

LEARNING PRONUNCIATION USING RECORD, LISTEN, REVISE (RLR) METHOD IN DICTIONARY SPEECH ASSISTANT – ELSA SPEAK APPLICATION: HOW THE FLOW OF THINKING GOES

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Article Info	Abstract
Article History Received: February 2024 Revised: March 2024 Published: April 2024 Keywords Learning pronunciation Dictionary speech assistant; Critical thinking; ELSA speak application;	<i>Dictionary Speech Assistant is a combination of Record, Listen, Revise (RLR) method of ELSA Speak Application to help students improve their pronunciation. The aims of the research were to describe the effectiveness as well as to explore how the flow of thinking of the junior high students in improving their pronunciation using RLR method in ELSA Speak Application. An explanatory sequential mixed-method design was utilized to collect quantitative and qualitative data. The data gained from pre-test, post-test, and documentation of single words which were collected from 34 students of SMA N 6 Semarang. Then, they were analyzed using SPSS program quantitatively and descriptive qualitative. The quantitative result outlined that there was significant difference on students' pronunciation skill with t-test value was higher than t-table ($9.117 > 2.035$). The effectiveness was qualitatively proven using RLR method; Record phase with the score of 23%, Listening phase which was followed by imitating process. In the Revise phase, after two to five attempts the students got the score of 96%, which was an increase from the first attempt. It is concluded that Dictionary Speech Assistant is beneficial for students in learning pronunciation. The majority of students believed that Dictionary Speech Assistant creates a new environment to help students improve their pronunciation skills.</i>

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INTRODUCTION

Mobile language learning applications have the potential to transform the way languages are learned (Cavus, 2016; Heil et al., 2016; Meisarah, 2020). Applications for mobile language learning have the power to completely change how people learn languages. One increasingly common type of digital technology that helps kids learn is mobile applications. Essentially, learning is a fundamental part of life. Throughout the learning process, the instructor must successfully instruct the children. It is considered that teaching students how to reflect on their own learning process can help them learn more effectively (Liaw, 2007). In fact, there was not much investigation about critical thinking using mobile language learning application to help students to have self-reflection during their learning.

Speaking is a crucial part of the language acquisition process. To guarantee that the information is transmitted to the audience, students must acquire English skills such as speaking and generating words correctly (Kholis, 2021). According to Bafadal and Muslimin (2020), speaking is an oral communication in which participants must negotiate meaning within a limited set of ideas, feelings, and facts, as well as establish who is to what, to whom, and about what. However, many students have difficulty pronouncing words. According to

Aratusa (2019), students learning English as a foreign language find it difficult to enunciate an English sound, especially when the instructor is not a native speaker, and failing to properly pronounce an English sound might lead to a misunderstanding of meaning. Furthermore, as Samad and Ismail (2020) mentioned, there are several accents or dialects in Indonesia based on area. The bulk of Indonesian students' pronunciation will be impacted by their dialect, making it difficult for them to properly speak their foreign language. Some of them struggle with pronunciation owing to influences from their mother tongue, place of birth, and wider culture. As we all know, pronunciation is increasingly important in communication. Pronunciation is the process of generating sounds from words in order to communicate with people and convey meaning. Pronunciation features including intonation, vocal point, and pausing are "discourse signals" that help listeners understand the flow of the speech (Tussa'adah, 2018). As a result, communicating without pronunciation is insufficient to avoid misinterpretation and misunderstanding.

Globalization has resulted in extensive cultural, political, economic, technological, scientific, and information interaction, which is frequently mediated by translators and interpreters. As a result, there is a greater demand for well-trained linguists who can effectively communicate a message from one language to another, whether written or spoken (Simon et al., 2015). Over decades, the innovator discovered a technology in language learning. This technology is used to help students learn a second or foreign language. Nowadays, technology is widely used in people's lives for a variety of reasons, including virtual interaction, product and service transfer, business transactions, commercial occupations, and even education (Kholis, 2021). It is time for the educational industry to properly adapt to changing teaching and learning practices.

Examples of educational technology include LMS (Learning Management System), Google Apps for Education, and AI (Artificial Intelligence). AI is defined as a machine, computer, or computer system that mimics human cognitive abilities such as learning and problem solving (Pokrivcakova, 2019). One of the examples of AI in English learning is called ELSA Speak. The acronym ELSA stands for English Language Speech Assistant. This innovation allowed students to analyze their language error correction and receive direct feedback from ASR (Automatic Speech Recognition), which has the potential to provide students with additional motivation and opportunities to engage in spoken conversation in the target language. Dictionary Speech Assistant was combined with the RLR (Record, Listen, Revise) method to help students improve their pronunciation skills. This method was linked to an AI system that would allow students to replay their recording of the words and repair it if errors occurred. It emphasizes the concept that AI has the potential to be equally revolutionary for society. AI is set to fundamentally alter how we work, live, and interact with the world. Technology has had an impact on how we engage with language and communication, including pronunciation (Ardini et al., 2024; Ardini & Sunarya, 2024; Senowarsito & Ardini, 2023; Susanto et al., 2023).

On the other hand, critical thinking is an essential skill for students to develop in academic language (Connolly, 2000; Davidson, 1998; Davidson & Dunham, 1997). Theorists and educators have presented a range of definitions for critical thinking. At least three educators in the field of second language acquisition have characterized the critical thinking abilities required for academic/professional employment (Pally, 2000). While critical thinking is necessary in L2 classrooms, EFL learners may also engage in it. In reality, EFL students typically arrive in L2 classes with a diverse set of critical thinking abilities gained in their first language. Many students are capable of and require critical thinking in their second language. Since higher-order thinking abilities are becoming increasingly important for success in a knowledge-based society, it is the role of EFL teachers to help their students develop critical thinking skills while studying English.

Since language development and thinking are inextricably linked, and the teaching of higher-order thinking abilities should be an essential component of an L2 curriculum, this study was conceived and carried out to investigate the possibility of boosting critical thinking skills in an EFL classroom. Therefore, the researchers formulated the objectives of the research are to describe the effectiveness of using Dictionary Speech Assistant of Elsa Speak Application as well as to investigate how the flow of thinking of the junior high students in improving their pronunciation using RLR method of ELSA Speak Application.

LITERATURE REVIEW

Mobile-Assisted Language Learning

Mobile learning, also known as M-learning, began as an extension of e-learning using mobile computational devices such as personal digital assistants (PDAs) and mobile phones. It was identified as a subset of distant learning, alongside e-learning (Cakmak, 2019). In other words, mobile learning is the use of mobile technology to improve the learning process, which includes delivering digitalized information to wireless phones that are linked to work and education. M-learning is currently accessible on a variety of mobile devices, including PDAs, mobile phones, small tablets, MP3/MP4 players, e-book readers, integrated circuit recorders, gaming consoles, digital dictionaries, voice recorders, and so on.

With the advancement of mobile devices and the availability of internet and telecommunication technologies, there has been a growing interest in participating in language learning in a more flexible setting. This approach is known as mobile-assisted language learning (MALL). MALL evolved from Computer-Assisted Language Learning (CALL) and Mobile Learning (Cakmak 2019). Language learning via mobile devices may be more real, relevant, and contextual when two strategies are used in conjunction. According to Naninggia (2017), mobile learning has three purposes in the classroom learning process: supplements, complements, and substitutes.

Dictionary Speech Assistant of ELSA Speak Application

ELSA Speak, which stands for English Language Speech Assistant, is a mobile application designed to help learners improve their English pronunciation that focuses on improving English pronunciation through its artificial intelligence technology and real-time speech recognition feedback. The app provides instant and detailed feedback on pronunciation and fluency, helping learners identify and correct pronunciation errors. It also offers an intelligent and adaptive learning platform with personalized lessons and guidance to help learners stay focused and motivated. ELSA Speak Application offers more lessons and subjects for users to practice pronunciation, beginning with English words, phrases, and sentences. An interactive dictionary is one of the features of the ELSA Speak Application that will assist users in pronouncing the word or phrase they are looking for (Anggraini, 2022).

Dictionary Speech Assistant is a combination of Record, Listen, Revise (RLR) method to help students improve their pronunciation skills. This method was linked to an AI system that would allow students to replay their recording of the words and repair it if errors occurred. It emphasizes the concept that AI has the potential to be equally revolutionary for society. To try this feature, open the ELSA Speak program, then select Dictionary under Discover. In order to begin the recording, locate a blue microphone and click. Ask the students to read the sentences after that. Then click "See My Score" to view the outcomes. The instructional materials utilized in the teaching and learning process should be in line with contemporary forms of learning as worldwide enters the industrial revolution. Students can practice speaking as though they have listened to the audio straight immediately by clicking the microphone button in ELSA Speak. This program is very useful for all students and is easy to use, which can help us learn how to pronounce words in English. It also features intriguing components that may awaken students' curiosity about what they are learning.

Critical Thinking

Critical thinking is used in all types of knowledge, and it also requires learners to form real bonds in order to gain knowledge via reflection and deep thought (Saleh, 2019). The concept of critical thinking was introduced by John Dewey, who dubbed it "reflective thinking". Reflective thinking is defined as the process of turning a subject over in one's thoughts and giving it meaningful, sequential consideration. According to Shalova (2015), critical thinking encompasses a broad range of cognitive talents (thinking strategies) employed in a variety of academic activities. Thinking critically entails demonstrating interest and employing research procedures that include asking questions, conducting a systematic search for answers, defining a certain point of view on the problem, and being able to defend this perspective using logic and evidence.

RESEARCH METHOD

This research utilized mixed method research design. According to Creswell (2012), a mixed-method research design involves combining quantitative and qualitative approaches in a single or series of studies to better understand a research subject. The researchers employed an explanatory sequential design, which could be utilized to collect both quantitative and qualitative data in support of the experimental design. According to Fraenkel and Wallen (2012), the primary purpose of an explanatory sequential design is to collect quantitative data, which will then be followed by qualitative data to fine-tune the conclusions drawn from the quantitative data. In an explanatory sequential mixed method design, researchers collect quantitative data first, then qualitative data to support the quantitative data conclusions. Furthermore, Creswell & Creswell (2018) stated how the researchers' interpretation of this mixed approach led them to interpret the findings in the study's discussion section, which were quantitative in the first phase and qualitative in the second phase. The quantitative data were obtained from pre-test and post-test, then the qualitative data were gathered from documentation of the students' work in the application. The data were in the form of screenshots the process of Record, Listen, Revise (RLR) method. The population was the eighth-grade students in SMP N 6 Semarang with the total number of 272 students. Creswell (2012) defines a sample as a subset of a larger population to be analyzed for general conclusions. There was one group chosen as a sample, class VIII H, which consists of 34 students. The researchers analyzed the pronunciation test to determine the students' pronunciation abilities after using Dictionary Speech Assistant. The analysis was performed by using SPSS 27. After the quantitative data was collected, the researchers analyzed the qualitative data within the documentation from students' application and analyze them using RLR method.

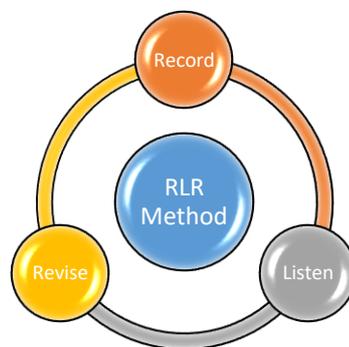


Figure 1. Record, Listen, Revise (RLR) Method

To try this feature, open the ELSA Speak Application, then select Dictionary under Discover. In order to begin the recording, locate a blue microphone and click. Ask the students to read the sentences after that. Then click "See My Score" to view the outcomes.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

This research endeavors to achieve two primary objectives: first, to elucidate the efficacy of the Dictionary Speech Assistant feature within the Elsa Speak application; and second, to examine the critical thinking abilities of junior high students regarding the adoption of the RLR (Repeat, Listen, Repeat) approach aimed at enhancing their pronunciation skills. To address these aims, a mixed-methods approach was employed, with a particular focus on quantitative data analysis. Initially, quantitative data was collected through pre-tests administered to the students to assess their pronunciation proficiency prior to utilizing the Dictionary Speech Assistant. Subsequently, post-test assessments were conducted to evaluate any improvements in pronunciation following the students' utilization of the Dictionary Speech Assistant feature. The comparison between pre-test and post-test results enabled the researchers to ascertain the effectiveness of the Dictionary Speech Assistant in improving students' pronunciation skills. Specifically, statistical analyses were employed to determine whether there existed a significant difference in pronunciation performance before and after the intervention. This systematic evaluation of the pre-test and post-test data provided valuable insights into the impact of utilizing the Dictionary Speech Assistant on students' pronunciation abilities. Furthermore, it shed light on the extent to which the RLR approach facilitated pronunciation improvement among junior high students. Such findings hold implications for both educational practice and the design of language learning applications, informing future strategies aimed at enhancing pronunciation instruction and fostering critical thinking skills among students.

The researchers delivered the pre-test to the students before presenting them with any materials. It was designed to measure the students' capacity to grasp pronunciation before they received treatment. Here are the results of students' pre-test.

Table 1
The Description of Students' Pre-Test

Assessed Components				Total Obtained Score	Total Final Score
Fluency	Accuracy	Intonation	Stressing		
3.2	3.0	2.8	2.2	11.2	56

Following the implementation of the treatment, the researchers proceeded to evaluate the efficacy of the intervention by administering a post-test to assess the students' skills. Specifically, the post-test aimed to gauge the extent to which the students had acquired and retained the targeted knowledge or abilities subsequent to the intervention. In addition to assessing skill acquisition, a post-test was also conducted to evaluate the pupils' pronunciation ability achievement. This comprehensive assessment sought to capture the students' overall performance and proficiency in the targeted areas. Subsequently, the researchers analyzed the results obtained from the students' post-tests to ascertain the impact of the treatment on their skills and pronunciation ability. The findings from these assessments serve as crucial indicators of the effectiveness of the intervention in facilitating learning outcomes and enhancing linguistic proficiency. By examining the post-test results, the researchers can identify any significant improvements or areas requiring further attention, thereby informing

future instructional practices and interventions aimed at optimizing student learning and development.

Table 2
The description of students' post-test

Assessed Components				Total Obtained Score	Total Final Score
Fluency	Accuracy	Intonation	Stressing		
4.8	4.2	4.0	3.6	16.6	82.8

The differences of students' pronunciation before and after applying Dictionary Speech Assistant is explained in Table 3 below.

Table 3
The result of paired sample test by using SPSS

Pair	Before	Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Lower	Upper			
1	using DSA - After using DSA	-26,88235	17,19366	-32,88151	-20,88320	-9,117	33	0,000

The data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) program, providing valuable insights into the effectiveness of the intervention. The findings revealed notable differences between the pre-test and post-test scores. Specifically, the mean pre-test score was recorded at 56, while the mean post-test score substantially increased to 82.8. Additionally, the standard deviation was calculated to be 17.19366, indicating the degree of dispersion of the scores around the mean. The standard error, representing the variability of sample means from the population mean, was determined to be 2.94869. Furthermore, the t-test was employed to compare the means of the pre-test and post-test scores. The computed t-test value was found to be 9.117, exceeding the critical value obtained from the t-table, which was 2.035 for a degree of significance of 5%. This discrepancy suggests that the observed difference between the pre-test and post-test scores is statistically significant. Based on these calculations, it can be inferred that the intervention, namely the utilization of the Dictionary Speech Assistant, contributed significantly to the improvement in students' pronunciation skills. The substantial increase in mean post-test scores, coupled with the statistical significance of the t-test results, underscores the efficacy of the intervention in facilitating pronounced improvements in student performance. These findings underscore the potential of technology-enhanced language learning tools in fostering enhanced learning outcomes and academic achievement.

The qualitative results made up the second set of data. It was acquired through documentation of the steps the students took to record their post-test. The information was in the form of screenshots, which were subsequently subjected to the RLR method of analysis.

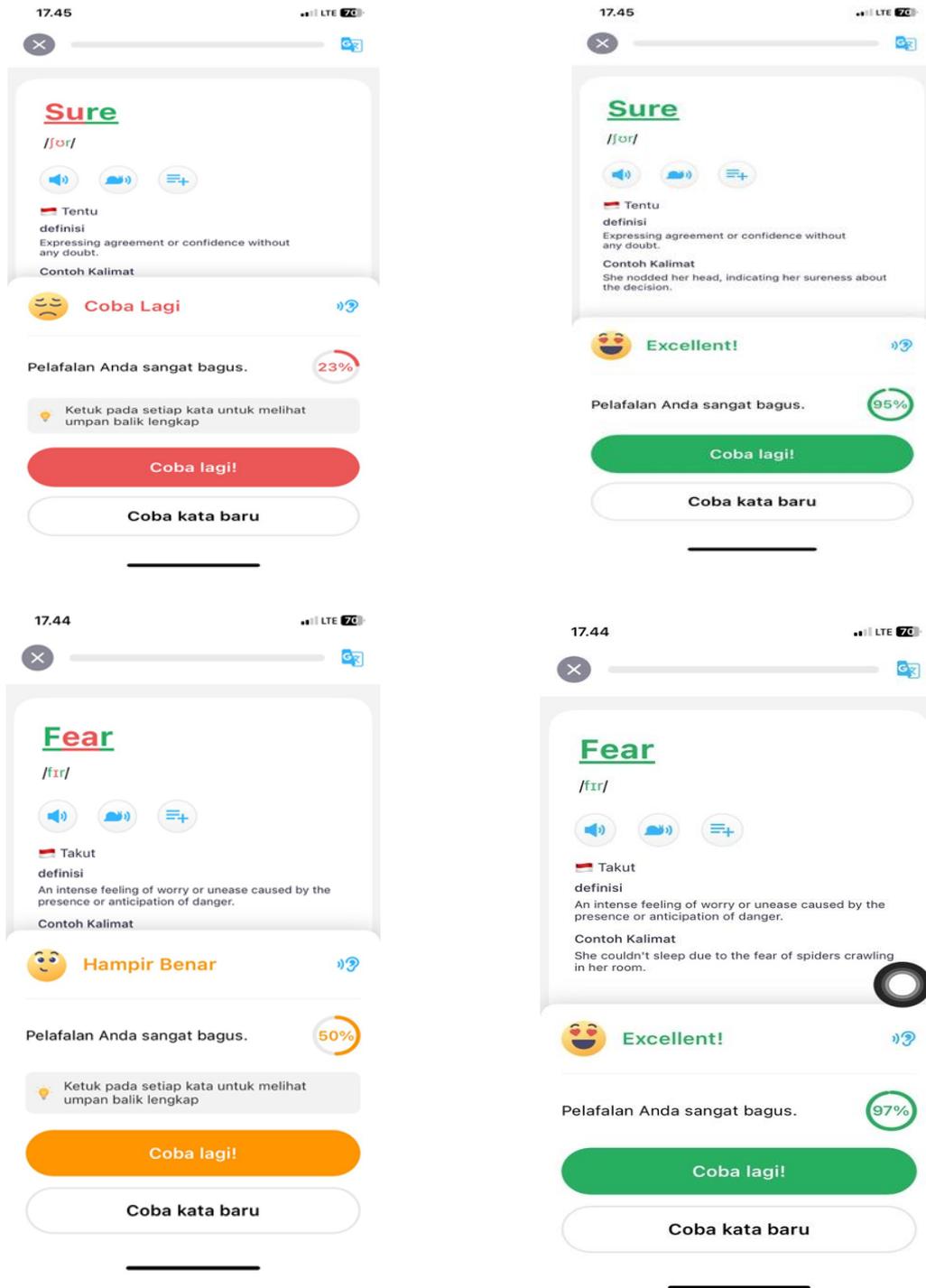


Figure 2. The process when student explore their critical thinking to be able to achieve excellent score

Discussion

The objectives of this study were to describe the effectiveness as well as to explore how the flow of thinking of the junior high students in improving their pronunciation using RLR method in ELSA Speak Application. Therefore, the researchers displayed two results; the quantitative data and then followed by the qualitative ones. According to Table 1, it is presented the highest pre-test score is 95, while the lowest score is 15. The pre-test result is produced by calculating the students' scores before utilizing Dictionary Speech Assistant. It is calculated using the total score, the percentage of students' scores, and the mean of the pretest.

The sum of the students' pre-test scores is 1904, calculated from 34 students. The percentage of students that took the pre-test was 56%, indicating that this group of students performed badly.

On the other hand, the post-test score shown in Table 2 highlights that the highest post-test score is 98, while the lowest is 62. The post-test result was calculated from the students' scores after utilizing Dictionary Speech Assistant. It was determined with the post-test total score, student score percentage, and post-test mean. The total post-test score obtained from 34 students was 2818. The students' score percentage is 82.8%, suggesting that the category of their post-test results after utilizing Dictionary Speech Assistant is good.

In the process of pronunciation classroom activities, students are treated to enhance their pronunciation ability by utilizing Dictionary Speech Assistant, and their development in pronunciation ability is assessed. The result of students pre-test and post-test indicated that there is an improvement in their pronunciation skill after applying Dictionary Speech Assistant. It can be seen from the result of significant difference which obtained that t-test score is higher than t-table ($9.117 > 2.035$).

The result presented that in the pre-test, most of the students had troubles in pronouncing /ʊə/ and /eɪ/ sounds. It made their score of pre-test was only 70. For examples, in the word 'fear' the students pronounced it as /fɪr/ which has correct pronunciation /fɪə/. Additionally, in the word 'sure', the students pronounced /ʃər/ which has correct pronunciation /ʃʊə/. However, the students had improvements in the post-test in pronouncing /aʊ/, /ʊə/ and /əʊ/ sounds. Although the respondent still had trouble especially on pronounced /eɪ/ sound. The mean score of student's post-tests was 96. It indicates that the student's score was improved 20% after using Dictionary Speech Assistant.

The qualitative findings were done through the documentation from students' account of Dictionary Speech Assistant of ELSA Speak application. As the result of pronouncing single words. This research presented two examples in Figure 2 as the qualitative data where student applied RLR method. In Record phase, the student showed the first attempt with the score of 23% on the word 'sure'. The score occurred due to the error of sounds /ʃ/ and /ʊ/. Instead of saying /ʃʊr/, she said /sər/. The RLR method, then, led to Listening phase which was followed by imitating process. The students listen again to the correct pronunciation by clicking the sound symbol section in the application. Every student got at least two to five times of attempt. After that, she came into the Revise phase. If we see in Figure 2, after five attempts the students got the score of 96%, which was an increase from the first attempt.

Additionally, in the second example, the other student showed the first attempt in saying the word 'fear'. In the Record phase, the students got 50% score which an error occurred with /ɪ/ sound. In the Listening phase, the student listened to the native sound then imitated for several times. The student, finally, obtained 97% in the Review phase. To get those improvements, the students carried out many times to listen and revise until they get maximum result.

The results obtained from the study shed light on the students' perceptions and experiences regarding the utilization of the Dictionary Speech Assistant. Evidently, the findings suggest that students regard this application as an instructional tool with significant benefits for improving pronunciation ability. Moreover, there is a consensus among students that the Dictionary Speech Assistant contributes positively to their overall learning performance. This sentiment is indicative of the perceived effectiveness of the application in enhancing language proficiency and facilitating academic progress. One notable aspect highlighted by the students is their favorable disposition towards the Dictionary Speech Assistant. They express appreciation for its qualities as an excellent and interactive learning medium. This positive reception can be attributed to various factors, including the application's utilization of artificial intelligence (AI) technology. The AI-driven feature

enables the application to detect mispronunciations and provide automatic corrections and feedback on pronunciation accuracy. This functionality enhances the learning experience by offering personalized guidance and support to students, thereby fostering engagement and motivation in language learning endeavors. Overall, the students' favorable attitudes towards the Dictionary Speech Assistant underscore its perceived utility and effectiveness as a pedagogical tool. By providing targeted feedback and guidance, the application not only addresses students' pronunciation challenges but also enhances their overall learning experience. These findings contribute to a growing body of evidence supporting the integration of technology-enhanced language learning tools in educational contexts, highlighting their potential to optimize learning outcomes and promote student engagement and success.

Additionally, Dictionary Speech Assistant also creates the students to have a new ambience of learning which supports them in improving their learning capacity. This statement also supported by the research from Samad & Ismail (2020) that the features of ELSA Speak Application successful to encourage students' to involved effectively in pronunciation learning. The combination of technology in the teaching and learning process was a principal in the attempt to improve students' performance and the effectiveness of teaching pronunciation. By giving the students quizzes through Dictionary Speech Assistant, the researcher would be able to know students' understanding so that the researcher knew the parts the students could not fully understand.

In the qualitative findings showed that the process of RLR method required critical thinking to identify and analyze the specific errors in pronunciation, understand the differences between the correct and incorrect sounds, and develop strategies to improve pronunciation effectively. Firstly, in the Record phase, critical thinking was necessary to recognize and acknowledge the errors made in pronunciation. This involved understanding phonetic symbols and discerning the differences between the intended sounds and the sounds produced.

Secondly, in the Listening phase, critical thinking came into play as students actively engaged in analyzing the correct pronunciation provided in the application. They needed to discern subtle differences in sounds and patterns, comparing them to their own pronunciation and identifying areas for improvement. Thirdly, during the imitation process, critical thinking was essential in determining the best strategies to replicate the correct pronunciation. This might involve breaking down the sounds into smaller components, adjusting tongue and lip positions, and practicing until achieving a closer match to the native pronunciation. Lastly, in the Revise phase, critical thinking was crucial in evaluating progress and making further adjustments as needed. Students had to reflect on their previous attempts, analyze areas of weakness, and strategize how to address them effectively.

Throughout this entire process, critical thinking skills such as analysis, evaluation, problem-solving, and reflection were essential for the students to progress from initial errors to significant improvements in pronunciation. They needed to continually assess their own performance, identify areas for growth, and adapt their strategies accordingly.

Another advantages, the ASR system that associated in Dictionary Speech Assistant provided direct feedback to the student's mistake on pronunciation. Kholis (2021) was pointed this benefit on his research, Automatic Speech Recognition (ASR) to teach pronunciation. It proved that ASR investigated how students heard, voiced, uttered, vocalized, and reiterated English words orally. It means Dictionary Speech Assisted was suitable for learners in the beginner or intermediate level who needs guidance in learning pronunciation. Despite the need for Wi-Fi and a stable internet connection, students preferred the ELSA Speak Dictionary Speech Assistant for its interactive learning experience and AI-powered pronunciation corrections and feedback, making it a valuable resource. Despite the

fact that Dictionary Speech Assistant was on another menu in the ELSA Speak Application, the researcher picked it because it was flexible enough to examine any word, phrase, or sentence that students were supposed to learn. It was not limited to the offered quizzes created by the app creator. This menu is equally clear and easy to grasp from the students' standpoint.

Additionally, the result of the current study confirms Luckin et al. (2016)'s assertion that AI has enormous promise for higher education, particularly in the Industrial Revolution period 4.0. This age has had a significant influence on human existence, one of which is in the education sector. Higher education is crucial in preparing future generations for the AI-enabled job climate that awaits them. Hidayati & Husna (2020) discovered that learning through applications is more engaging. Students demonstrated strong potential for autonomous learning through the use of applications. The study did not determine if online learning was beneficial or ineffective since students found certain components pleasurable but not others. This study demonstrates that learning through applications is not only entertaining and contributes to autonomous learning, but also identifies specific courses and provides several application sources, making it an innovative approach.

The findings of this study also provided a solution to students' perceptions that learning pronunciation is difficult, especially because the majority of them are unfamiliar with AI-based applications. In order to promote the Fourth Revolution Industry, in which scientific and technological growth is fast increasing, educators should include AI into all of their courses.

CONCLUSION

The aims of this study were to find out the results of students' critical thinking in pronunciation before and after applying Dictionary Speech Assistance. According to the results that have been presented previously, the scores result before applying Dictionary Speech Assistant was found that the score percentage was 56% which means the category of student grades before applying Dictionary Speech Assistant was poor. On the other hand, the score result of students' score percentage was 82.8% which means the category of student grades after applying Dictionary Speech Assistant was good. Moreover, the results of students' critical thinking skills revealed that the majority of students responded positively. There are improvements in the post-test. The students tried to fix their error pronunciation to get correct pronunciation. In contrast, the majority of students believed that Dictionary Speech Assistant creates a new environment to help students improve their pronunciation skills. Dictionary Speech Assistant is a new and challenging assessment tool for students that incorporates technology into their learning. These findings may have consequences for the development of 21st-century abilities, which should be integrated in pronunciation competency as soon as feasible. As a result, teachers and students will perceive pronunciation as a tough and intriguing topic, rather than one to be overlooked and undervalued.

REFERENCES

- Anggraini, (2022). Improving students' pronunciation skill using ELSA Speak application. *Journal of English Language and Pedagogy*.
- Aratusa, Z.C. (2019). Using accent reduction software to improve English beginners' pronunciation. *188 (Eltlt 2018)*, 112-116.
- Ardini, S. N., Sunarya, S., & Latifah, K. (2024). Development of mobile application through the concept of artificial intelligence to enhance pronunciation skill in EFL. *KnE Social Sciences*, 56-66.
- Ardini, S. N. (2024, March). An acoustic study of Jonglish Community: Javanese-accented speech. *Forum for Linguistic Studies*. Vol. 6(2), 1167-1167.

- Bafadal, M.F. & Muslimin. (2020). The analysis of students' speaking ability on specific purpose learning. *Linguistic and English Language Teaching Journal*. ISSN: 2614-8633.
- Cakmak, F. (2019). *Mobile learning and mobile assisted language learning in focus*. Language and Technology Book. Dergi Park Academic.
- Cavus, N. (2016). Development of an intellegent mobile application for teaching English pronunciation. *Procedia Computer Science*, 102, 365-369. <https://doi.org/10.1016/j.procs.2016.09.413>.
- Connolly, M. (2000). What we think we know about critical thinking. *CELE Journal*, 8, 120-134.
- Creswell, J. (2012). Educational research: planning, conducting, and evaluating quantitative and qualitative research. <http://nuir.nkumbauniversity.ac.ug/handle/20.500.12383/985>
- Creswell, W. J. and, & Creswell, D. J. (2018). Research design: qualitative, quantitative, and mixed methods approaches. *Journal of Electronic Resources in Medical Libraries*: Vol. 19(1-2). <https://www.tandfonline.com/doi/full/10.1080/15424065.2022.2046231>
- Davidson, B. (1998). A case for critical thinking in the English language classroom. *TESOL Quarterly*, 32, 119-123.
- Davidson, B., & Dunham, R. (1997). Assessing EFL student progress in critical thinking with the Ennis-Weir Critical Thinking Essay Test. *JALT Journal*, 19(1), 43-57.
- Edmons, W.A., & Kennedy, T.D. (2016). *An applied guide to research designs: Quantitative, qualitative, and mixed methods*. Sage Publications.
- Fraenkel, J. R., & Wallen, N. E. (2012). How to design and evaluate research in education.
- Heil, C. R., Wu, J. S., Lee, J. J., & Schmidt, T. (2016). A review of mobile language learning applications: Trends, challenges, and opportunities. *The EuroCALL Review*, 24(2), 32-50.
- Hidayati, T., & Husna, F. (2020). Learning English from home during the COVID-19: Investigating learners' experience for online and autonomous learning. *Langkawi: Journal of The Association for Arabic and English*, 6(2), 202-217.
- Kholis, A. (2021). Elsa Speak App: Automatic Speech Recognition (ASR) for supplementing English pronunciation skills. *Pedagogy: Journal of English Language Teaching*. ISSN 2580-1473.
- Liaw, M. L. (2007). Content-based reading and writing for critical thinking skills in an EFL context. *English Teaching and learning*, 31(2), 45-87.
- Luckin, R., & Holmes, W. (2016). Intelligence unleashed: An argument for AI in education.
- Meisarah, F. (2020). Mobile-assisted pronunciation training: the google play pronunciation and phonetics application. *Script Journal: Journal of Linguistics and English Teaching*, 5(2), 70-88.
- Naninggia R. (2017). *Attitudes toward using mobile devices in language learning among English Education Department students at Muhammadiyah University of Purwokerto*. (Doctoral dissertation). Universitas Muhammadiyah Purwokerto.
- Pally, M. (2000). *Sustained Content Teaching in Academic ESL/EFL: A Practical Approach*. Houghton Mifflin Company, 222 Berkeley Street, Boston, MA 02116-3764.
- Pokricakova, S. (2019). Preparing teachers for the application of AI-powered technologies in foreign language education. *Journal of Language and Cultural Education*, 7(3), 135-153.
- Saleh, S. E. (2019). Critical thinking as a 21st century skill: Conceptions, implementation and challenges in the efl classroom. *European Journal of Foreign Language Teaching*, 4(1), 1-16. doi: 10.5281/zenodo.2542838
- Samad, I.S., & Ismail, I. (2020). ELSA Speak application as a supporting media in enhancing students' pronunciation skill. *Majesty Journal*. 2(2), 1-7.

- Senowarsito, S. & Ardini, S.N. (2023). The use of artificial intelligence to promote autonomous pronunciation learning: Segmental and suprasegmental features perspective. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 8(2), 133-147.
- Shalova, N. S. (2015). Critical thinking as a tool for teaching listening in the English classroom at the universities. *Journal of the National Technical University of Ukraine "KPI": Philology and Educational Studies*, 6, 100-104.
- Simon, S. K. (2015). Strategies for improving the English pronunciation of the 1st year "Translation-interpreting" students. *Procedia - Social and Behavioral Sciences*, 2157-2160.
- Susanto, A. S., Ardini, S. N., & Sukmaningrum, R. (2024). Dictionary Speech Assistant to improve students' pronunciation. *Allure Journal*, 4(1), 14-22.
- Tussa'adah, N. (2018). *The correlation between students' pronunciation mastery and their speaking ability at the first semester of the eleventh grade of SMA N 1 Adung Pekurun Kotabumi North Lampung in the academic year of 2017/2018*. (Doctoral dissertation). UIN Raden Intan Lampung.