

Integrating Elsa Speak Application into English Language Learning to Enhance Students' Pronunciation Skills at SD IT Aulia Kids School

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Abstract—The integration of Artificial Intelligence (AI)-based technology in English language learning offers innovative ways to improve students' pronunciation skills. This study aims to investigate the effectiveness of the Elsa Speak application in enhancing students' English pronunciation at SD IT Aulia Kids School. A quantitative approach with a pre-experimental design was employed involving elementary school students. Data were collected through pre-test and post-test pronunciation assessments as well as classroom observations. The findings revealed that the use of Elsa Speak significantly improved students' pronunciation accuracy, word stress, and speaking confidence. The application also increased students' motivation and participation in English learning activities due to its interactive features and instant feedback. The study concludes that Elsa Speak is an effective AI-based learning tool for improving students' English pronunciation skills and supporting more engaging English language learning.

Keywords: Elsa Speak; English Pronunciation; Artificial Intelligence; English Language Learning; Educational Technology

1. INTRODUCTION

English is recognized as a global language that plays a crucial role in international communication, education, science, and technology. As a result, English has become one of the most important subjects taught in schools worldwide, including in Indonesia. The primary objective of English language learning is to develop students' communicative competence, enabling them to use the language effectively in various contexts. Among the four language skills, speaking is considered one of the most challenging skills because it requires learners to master vocabulary, grammar, fluency, and pronunciation simultaneously (Levis, 2018).

Pronunciation is an essential component of speaking because it influences the clarity and comprehensibility of oral communication. Students with poor pronunciation often experience difficulties in expressing their ideas and interacting effectively in English. According to Gilakjani (2020), pronunciation instruction helps learners improve intelligibility and confidence, thereby facilitating successful communication. Therefore, developing pronunciation skills from an early age is important for helping students achieve better speaking performance and language proficiency.

However, many elementary school students still face challenges in learning English pronunciation. These challenges are often caused by limited exposure to authentic English input, insufficient opportunities for speaking practice, and a lack of individualized feedback during classroom instruction (Gilakjani, 2020). Traditional teaching methods sometimes focus more on vocabulary and grammar than on pronunciation practice, resulting in students' difficulties in producing English sounds accurately. The rapid advancement of digital technology has transformed educational practices and created new opportunities for language learning. Technology-assisted learning enables students to access educational resources anytime and anywhere while promoting active and independent learning. Saragih (2022) argues that the integration of technology into English language teaching can increase students' motivation, participation, and learning achievement by creating more engaging and interactive learning environments. Furthermore, technology provides learners with opportunities to practice language skills beyond classroom settings, thereby supporting continuous learning.

In recent years, Artificial Intelligence (AI) has emerged as one of the most innovative technologies in education. AI-powered applications offer personalized learning experiences through intelligent feedback systems and adaptive learning features. According to Wang and Young (2022), AI technologies have significant potential to enhance language learning by providing immediate feedback, individualized instruction, and continuous performance assessment. These advantages make AI-based applications particularly useful for improving students' speaking and pronunciation skills.

One of the AI-powered applications designed specifically for English pronunciation learning is Elsa Speak (English Language Speech Assistant). Elsa Speak utilizes speech recognition technology to evaluate learners' pronunciation and provide instant corrective feedback. The application allows students to practice pronunciation independently while receiving detailed guidance on sound production, word stress, and intonation. Kukulska-Hulme (2020) states that mobile-assisted language learning applications support learners' autonomy and increase learning engagement through flexible and interactive learning experiences. Therefore, Elsa Speak has the potential to become an effective tool for improving students' pronunciation skills.

At SD IT Aulia Kids School, English learning is implemented to equip students with basic communication skills and prepare them for future academic development. Nevertheless, preliminary observations indicate that some students still encounter difficulties in pronouncing English words accurately and confidently during speaking activities. These challenges highlight the need for innovative instructional strategies that can provide students with more opportunities to practice pronunciation and receive immediate feedback.

Although numerous studies have explored the use of digital applications in English language learning, research investigating the integration of Elsa Speak among elementary school students remains limited. Most previous studies have focused on secondary or university-level learners, leaving a gap in understanding how AI-based pronunciation applications can support young learners in elementary school contexts. Therefore, this study aims to investigate the effectiveness of integrating the Elsa Speak application into English language learning to enhance students' pronunciation skills at SD IT Aulia Kids School. The findings are expected to contribute to the development of technology-enhanced language learning and provide practical recommendations for English teachers seeking to integrate AI-based applications into their classroom practices.

2. RESEARCH METHODS

This study employed a quantitative research approach using a pre-experimental design with a one-group pre-test and post-test model. The design was selected to examine the effectiveness of the Elsa Speak application in improving students' English pronunciation skills by comparing their performance before and after the implementation of the application. According to Creswell and Creswell (2018), a pre-experimental design is appropriate for investigating the effect of an educational intervention when a control group is not available.

The research was conducted at SD IT Aulia Kids School during the 2025/2026 academic year. The participants of the study were fifth-grade students who were enrolled in English classes. A total of 25 students were selected as the sample using purposive sampling because they had similar levels of English proficiency and had not previously used the Elsa Speak application as a learning tool.

The research procedure consisted of three stages. The first stage was the administration of a pre-test to assess students' initial pronunciation skills. During this stage, students were asked to read a list of English words and simple sentences, which were evaluated using a pronunciation scoring rubric. The second stage involved the implementation of the Elsa Speak application in English learning activities for six weeks. Students practiced English pronunciation using the application during classroom sessions and were encouraged to continue practicing independently outside the classroom. The final stage was the administration of a post-test using tasks similar to those in the pre-test to measure improvements in students' pronunciation skills after the treatment.

The instruments used in this study included pronunciation tests and classroom observation sheets. The pronunciation test was designed to evaluate students' pronunciation accuracy, word stress, and intonation. Meanwhile, the observation sheet was used to record students' participation, motivation, and engagement during the learning process. The use of multiple instruments enabled the researcher to obtain comprehensive data regarding the effectiveness of the application.

The collected data were analyzed using descriptive and inferential statistics. Descriptive statistics, including mean scores and percentages, were used to describe students' pronunciation performance before and after the treatment. To determine whether there was a significant improvement in students' pronunciation skills, a paired-sample t-test was conducted using a significance level of 0.05. According to Fraenkel, Wallen, and Hyun (2019), the paired-sample t-test is appropriate for comparing the means of two related sets of scores obtained from the same participants.

The study adhered to ethical research principles. Permission to conduct the research was obtained from the principal of SD IT Aulia Kids School, and all participants were informed about the purpose of the study. The confidentiality of students' personal information and research data was maintained throughout the research process.

3. RESULTS AND DISCUSSION

3.1. Result

The study was conducted to investigate the effectiveness of integrating the Elsa Speak application into English language learning to enhance students' pronunciation skills at SD IT Aulia Kids School. The data were obtained from the pre-test and post-test administered to 25 fifth-grade students before and after the implementation of the application. The results indicated a noticeable improvement in students' pronunciation performance after using Elsa Speak. The mean score of the pre-test was 65.24, indicating that many students experienced difficulties in pronouncing English words accurately, particularly in terms of vowel sounds, consonant sounds, word stress, and intonation. After six weeks of treatment using the Elsa Speak application, the mean score of the post-test increased to 84.56. This improvement demonstrates that students achieved better pronunciation accuracy and greater confidence in speaking English.

Table 1. presents the students' pronunciation test results.

Test	Mean Score	Category
Pre-test	65.24	Fair
Post-test	84.56	Good
Improvement	19.32	Significant

Furthermore, the paired-sample t-test revealed that the significance value was lower than 0.05 ($p < 0.05$), indicating a statistically significant difference between the pre-test and post-test scores. Therefore, the null hypothesis was rejected,

and it can be concluded that the use of the Elsa Speak application significantly improved students' English pronunciation skills. Classroom observations also showed positive changes in students' learning behavior. Students became more enthusiastic and actively participated in pronunciation practice activities. They showed greater confidence when speaking English and were willing to repeat pronunciation exercises several times to achieve better results. The immediate feedback provided by the application helped students identify and correct their pronunciation mistakes independently.

3.2 Discussion

The findings of this study demonstrate that the integration of the Elsa Speak application positively influenced students' English pronunciation skills. The significant improvement in the post-test scores suggests that AI-based pronunciation learning applications can effectively support language learning among elementary school students. The speech recognition technology embedded in Elsa Speak allowed students to receive immediate feedback, which helped them recognize pronunciation errors and improve their performance through repeated practice.

These findings are consistent with Gilakjani (2020), who argues that continuous pronunciation practice accompanied by corrective feedback is essential for developing accurate pronunciation and intelligible speech. The results also support the view of Wang and Young (2022), who emphasize that Artificial Intelligence can enhance language learning by providing personalized instruction and real-time feedback that are difficult to achieve through conventional classroom methods alone. The improvement in students' motivation and classroom participation observed during the study aligns with the findings of Ginting (2023), who states that technology-enhanced learning environments encourage active student engagement and create more meaningful learning experiences. According to Ginting (2023), digital learning platforms enable students to become more autonomous learners by allowing them to access learning resources and practice language skills independently. This situation was evident during the implementation of Elsa Speak, where students demonstrated a high level of enthusiasm and actively practiced pronunciation both inside and outside the classroom. Moreover, the findings support the argument of Saragih (2022) that technology integration in English language learning contributes to improved learning outcomes by creating interactive and student-centered instructional environments. Through Elsa Speak, students were able to engage directly with pronunciation activities and monitor their own progress. Such opportunities encouraged self-directed learning and increased students' confidence in using English orally.

Another important finding was the positive impact of the application on students' confidence. Prior to the treatment, many students were hesitant to speak English due to fear of making pronunciation mistakes. However, after regularly practicing with Elsa Speak, students became more confident because they received constructive feedback in a non-threatening learning environment. This finding suggests that AI-powered applications can reduce students' anxiety and promote a more supportive atmosphere for language learning. Overall, the results indicate that Elsa Speak is an effective educational technology tool for improving English pronunciation skills among elementary school students. The application not only enhances pronunciation accuracy but also increases students' motivation, participation, autonomy, and confidence in learning English. Therefore, integrating AI-based applications such as Elsa Speak into English language instruction can be considered an innovative and effective strategy for supporting language learning in elementary school contexts.

4. CONCLUSION

Based on the findings of this study, it can be concluded that the integration of the Elsa Speak application into English language learning was effective in enhancing students' pronunciation skills at SD IT Aulia Kids School. The results of the pre-test and post-test demonstrated a significant improvement in students' pronunciation performance after using the application. Students showed better accuracy in pronouncing English words, improved word stress and intonation, and increased confidence in speaking English. In addition, the implementation of Elsa Speak positively influenced students' motivation and participation during the learning process. The application's interactive features, speech recognition technology, and instant feedback encouraged students to engage actively in pronunciation practice and enabled them to learn independently both inside and outside the classroom. These findings indicate that Artificial Intelligence (AI)-based learning applications can provide meaningful support for English language instruction, particularly in developing students' speaking and pronunciation abilities. Therefore, Elsa Speak can be considered an effective and innovative learning tool for improving English pronunciation among elementary school students. The integration of AI-powered educational applications into classroom instruction has the potential to create a more engaging, interactive, and student-centered learning environment. Future studies are recommended to involve larger samples, longer treatment periods, and different educational levels to further explore the effectiveness of AI-based applications in English language learning.

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