

ENHANCING PRONUNCIATION SKILLS IN EFL STUDENTS THROUGH THE ELSA SPEAK APPLICATION

Suci Permatasari

Universitas Islam Negeri Sumatera Utara, Indonesia
Email: Suci0304202085@uinsu.ac.id

Yani Lubis

Universitas Islam Negeri Sumatera Utara, Indonesia
Email: yanilubis@uinsu.ac.id

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Abstract: This study investigates the effectiveness of the ELSA Speak application in improving the pronunciation skills of EFL students. Utilizing a quasi-experimental design, the study compared the pronunciation skills of students using ELSA Speak with those using the U-Dictionary application. Data were collected through pre-tests and post-tests, and analyzed using paired sample t-tests. The researcher employed a paired sample t-test to determine if there was a statistically significant disparity between the pre-test and post-test scores of students' pronunciation abilities following the utilization of the ELSA Speak App in the experimental class and u-dictionary in the control class. The results indicate that students using ELSA Speak showed significant improvement in pronunciation skills compared to those using U-Dictionary. These findings suggest that ELSA Speak is an effective tool for enhancing pronunciation skills in EFL contexts, providing valuable insights for educators and curriculum developers.

Keywords: *ELSA Speak; pronunciation; technology.*

INTRODUCTION

Pronunciation is a crucial element in language acquisition, essential for effective communication (Julia, 2002). Despite its importance, EFL learners often struggle with accurate pronunciation due to various factors, including native language interference and limited exposure to the target language (Fadillah, 2020). Technological advancements offer innovative solutions to these challenges. Among these, the ELSA Speak application utilizes AI to provide personalized pronunciation practice, offering a promising tool for improving pronunciation skills. This study aims to evaluate the effectiveness of ELSA Speak in enhancing EFL students' pronunciation.

Pronunciation is important because English has become the primary language for spoken communication worldwide (Crystal, 2003). Pronunciation skills support the development of other language skills as they could not be learned separately Gomez and Pablo (2020). In improving students' speaking ability, of course, is to improve the oral production of students. In other words, there are some essential elements that should be paid attention. The essential elements in speaking are such as vocabulary, pronunciation,

grammatical function, intonation, stress, fluency and others (Ramasari, 2017). Modern models of language and language learning now give a central place to social and psychological factors involving identity and speaker agency that affect all aspects of language learning and use, including pronunciation (Douglas Fir Group, 2016; Ellis, 2019; Larsen-Freeman, 2019).

Ridwan (2017) argue that accents from the native tongue, including stress, rhyme, intonation, and speech sounds, contribute to difficulties in pronouncing English as a foreign language. These factors have an impact on the second language. In Indonesia, the students are had many difficulties in pronounce English words as correctly and accurately. This phenomenon is impacted by a multitude of factors, including biological influences such as ear perception and the level of exposure to the target language and the mother tongue (Fadillah, 2020). In addition, the result of the Asassfeh et al. (2011) research showed that speaking proficiency was identified as the most challenging skill for undergraduate English language learners in Jordan. The students encounter challenges when it comes to pronouncing English vowels and consonants,

which are not present in the Arabic language. It can be concluded that EFL students still face some difficulties in English pronunciation which are influenced by several factors.

The world is currently experiencing rapid development, including educational technology. This progress has affected many things, including the education system, which is very important for the learning process (Nurdyansyah et al., 2017). Budiman (2017) argues that the integration of technology into learning methods will provide students with a more extensive knowledge base. Technology provides language learners with a variety of resources, argue Bull and Ma (2001). Teachers should encourage students to find suitable activities using computer technology in order for them to learn languages successfully, according to Harmer (2007) and Gençler (2015). Clements and Sarama (2003) state that using appropriate technological materials can benefit students. There are many technologies that are useful for education, especially learning English. One of them is Elsa Speak.

The utilization of technology, specifically through applications like Elsa Speak, has brought about significant changes in the learning process. Elsa Speak offers an innovative solution to enhance language pronunciation skills by harnessing voice recognition technology. By combining artificial intelligence and advanced speech recognition technology, this application provides an interactive and personalized learning experience. Students can access pronunciation exercises anytime and anywhere, seamlessly integrating language learning into their daily lives. The technology enables Elsa Speak to deliver immediate feedback, aiding students in identifying and rectifying pronunciation errors effectively. Moreover, the application's capability to offer tailored exercises based on individual needs enhances the efficiency of the learning process. With regular updates and the incorporation of multimedia features, Elsa Speak creates an engaging and practical learning experience. Thus, the utilization of technology, particularly through Elsa Speak, has opened new avenues in improving students' pronunciation skills and elevated language learning to a more adaptive and effective level. The Elsa Speak application emerges as a promising solution, employing cutting-edge technology to address pronunciation challenges among students. Therefore, this study aims to investigate the effectiveness of Elsa Speak application as a tool in improving EFL students' pronunciation skills.

Previous studies have examined the Elsa Speak Application. Adhan Kholis (2021) conducted research to determine the impact of the English Language Speech Assistant (ELSA) Speak application on the pronunciation skills of English language learners at Nahdlatul Ulama University of Yogyakarta (UNU). The study involved interviews and pronunciation tests, and the findings suggest that ELSA Speak is an effective and efficient tool for improving students' pronunciation abilities. Consequently, students are encouraged to actively engage in the process of learning pronunciation. A recent study conducted by Rolisda and Agnira (2021) aimed to assess the viewpoint of 112 English Department students on the effectiveness of Elsa Speak, a tool employed in their online pronunciation course. The researchers utilized questionnaires and interviews to gather data. The majority of participants displayed a favorable disposition towards Elsa Speak when incorporating it into their online pronunciation classes. While a few participants expressed negative feedback, the benefits of using the tool outweighed the drawbacks. A study conducted by Akhmad and Munawir (2022) investigated the influence of the Elsa Speak application on the English pronunciation proficiency of English major students at the University of West Sulawesi. The findings indicate that the program has a substantial impact on enhancing students' English pronunciation abilities.

ELSA Speak is a useful tool for helping students pronounce words correctly (Kholis, 2021). However, teachers rarely use apps in teaching pronunciation. For this reason, this study aims to find out the effectiveness of using ELSA Speak as a tool to improve EFL students' pronunciation skills.

Technology, according to Bull and Ma (2001), provides language learners with an infinite amount of resources. Numerous research examined the influence of technology on language acquisition, highlighting the function of applications in enabling self-directed and collaborative learning experiences. (Aminatun and Oktaviani 2019) the development of technology provides various learning strategies that are suitable to make students become independent learners. MALL (Mobile Assisted Language Learning) is an educational technology that aids in the acquisition of foreign languages. Mobile-Assisted Language Learning (MALL) is the latest learning way in the language education where applications or websites are used to facilitate students learning activities (Nuraeni et al., 2020).

Mobile-Assisted Language Learning (MALL), as an approach to learning English as foreign language is considered in the learning environment as a promising technology for teaching a language (Isamiddinovna, 2019). MALL is associated with the usage technology especially mobile phone technology in the field of language learning. Unlike learning in the conventional study (Luis, 2016). The usage of technology, especially mobile phone in classroom activities can help learning aims, for instance assisting all stages of difficulty in learning, developing learners' achievement and reaching learners that would not otherwise have the chance to participate in education (Elaish, Monther M. Shuib, Liyana Abdul Ghani et al.) According to recent technological advancements, the majority of teachers find technology to be easy to use and think it can save them time and effort (Golshan & Tafazoli, 2014). In the realm of English as a Foreign Language (EFL) education, applications for language learning have become indispensable resources, transforming the conventional methods of language learning.

These days, mobile devices and apps for phones are becoming an important part of learning, even when learning a new language. Additionally, a study by Grimshaw and Cardoso (2018) revealed the impact of mobile devices for improving students' fluency. This study was under the assumption that ESL learning practices put less emphasis on students' fluency and language automatization. Therefore, a mobile game application namely Space team ESL provides pre-constructed learning activities to address this issue by encouraging students to produce oral language and thus practice their fluency. There are many apps designed for language learning that can be used by EFL students which are very beneficial and motivating for language learning based on their functionalities, emphasizing their roles in fostering different language skills such as applications focus on vocabulary acquisition and grammar, including pronunciation-centric apps like Elsa Speak, specialize in honing specific language facets. Wongsuriya (2020) argue in pronunciation skills, many developers have made apps for smartphones and laptops that make it easier to say difficult English words or sentences. These apps are very helpful for students because they help them model pronunciation and practice both theory and practice in saying English words or sentences. Additionally to apps, many websites that show how to pronounce English words have also become very popular and easy to access in online.

ELSA Speak is an English Language Speech Assistant software that utilizes artificial intelligence (AI) to help users improve their pronunciation skills. This is an Android application that can be downloaded for free from either Google Play or the App Store. ELSA Speak offers a range of functionalities to assist students with accurately pronouncing words, phrases, and sentences with an American accent. It does this by providing them with opportunities to practice speaking. The user may use the microphone icon to simulate speaking as if they have previously heard the audio. A study done by Ahmad and Munawir (2022) has shown that the use of the ELSA Speak application may lead to substantial enhancements in students' pronunciation abilities. It was found that the results of these research were consistent with each other. The potential connection may stem from the app's capabilities in enabling students to refine their pronunciation skills via the use of sophisticated algorithms and artificial intelligence, which provide personalized assistance and feedback. ELSA Speak Application uses speech recognition technology that can help users to help improve their English pronunciation. ELSA Speak application provides more lessons and more topics for users to practice pronunciation, starting from practicing English words, phrases, and sentences. Another feature that ELSA Speak application offers is an interactive dictionary, which will help users how to pronounce the word or phrase they are looking for (Anggraini, 2022). The ELSA Speak application is suitable learning pronunciation (Sarmita Samad, 2019).

According to Yates (2002), pronunciation is the process by which a person makes sounds that are used to convey meaning. These sounds include suprasegmental elements like stress, timing, phrasing, and rhythm, as well as segmental elements like the specific sound of a language. Kelly (2000) classified the primary components of pronunciation into phonemes and suprasegmental features. The various sounds that form a language are called phonemes, and they fall into two categories: vowel sounds and consonant sounds. Stress, intonation, and the way sounds change during speech are examples of suprasegmental features. English pronunciation is a basic skill that is very important in developing speaking, listening, and speaking English skills. By learning pronunciation, you will know how to pronounce a word correctly (Cakmak, 2019). According to Purbowati (2008), pronunciation is among the most crucial factors connected to Learning a language is the main goal, particularly when

speaking. English pronunciation is one of the trickiest skills to acquire, and learners are supposed to spend a great deal of time improving their pronunciation (Aliaga García, 2007; Pourhosein Gilakjani, 2016). When someone uses a word that is pronounced differently than its true meaning, pronunciation can be crucial. To ensure the purity of pronunciation, it is necessary to study the work of articulation organs when pronouncing each sound (Abdullayeva Dildora Abduraxmonovna, 2020). For this reason, it is crucial that native speakers acquire and perfect accurate pronunciation.

In Bahasa Indonesia, there is complete correspondence between the spoken and written forms of the language. However, in the English language, the written and spoken forms differ. Pronunciation may be defined as the outcome of the sounds produced in a language, namely English, and their impact on the listeners. Pronunciation is a crucial element of successful communication. It helps children transfer sounds that are connected with meaning. The learner may improve their pronunciation skills by actively participating in pronunciation exercises led by the teacher. The teacher will guide the pupils in accurately articulating the words. According to Maxon (2009), one technique to improve students' pronunciation is to urge them to search for new vocabulary terms and challenging words. Subsequently, they have the ability to articulate and replicate the words. Repetition may significantly impact a student's ability to comprehend and master precise pronunciation. The recommended sequence for acquiring language abilities is as follows: listening, speaking, reading, and finally writing. Repetition emerges as the primary method for teaching pronunciation. By uttering the command "repeat!" in a natural manner, the pupils will obediently mimic and reiterate the words said by the instructor. There are two kinds of class in conducting repetition: solo and full class. Choral drilling is the term used to describe the practice of repetition throughout the whole class. The pupils get a sense of tranquility and self-assurance as a result of collectively practicing the pronunciation of the phrases. Therefore, they have no sense of shame. Nevertheless, it is important for the instructor to attentively assess the pupils' pronunciation. The second kind of repetition is known as individual drilling, when pupils repeat the phrases on their own. During the individual practice, the teacher's pronunciation of words will be more audible to the pupils.

METHOD

This study employs a quasi-experimental design with a control group using U-Dictionary and an experimental group using ELSA Speak. Participants were eleventh-grade students from a high school in North Sumatra during the 2023/2024 academic year. Data were collected through pre-test and post-test pronunciation assessments, each comprising 15 multiple-choice questions. The experimental group received explicit instruction on using ELSA Speak, while the control group used U-Dictionary. Data were analyzed using paired sample t-tests to determine the effectiveness of the interventions. This study applies a quantitative approach and incorporates a quasi-experimental research methodology. Anderson (2005) describes this experimental approach as including the provision of many opportunities to different groups and the analysis of quantitative measure variations, such as student scores, in order to facilitate comparisons. The aim of the penetration design used in this study was to evaluate and differentiate the effects of two interventions: namely, the usage of U-Dictionary in the control group and the adoption of the ELSA Speak application within the experimental group. The research utilizes two groups, specifically a control group and the experimental one, using the pre- and post-test experimental approaches in both groups.

An investigation was conducted at a high school in North Sumatra to assess the effectiveness of the ELSA Speak application in improving the pronunciation abilities of high school pupils. The research included conducting a comparison of the students' performance beforehand to and after their participation in the ELSA Speak applications class. The study sample comprises eleventh-grade students for the academic year 2023/2024. Scientists conducted a preliminary assessment, followed by a treatment, and then a final assessment in order to collect data. As part of the pre-test, researchers conducted a pronunciation evaluation that included 15 questions with multiple choices for assessing the participants' ability to pronounce words correctly. Afterwards, the researcher will provide treatment by using the ELSA Speak software in the laboratory environment and the u dictionary in the control class. An evaluation will be carried out subsequent to the treatment. This assessment is carried out to assess the pupils' competency in pronunciation. This portion of the examination covers the same material as the first test. The objective of this examination is to ascertain if using ELSA Speak as

a pedagogical tool may improve students' proficiency in pronunciation. The examination has a total of 15 inquiries.

In order to determine whether a significant difference exists between the mean data values prior and following treatment, the t-test is employed in this study as a descriptive and inferential quantitative analytic method.

RESULTS AND DISCUSSION

Validity and reability

To assess students' pronunciation skills, researcher used pre-test and post-test instruments with multiple choice questions. The validity test of the instrument used content validity. Researchers must test both the Validity and Reliability of the measuring instrument they intend to use (Sürücü, 2020). Based on the calculated of validity test so that 15 pre-test multiple choice questions are valid. After that, the reliability of the test was carried out by the researcher which is presented below:

Table 1. *Reliability statistics*

Reliability Statistics	
Cronbach's Alpha	N of Items
.854	75

Researchers administered a reality test and evaluated it using Cronbach's Alpha. The table indicates that the test reliability result is 0.854. findings of the reliability test (α) >0.6 support the dependability of the findings.

Prior to administering the therapy, the researcher administered a pre-test to both the control group class and the group participating in the experiment. Subsequently, the researcher administered the therapy to both groups. Within the experimental class, the researcher provided explicit guidance on how to use the ELSA Speak program. Subsequently, ELSA Speak was used in the educational procedure, affording pupils the chance to perceive accurate pronunciation using the program. Additionally, students were able to identify their pronunciation problems by analyzing the system's response inside the program. Simultaneously, the control class used the u-dictionary application throughout the learning process. Students are provided with the chance to acquire accurate pronunciation skills. Following the implementation of the therapy, the researcher conducted the post-test in both the control class and experimental class using the same test questions as the pre-test.

Data analysis was used to analyze students' pronunciation skills. Following their participation

in an experimental lesson using ELSA Speak and a controlled class using U-dictionary, the outcomes were as follows:

Table 1. *Descriptive statistic of the data ELSA Speak app*

Data	Experiment ELSA Speak	
	Pre-test	Post-test
Mean	62.14	75.55
Median	66.00	77.50
Min	36	44
Max	84	100
Varian	171.933	168.924
Range	48	56
Std Deviation	13.112	10.403

Table 2. *Descriptive statistic of the data U-dictionary app*

Data	Control u-dictionary	
	Pre-test	Post-test
Mean	55.05	62.68
Median	55.00	65.00
Min	30	44
Max	77	80
Varian	160.998	108.227
Range	47	36
Std Deviation	12.688	10.403

Normality test

The researcher conducted a normality test before analyzing the data with a paired sample t-test after it was collected. This study used the Shapiro-Wilk method because the number of samples was less than 50.

Table 4. *Tests of normality*

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Stati	df	Si g.	Stati	df	Si g.
Pre-control	.193	22	.033	.956	22	.411
Post-control	.137	22	.200	.950	22	.312
Pre-experimental	.173	22	.087	.960	22	.493
Post-experimental	.165	22	.122	.939	22	.190

Due to the normality test, the findings achieved in the control class were 0.411 during the pre-test and 0.312 during the post-test. Both of these values

were larger than 0.05. The prior to and following the test data in the control class exhibit normal distribution, as confirmed. In addition, we performed a normality test on the data collected before and after the test in the experimental class, which yielded values of 0.493 for the pre-test and 0.190 for the post-test. This indicates that the data from the experimental class is normally distributed, since the values of 0.493 and 0.190 are both over the significance level of 0.05.

Mean score of pre-test and post-test

Based on the data collected of this research, The use of ELSA Speak application has a great impact on the pronunciation skills of high school students. Table 5, which is located below, presents the results of the pre- and post-tests.

Table 5. Paired samples statistics

		Mean	N	Std. Deviation	Std. Error Mean
Control	Pre-test	55.05	22	12.688	2.705
	Post-test	62.68	22	10.403	2.218
Experimental	Pre-test	62.14	22	13.112	2.796
	Post-test	75.55	22	12.997	2.771

Based on the data presented in table 5, it shows that the mean score in control class of students' pronunciation skills in the pre-test was 55.05 and increased to 6.68 in the post-test. It indicates that after using dictionary application in learning process, students' pronunciation skills improved 13,86%. Meanwhile in experimental class students' pronunciation skills in the pre-test was 62.14 and increased to 75.55 in the post test. It indicates that after using ELSA Speak in learning class, students' pronunciation skills improved 21,58%. This implies that the mean score in the experimental class has increased significantly greater than the control class as a consequence of the Elsa Speak app being integrated as an additional aid during the learning process.

Next, the researcher employed a paired sample t-test to determine if there was a statistically significant disparity between the pre-test and post-test scores of students' pronunciation abilities following the utilization of the ELSA Speak App in the experimental class and u-dictionary in the control class.

Table 6. Paired sample test

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Control	Pre-test - post-test	-7.636	3.799	.810	-9.321	-5.952	-9.428	21	<.001	<.001
	Experiment	-13.409	10.707	2.283	-18.156	-8.662	-5.874	21	<.001	<.001

Based on table 6 of the t-test (Paired Sample t-test), the Sig (2-tailed) statistical value both in control dan experimental class are 0.001, less than the 0.05 threshold. The mean post-test scores for the experimental group (75.55) were significantly higher than the pre-test scores (62.14), indicating a 21.58% improvement. In contrast, the control group showed a 13.86% improvement. Paired sample t-tests confirmed the statistical significance of these improvements (p < 0.001). The results show that ELSA Speak application and u-dictionary is effective in improving students' English pronunciation.

CONCLUSION

This research used a quantitative methodology, namely a quasi-experimental design, to assess and evaluate the impact of the u-dictionary and ELSA Speak apps on student pronunciation. The findings demonstrated a considerable improvement in students' pronunciation abilities via the integration of the ELSA Speak app, as seen by higher post-test results in the experimental class when compared to the u-dictionary app. The paired sample t-test also verified the efficacy of both applications in enhancing students' English pronunciation. This study demonstrates that the ELSA Speak application significantly improves EFL students' pronunciation skills compared to traditional methods. ELSA Speak app can support the students in improving the pronunciation(Kholis, 2021). These findings support the integration of AI-based tools in language education to address pronunciation challenges. Educators are encouraged to incorporate ELSA Speak into their teaching practices. Future research should explore long-term impacts and the effectiveness of ELSA Speak across diverse learner populations. This study is important because it focuses on meeting the increasing need for efficient pronunciation aids in language teaching. Educators and researchers may acquire valuable information regarding the efficacy of technology in improving speech abilities by analyzing the Elsa Speak program. The results may guide teaching methods, enhance the development of future language acquisition software, and ultimately support students aiming to improve their language skills.

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