

The Effect of Using Cake and ELSA Speak Application on Students' Pronunciation Skills at the Eighth Grade of SMP Negeri 25 Medan

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A B S T R A C T

The CAKE application is an English learning application that functions to increase student learning activities in the field of English. Meanwhile, ELSA Speak, an 'Education Tech' startup based in Silicon Valley, United States, uses speech recognition technology and Artificial Intelligence to help students improve their English-speaking skills. The objective of this research is to determine the effect of using CAKE and ELSA Speak on students' pronunciation skills in the eighth grade at SMP Negeri 25 Medan. The method used in this research is quantitative approach with data collection stages, namely pre-test and post-test, and then the data that has been obtained is analyzed using the SPSS application. Based on the data analysis, the researcher found that the iELSA iSpeak iApplication can improve students' pronunciation skills. This research shows that there are several problems experienced by junior high school students in learning pronunciation skills. Therefore, this research aims to describe the problem of speaking ability in junior high school and the students' learning difficulties in current pronunciation skills. As a result of the pre-test and post-test, the mean scores, which were given, were 64.83 and 91.38. The students who were taught using CAKE and ELSA iSpeak and the students who were taught using the traditional method exhibited significantly different levels of achievement. The statistics also revealed that students believed that pronunciation could be improved by using instructional material. The majority of them also mentioned that they included educational media into their regular discourse.

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Introduction

English has become one of the required subjects in Indonesian elementary and secondary schools. Listening, reading, writing, and speaking are the four English language skills that students learn in school. Speaking, in particular, is an essential skill for students to develop because it is related to daily activities. Speaking is the capacity to explain oneself in real-life settings by articulating a succession of ideas (Manurung et al., 2023). Although pronunciation practice is sometimes disregarded by teachers because they believe there are more important skills to master, such as grammar, pronunciation competence is nevertheless regarded as a second-level object in school learning. As a result of this fact and the limitations placed on teachers by learning tools for teaching pupils pronunciation, many students in. Students who are comfortable communicating do not wish to disclose explicit information. Pronunciation is crucial in communication, especially when speaking.

Xiaoyu (2018) said in his writing that using the English application Cake App is an effective new method for arousing students' interest and improving their English

speaking skills. In his study, he also detailed five benefits gained from using the Cake App English application to improve students' English speaking proficiency. Xiaoyu (2018) found that teachers can adapt the use of the English language application Cake App to suit students' needs in strengthening their English language skills. He highlighted the need for educators or teachers to have the latest and continuously updated learning resources to suit current developments and the curriculum. The use of the Cake App English language application is directed at improving students' comprehensive abilities in English, especially in the speaking aspect.

Anggraini (2022) states that ELSA Speak, which was designed by Vu Van in 2015 in San Francisco, United States, combines artificial intelligence and voice recognition components to improve the quality of English pronunciation. This application uses speech synthesis technology to teach vocabulary and grammar to users (Muamar et al., 2022). With voice recognition technology, ELSA can detect more than 95% of English pronunciation errors (Luu et al., 2021). Users can receive feedback to correct their pronunciation errors, with more than 1300 lessons and 70 relevant topics to practice pronunciation, ranging from words to phrases to suit user needs (Tran, 2019). ELSA Speak has a number of advantages, including: (1) displays animated English diagrams showing the correct position for each vowel and consonant sound. This allows the user to see the exact position of the mouth when pronouncing the sound, rather than just hearing it; (2) using software with a voice recognition feature that provides immediate feedback if words are pronounced correctly, allowing the user to repeat the words multiple times for improvement; (3) easy to access at any time without high costs. Users only need to access this application via a laptop or Android cellphone and train according to their free time (Zakiyyah et al., 2022).

From the explanation above, now we know the importance of pronunciation when communicating in English, with the right pronunciation, you can effectively use every word you say when having a conversation with other people. Indonesian students, especially in the author personal experience from eighth-grade junior high school class in SMP Negeri 25 Medan are not familiar with learning how to pronounce English words. These learning patterns need to be changed immediately away because they call for complete command of the vocabulary's pronunciation and meaning.

Table 1. The average data of English subject score at SMP N 25 Medan in 2019-2023.

Years	Average (English Subject)	KKM
2019/2020	69	70
2020/2021	67	70
2021/2022	68	70
2022/2023	68	70

Based on Table 1. above, we can see that the English scores of students at SMP N 25 Medan do not reach the average scores for English Subjects. One of the topics of concern in the subject of English is Pronunciation. Even if you understand the meaning of the word, incorrect pronunciation will make it difficult to pronounce in English. Since they need more practice with English pronunciation during the teaching process, the majority of students want to speak English with a nice accent (Muamar, 2022).

A mispronunciation or miscommunication of a person was obtained based on the researcher's experience. It is due to mispronunciation, and the researcher uses the media to fix the problem. Technology can enhance student learning outcomes, particularly when studying, and digital technology can no longer be separated since research evidence gives knowledge and determination that technology, particularly digital technology, has been demonstrated to improve and accelerate learning (Tampubolon et al., 2021). This media could assist users enhance their speaking skills. The first launch product is a mobile app called Cake and Elsa Speak. It enables users to improve their pronunciation through practice. Furthermore, this program is simple and enjoyable to use.

Nevertheless, most teachers are unprepared to educate utilizing social media. It is tough to break their habit of face-to-face instruction or traditional education (Sipayung, 2021). In learning English pronunciation, we are not only learn from books and dictionaries, but we can also learn from other media such as a cell phone, listening to a music, or watching a movie on television or a laptop (Marjun & Sa'adah, 2022). Based on the information presented above, teachers should be able to devise an inventive approach to remove the kids' barriers to communicating. Nowadays there has been a rise in Cake and Elsa Speak applications to improve students language skills. This research however focus solely on students pronunciation skill. Utilizing Cake and Elsa Speak applications to better improve students' pronunciation skill. Therefore this research will be conducted to identify the effect of Cake and Elsa Speak application in improving students' pronunciation in teaching pronunciation at SMP Negeri 25 Medan.

Research Method

The researcher will conduct the research by using the Quantitative Research Design Approach, specifically in Quasi Experimental. Anderson (2005) stated that the quasi experimental approach is a comparison method in which various groups are given different chances and show variations in quantitative metrics, such as student test scores. This method has dominated educational research for centuries, but more varied techniques are replacing it. Experimental research methods are more adaptable and have long been utilized in assessment initiatives.

The purpose of the experiment is to compare and contrast the effects of Cake and ELSA Speak Application on student pronunciation. In experiments, participants will not be assigned to groups at random. Since the researcher was unable to create a fake group due to the limitations of the study setting, the experiment will be employed. According to the statement above, the researcher will be conducted the research utilizing an experimental design with pre- and post-tests for both groups. The differences in the Pre Test between the groups then will be determined by the effect of the treatment. For more understanding, the research design will be shown in the table below:

Table 2. Research Design

Groups	Pre-Test	Treatment	Post Test
Experimental Groups	√	CAKE Application	√

(VIII E)			
Experimental Groups	√	ELSA Speak	√
(VIII F)			
Control Group (VIII G)	√	Conventional Method	√

The 248 pupils in the eighth grade at SMP N 25 Medan, which is organized into seven classes, make up the population of the study. The Eighth grade of SMP N 25 Medan is listed in the table below. This study's sample method was cluster random sampling. Cluster random sampling involves selecting groups/clusters and then drawing individual samples from the designated cluster Myers & Hansen (2011) cited in (Fajrin & Leonardi, 2019) and the researcher took as the sample 93 students.

The significance of the product-moment correlation was tested using the t-test to determine whether there is a relationship between the variables. IBM Statistic SPSS 20 for Windows can be used to conduct this investigation. with the following requirements: H_a was accepted and H_0 was refused if $t_{count} > t_{table}$ later. H_a was refused if t_{count} exceeded t_{table} , but H_0 was accepted. Prior to the t-test, there are certain data tests, including those for normality, homogeneity, and the T-Test where $\alpha = 0.05$.

Result and Discussion

From the Data below The researcher gave pre-test to both groups, experimental and control group to see ability of each student before doing the treatment. The next step, the researcher gave treatment by using Cake and Elsa Speak to the experimental group while the control group without using Cake and Elsa Speak. After applying the treatment, the researcher gave post-test to both group, experimental and control group with the same test.

By using the cake and Elsa Speak application have improved students' pronunciation, especially in Sounds, Stress, and Intonation. The score of students' pronunciation skills were shown in the table below. From the result of the control class and experimental class pretest, the mean of the score was 90.80 for CAKE App , 91.38 For ELSA Speak and 74.19 for Control Class , the researcher found that there was a significant improvement in students pronunciation skill based on the Sounds, Stress and intonation style aspects. The table below explained the analysis of students pronunciation skill improvement statistically.

Table 3. The Data of Pre-test and Post-test of the both Experimental class and control class

	CAKE APP		ELSA SPEAK		CONTROL	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
S1	60	90	60	95	60	60
S2	50	90	70	90	50	70
S3	60	90	60	90	60	60
S4	60	100	60	100	50	70
S5	50	100	70	90	50	70
S6	50	95	65	95	30	70
S7	70	95	70	95	70	70

S8	60	90	70	85	60	70
S9	50	95	50	95	50	80
S10	70	90	70	90	70	90
S11	60	90	70	90	60	70
S12	50	100	80	90	50	70

	CAKE APP		ELSA SPEAK		CONTROL	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
S13	60	60	70	90	50	70
S14	80	90	80	90	30	80
S15	60	95	60	88	60	80
S16	65	95	65	100	60	70
S17	80	95	50	95	50	80
S18	80	90	60	95	60	90
S19	80	100	50	100	50	90
S20	75	90	80	90	40	80
S21	50	95	65	80	50	70
S22	75	90	70	90	50	70
S23	75	80	65	80	50	80
S24	50	95	50	90	40	80
S25	80	95	80	90	50	80
S26	80	95	60	95	50	70
S27	55	100	70	90	55	80
S28	70	90	70	100	70	70
S29	50	95	70	95	50	70
S30	60	95	60	90	60	70
S31	60	90	40	90	63	70
T	1975	2815	2010	2833	1645	2300
M	63.70	90.80	64.83	91.38	53.06	74.19

According to the data below, the researcher administered a pre-test to both the experimental and control groups to gauge each student's aptitude prior to beginning the treatment. The next step, the researcher gave treatment by using Cake and Elsa Speak to the experimental group while the control group without using Cake and Elsa Speak. After applying the treatment, the researcher gave post-test to both group, experimental and control group with the same test.

By using the cake and Elsa Speak application have improved students' pronunciation, especially in Sounds, Stress, and Intonation. The score of students' pronunciation skills were shown in the table below. From the result of the control class and experimental class pretest, the mean of the score was 90.80 for CAKE App , 91.38 For ELSA Speak and 74.19 for Control Class , the researcher found that there was a significant improvement in students pronunciation skill based on the Sounds, Stress and intonation style aspects. The table below explained the analysis of student's pronunciation skill improvement statistically.

Recently, data analysis was used to analyze the students' speaking skills. Following their participation in an experimental lesson using CAKE and ELSA

Speak and a controlled class using the conventional method, the outcomes were as follows :

Table 4. Descriptive Statistic of The Data CAKE APP

Data	Experimental CAKE	
	Pre-test	Post-test
Total	1975.5	2815.7
Mean	63.70	90.80
Median	58.300	79.200
Min	50.3	70.0
Max	80.8	100.0
Varian	134.988	76.180
Range	33.3	37.5
Std Deviation	11.6184	8.7281

Table 5. Descriptive Statistic of the Data ELSA Speak

Data	Experimental ELSA	
	Pre-test	Post-test
Total	2010.0	2833.0
Mean	64.83	91.38
Median	58.300	80.200
Min	50	70
Max	70.8	100.0
Varian	134.988	76.180
Range	33.3	37.5
Std Deviation	11.6184	8.7281

Table 6. Descriptive Statistic of the Data (CONTROL)

Data	Control	
	Pre-test	Post-test
Total	1645.0	2300.1
Mean	53.06	74.19
Median	62.500	72.950
Min	50.1	70.1
Max	75	80
Varian	122.274	97.393
Range	45.9	33.3
Std Deviation	122.274	97.393

According to table 4, the experimental CAKE group had a higher post-test score of 100 and the controlled group had a lower score of 70. The experimental CAKE group's minimum score was 50.3 and the controlled group's minimum score was 50.1. The mean post-test score for the experimental CAKE group was 90.80 and the mean for the control class was 74.19. The mean score from the experimental ELSA group was 91.38 and 74.19 for the controlled group mean, meaning that the mean score within the experimental class was higher than the minimum standard score within the controlled class. The higher score post-test of the experimental ELSA Speak group was 100 and

70 for the controlled group, while the minimum score of the experimental ELSA Speak group was 50.0 and the controlled group was 50.1.

Findings

1. Improvement of Students Pronunciation Using CAKE Application

Pre-experimental research was used in this study to gauge how much the CAKE application enhanced students' pronunciation among eighth-graders at SMP N 25 during the academic year 2023–2024. The outcome of better pronunciation among pupils could be seen in the following:

Table 7. Mean core of Pre-Test and Post-Test

Kind of Test	Mean Score	Improvement
Pre – Test	63.70	
Post – Test	90.80	40,14%

The pre-test mean score for the students was 63.70, while the post-test mean score for the students was 90.80, according to the table above. After using the CAKE application in class, it was determined that students' pronunciation has improved (40,14%).

2. Significant Testing

The researcher employed a t-test to assess the data after collecting it. The t-test value, which was greater than the t-table value of 1.68957, was 11.501. It was discovered that eighth grade pupils at SMP Negeri 25 Medan utilized the CAKE program to improve their pronunciation.

Table 8. T-Test analysis

t-test	t-table	Comparison	
11.501.	1.68957	t-test>t-table	Significant

Table 9. Paired Samples Test

Paired Differences				T	df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence			

				Interval of the Difference					
				Lower	Upper				
Pair 1	Pre test – Post test	11.52778	6.01420	1.00237	13.56269	9.49286	11.501	35	000

In order to determine the degree of freedom (df) and determine whether the CAKE application's use in teaching pronunciation was significant, the researcher compared the t-test score and t-table. For the level of significance (p) = 0, 05, and $df=35$, the researcher used the formula $N-1=36-1=35$. The t-table received a score of 1.68957. The t-test was calculated to have a score of 11.501; hence, the t-test and t-table scores were ($11.501 > 1.68957$), indicating that the results of the two tests were different. The use of the CAKE Application has an impact on students' pronunciation skills because The H_a was approved and H_0 was refused since the t-test was greater than the t-table.

3. Improvement of Students Pronunciation Using English Language Speech Assistant (ELSA) Application

In this study, the researcher utilized a pre-experimental approach to examine how the English Language Speech Assistant (ELSA) program, which was used with SMP Negeri 25 students in the eleventh grade during the academic year 2023–2024, affected the students' pronunciation. The outcome of enhanced pronunciation among pupils could be seen in the following:

Table 10. Mean Score of Pre-Test and Post-Test

Kind of Test	Mean Score	Improvement
Pre – Test	64.83	
Post – Test	91.38	42.19%

According to the data above, the pre-test mean score for the students was 64.83, and the mean score after the test for the students reached 91.38. Following the use of the English Language Speech Assistant (ELSA) program in the classroom, it was determined that students' pronunciation improved significantly (42.19%).

4. Significant Testing

The researcher employed a t-test to assess the data after collecting it. The distinction between the t-test and t-table values was 11.611, which was greater. It was discovered that eighth grade pupils at SMP Negeri 25 Medan have improved their pronunciation by using the English Language Speech Assistant (ELSA Speak) application.

Table 11. T-Test analysis

t-test	t-table	Comparison
11.611	1.68957	t-test>t-table Significant

Table 12. Paired Samples Test

Table 12: Paired Samples Test									
Paired Differences				t	df	Sig. (2-tailed)			
Mean		Std. Deviation	Std. Error Mean				95% Confidence Interval of the Difference		
							Lower	Upper	
Pair 1	Pre test – Post test	-11.68778	6.01420	1.00237	-13.56269	-9.49286	-11.401	35	.000

To determine the degree of freedom (df), the researcher used the formula $N-1=36-1=35$. For the level of significance $(p)=0,05$ and $df=35$, the t-table received a score of 1.68957. The researcher analyzed the t-test score and t-table to determine whether the usage of the CAKE application in taught pronunciation was significant. The outcome of the calculation revealed that the t-test had a score of 11.401, meaning that there was a difference between the results of the t-test and the t-table ($11.401>1.68957$). Due to the fact that the t-test was higher than the t-table, The H_a was approved and H_0 was denied as a result. The Elsa Speak App has an impact on how well kids pronounce words.

Discussion

Here is the discussion of the effect of using CAKE and ELSA Speaking Application, as follow:

1. The Improvement of CAKE Application

According to the research's findings, class VIII E students at SMP Negeri 25 Medan's eighth grade had poor pronunciation based on their score on the CAKE application's pronunciation test. It was due to the fact that many students were unable to pronounce certain terms properly. At the first session of therapy, the researcher discovered that the majority of the students had pronunciation issues since they still found it challenging to pronounce specific consonants. They focused on the explanations the researcher offered them at the end of each meeting and tried to pronounce certain sounds correctly from the second meeting until the last.

The researcher administered a post-test to gauge the students' performance after using CAKE in English teaching and learning until it reached the final treatment session. The researcher attempted to gauge how much the students' pronunciation had improved after administering the post-test. The students' average score on the pre-test was 51.94%, while their average score on the post-test was 63.47%. The researcher discovered that the pupils' pronunciation had improved by 40,14% from the pre-test to the post-test. This indicates that the students' pronunciation improved after receiving certain treatments using the CAKE Application. Abdul Rosyid and Poppy Sofia Hidayati are the authors of

the first. "Pembelajaran English Pronunciation Melalui Mobile Assisted Language Learning (Mall): Potensi Dan Hambatan (2020)" is the title of the study. Every element of modern life has been impacted by the widespread usage of mobile phones, which are wireless, personal, networking devices. In an EFL environment, using mobile technology in language study would increase opportunities for learning outside of the traditional classroom and reduce challenges with English language learning.

2. Significant Testing of the Students Pronunciation Improvement Through CAKE Application

The researcher discovered through the t-test that the worth of the t-test (11.501) was higher than the value of the t-table (1.68957) at the degree of freedom (df) of 35. It comes from instructing students on pronunciation Application CAKE.

The researcher discovered that the pupils' pronunciation had improved as a result of the t-test results. This indicates that there were appreciable differences between the results of the pre-test obtained before and after the teaching and learning activities carried out in the classroom using the CAKE application. It was because the CAKE application in the classroom let the kids learn and practice how to pronounce specific words that may broaden their new experiences and knowledge. The research indicates that the VIII E students of SMP Negeri 25 Medan have improved.

3. The Improvement of English Language Speech Assistant (ELSA) Application

The eighth-grade pupils at SMP Negeri 25 in particular class VIII had poor pronunciation, as evidenced by their score on the ELSA application's pronunciation test before using it. It was due to the fact that many children were unable to pronounce certain terms correctly. At the first conference, the researcher discovered that the majority of the students had pronunciation issues since they still found it challenging to pronounce specific consonants. They focused on the explanations the researcher offered them at the end of each meeting and tried to pronounce certain sounds correctly from the second one until the final.

The researcher administered a post-test to gauge the students' performance after implementing the ELSA Speak application in English teaching and learning up until the final treatment session. The researcher attempted to gauge the improvement in the students' pronunciation after administering the post-test. Students received a mean score of 56.94% on the pre-test, with a mean score of 69.47% on the post-test. The researcher discovered that the pupils' pronunciation had improved by 48.19% from the pre-test to the post-test. It signifies that the pupils' pronunciation improved after receiving some instruction using the ELSA Speak application. Ahmad Munawir and Nur Wahid Akhmad are the researchers. "Improving the Students' Pronunciation Ability by Using Elsa Speak App" is the topic for the year 2022. This study sought to ascertain how much students' English pronunciation abilities (Supra-segmental) have improved using the ELSA Speak program as well as how the students felt about using it. The University of West Sulawesi is where this study is being conducted. The research's methodology is quantitative. The One Group Pre-

Experimental Design is the methodology employed in this investigation. The participants in this study were students from the University of West Sulawesi's class D class of 2021 who were English majors. This study used a straightforward random sample technique as its sampling strategy.

4. Significant Testing of the Students Pronunciation Improvement of English Language Speech Assistant (ELSA) Application

The researcher discovered through the t-test that the result of the t-test (11.501) was higher than the value of the t-table (1.68657) at the degree of freedom (df) of 35. It is the outcome of the students' pronunciation instruction using the ELSA Speak Application.

The researcher discovered that the pupils' pronunciation had improved as a result of the t-test results. This indicates that the pre-test results before and after teaching and learning that took place using the ELSA program in the classroom showed a substantial difference. Through the usage of ELSA in the classroom, children learnt how to pronounce various words, which helped to broaden the scope of their learning. Based on the facts, it can be said that VIII F students at SMP Negeri 25 Medan performed better. Lastly, is the research conducted by Haryadi S and Aprianoto. The title is Integrating "English Pronunciation" App Into Pronunciation Teaching: How It Affects Students' Participation and Learning (2020). The purpose of this study was to determine whether or not the English Pronunciation app can improve student engagement and self-learning in pronunciation classes at Mandalika University of Education (UNDIKMA). This study used a quasi-qualitative approach to design. 48 first-year English department students, ages 19 to 21, from two learning groups participated in this study. There were 24 students in each group (Group A and Group B).

Conclusion

The researcher draws the conclusion that using Cake and Elsa Speak applications is beneficial in enhancing the students' pronunciation ability based on the data analysis of the findings and discussions in the preceding chapter. The research covered pronunciation skills related to content, organization/form, grammar, mechanics, and vocabulary style when it came to speaking. Correct intonation, stress, and sounds were considered speaking skills in the study. The researcher discovered through the t-test that the t-test score (11.501) was greater than the t-table score (1.68957) at the level of significance $p=0.05$ at the degree of freedom (df) of 35. It came about as a result of students learning proper pronunciation. Application CAKE. According to the results of the t-test, the researcher discovered that the t-test score (11.611) was greater than the t-table score (1.68657) at the degree of freedom (df) of 35. It came about as a result of ELSA Speak Application-based pronunciation instruction for the pupils. and it indicates that the t-test and t-table scores were different. The H_a was therefore approved and H_0 was denied because the t-test was higher than the t-table. Students' pronunciation abilities are influenced by their use of the CAKE Application and ELSA Speak.

the study carried out at SMP Negeri 25 in Medan. The difference between the students' pre-test and post-test mean scores on the pronunciation test, where the post-test mean score is greater and shows a substantial increase over the

mean score before the test following therapy, serves as evidence of the improvement. By engaging in activities that made learning English pronunciation fun, interesting, and enjoyable, students became more active and confident in their ability to pronounce words and sentences, which led to an improvement in their pronunciation abilities that was made possible by the Cake and Elsa Speak application.

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