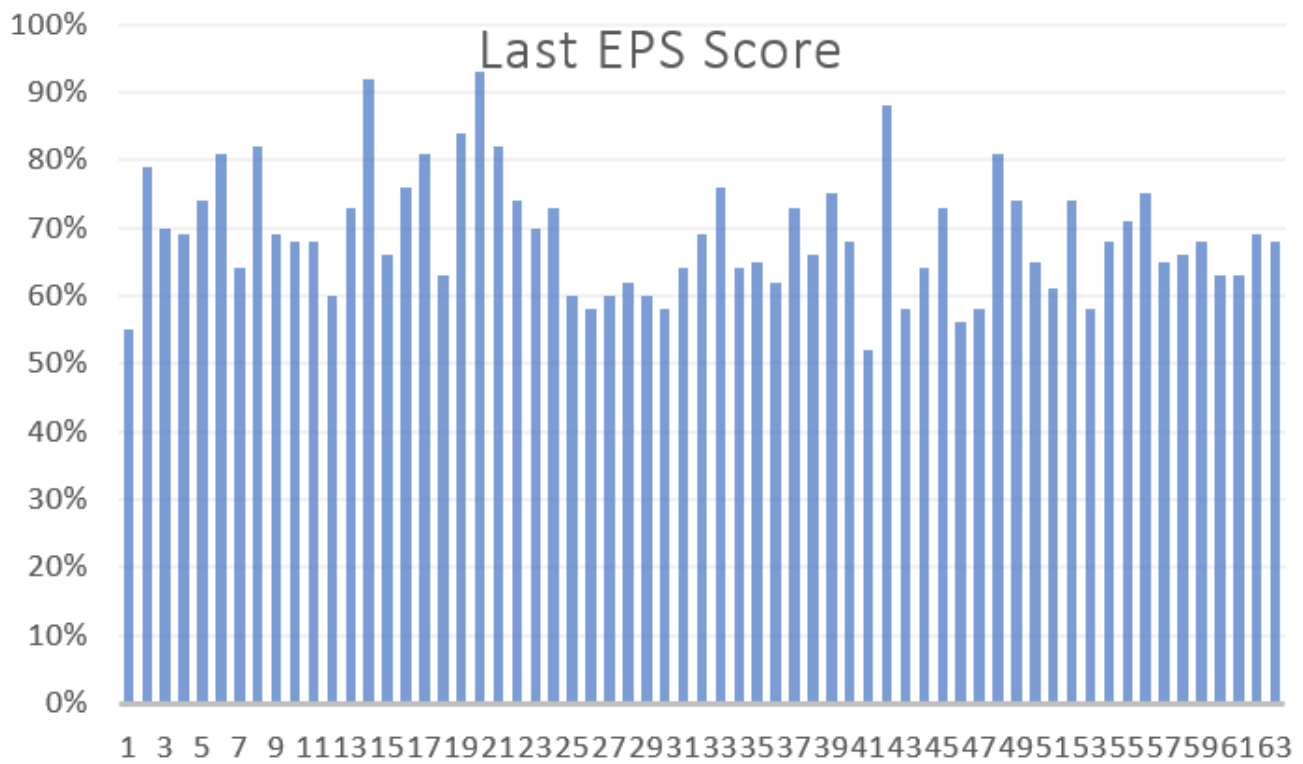
Source: Research team conducting the survey

This systematic approach, combining traditional methods with innovative technology, aims to provide a comprehensive assessment of the impact of Elsa Speak on students' English pronunciation skills.

Step 5: Data Analysis

The data from the initial and final pronunciation assessments wereanalyzed to compare the results before and after using Elsa Speak. Statistical analysis methods, such as the Paired T-test,were employed to determine any statistically significant differences between before and after the experimental phase of the study.

Specifics of the Analysis

1. **Experimental Statistics**: To calculate the mean and standard deviation for the students' pronunciation scores before and after Elsa Speak usage.
2. **Paired T-test**: to compare two related datasets - in this case, the results before and after using the software
3. **Effect Size**: To evaluate the magnitude of the difference between the two phases before and after using Elsa Speak.
4. **Interpretation**: To analyze the results in the context of the study objectives to assess the impact of using Elsa Speak on improving pronunciation skills.

In conclusion, this analytical approach provided a comprehensive understanding of the effectiveness of the Elsa Speak software in enhancing students' pronunciation, contributing valuable insights for future teaching methodologies.

Table 4. Improvement in Pronunciation Skills of Students After Using Elsa Speak.
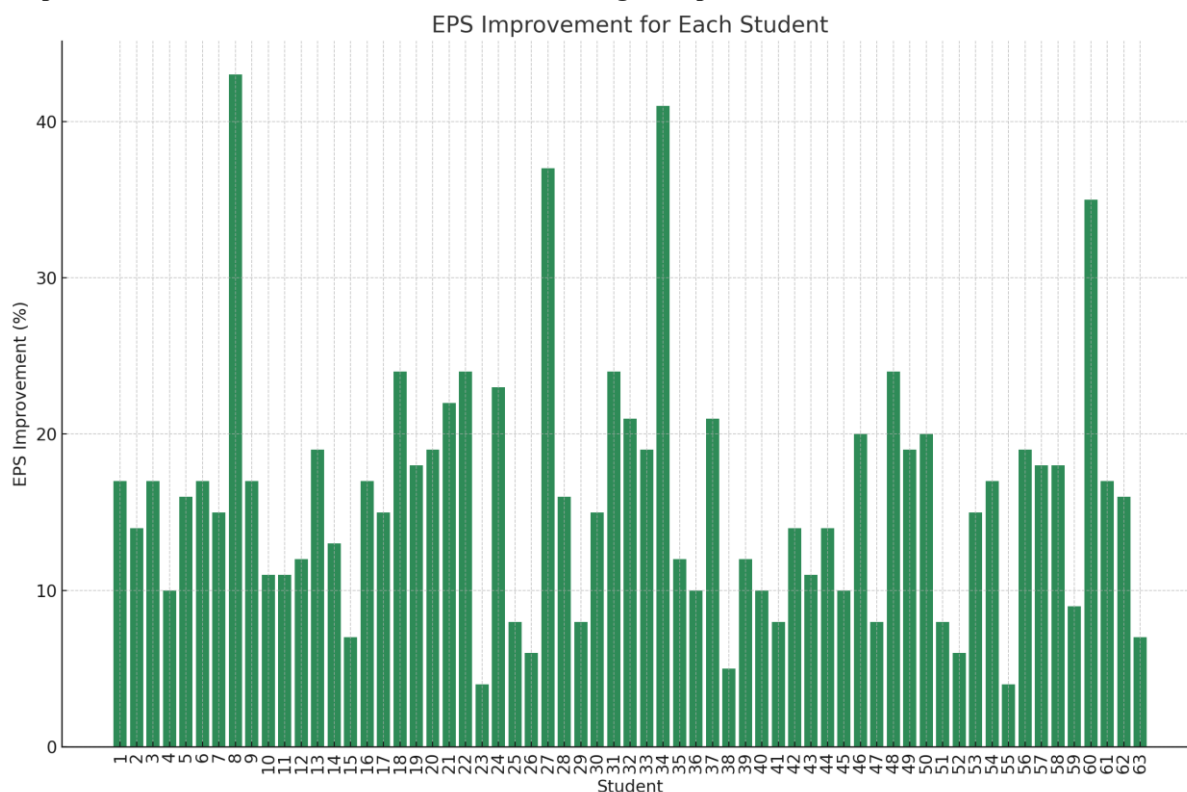
Source: Research team conducting the survey and analysis

Through the summarized data, we observed the results of the 63 students using Elsa Speak:

-**Initial EPS Scores:** Ranged from 23% to 79%

-**Final EPS Scores**: Ranged from 52% to 93%.

-**Improvement in EPS Scores**: Some students improved by up to 43%, while the lowest improvement was 4%.

The improvement levels for individual students showed significant progress, with some achieving an increase of 41% to 43%. This demonstrates that the research and application of Elsa Speak yield positive results in enhancing the speaking skills of English Language students at CTUT.

Following this, the research team conducted in-depth interviews with some selected students and experts to identify the strengths and limitations of using Elsa Speak. Based on this feedback, appropriate measures and recommendations will be made for the effective implementation of Elsa Speak for English-majored students at the university.

4. CONCLUSION AND RECOMMENDATIONS

After the study, we found that students who used Elsa Speak showed noticeable improvements in pronunciation compared to the time they had not used the software yet. This evidence suggests that integrating AI technology into English teaching can help overcome the limitations of conventional teaching methods, particularly in developing students' communication skills and confidence in using English.

The results of the in-depth interviews also indicated that students felt satisfied with their experience using Elsa Speak, which effectively helped them recognize and correct their detailed pronunciation errors. Additionally, ELSA Speak helps improve students' English self-study and self-practice by giving personalized exercises with instant feedback, allowing users to correct their mistakes right away. Its easy-to-use design makes it simple to practice anytime, even during short breaks or while commuting. Also, according to both interviewed students and instructors, using Elsa Speak enhanced students' confidence in English communication, a crucial skill in academic and future professional settings.

According to an interviewed student's opinion, Elsa Speak allows him to practice several skills through practical exercises, which helps him feel more familiar with the foreign language and no longer see English as just a boring subject. As a result, he feels much more confident when communicating in English.

To another student's idea,the app offers a safe, judgment-free environment to practice pronunciation and speaking skills. Receiving immediate feedback and trackingher own progress, she can see her noticeable improvements, which reinforces a sense of achievement. Besides, the ability to practice at her own pace allows her to gradually build her skills without the pressure

of speaking in front of others. This combination of practice and positive reinforcement helps her feel more self-assured when communicating in English.

However, the study also noted some challenges in applying Elsa Speak in teaching, such astechnical issues with the app, like connectivity problems or inaccuracies in speech recognition, students' proficiency in using the software, and even the students' financial capacity to buy the software. This underscores the need for comprehensive technical support, detailed guidance for students during the software's usage, and the policy of financial support from CTUT.

Recommendations for English Teaching at CTUT:

Integrate Technology into the Curriculum: The university should implement technologies like Elsa Speak in the English curriculum to enhance learning outcomes, especially in developing pronunciation and communication skills for English-majored students.

Training and Technical Support: Continuous training and technical support should be provided for both instructors and students to ensure successful integration of technological tools in teaching.

Further Research on Technology Applications: Future studies could explore other technological applications in English teaching for English-majoredand non-majored students. Research may focus on using Elsa Speak in different contexts or comparing its effectiveness with other AI software tools to identify best practices for improving English teaching quality.

In summary, the research has proven that Elsa Speak is an effective tool for improving English pronunciation skills among first-year university students, contributing to the improvement of English education quality at CTUTin the context of rapidly advancing technology. The combination of technology and traditional education promises to bring positive advancements in the English learning and teaching in the future for institutions in the Mekong Delta region.

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