The Effectiveness of Stimuler Application as Learning Media to Improve Students' Speaking Skills at Vocational School

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Abstract: The purpose of this study is to assess the Stimuler application's effectiveness as a learning media for improving vocational school students' speaking skills. The Stimuler application was chosen for its advanced artificial intelligence features that offer real-time feedback and simulate real-world communication, which is critical in vocational education where speaking skills are essential for workplace readiness. The study utilized a quasi- experimental design, with an experimental group using the Stimuler application and a control group using conventional techniques. Both groups were assessed through pre- and post-tests. The research involved 38 participants, with 22 students in the experimental group and 16 in the control group, over a period of four weeks. Researcher calculated that the experimental group's mean post-test score increased by an average of 15.1 points (from 65.4 to 80.5), while the control group showed a minimal increase of 3.9 points (from 64.8 to 68.7). These findings highlight the Stimuler application's ability to improve students' speaking skills through its AI-powered interactive features. The significant improvement in the experimental group suggests that the tool can offer a more effective alternative to traditional teaching methods in vocational education, where communication skills are key to students' future professional success.

Keywords: Learning Media, Speaking Skills, Stimuler Application

INTRODUCTION

English is the most commonly spoken language globally and is taught as a foreign language in Indonesian schools from elementary to college. Starting in the 2013-2014 academic year, English lessons in elementary schools were no longer required, but schools can still set up English classes as supplemental or local content topics. Starting with the 2027-2028 academic year, English will be required in elementary schools as per the Minister of Education and Research and Technology's Regulation Number 12 of 2024 on Curriculum in Early Childhood Education, Elementary Education, and Secondary Education. The goal of learning English as a foreign language (EFL) is for students to master listening, speaking, reading, and writing skills to the best of their abilities (Pramono, 2022). Speaking skills are essential for daily communication, involving

continuous negotiation, interpretation, and expression. The level of mastery in a language is determined by how well a student can speak. Speaking skills allows students to communicate their thoughts, feelings and opinions more clearly. Therefore, speaking skills are essential for daily conversation with having an understanding of English becoming increasingly important in today's interconnected world, both in personal and work environments. Thus, speaking English not only makes it easier for students to express themselves but also becomes a necessary skill in today's era.

Speaking is the capacity to articulate sounds or words to express opinions on a daily basis. Without constant practice, speaking skills are difficult to acquire, making it the most difficult skill for students to master, especially at the postsecondary level (Islam, Ahmad, & Islam, 2022). The researcher aims to examine the speaking ability of vocational school students to better understand their language skills. Building sentences can be challenging for students studying a foreign or second language if they do not master important vocabulary and grammar rules (Rao, 2019). Therefore, it is expected that this study will makes a significant contribution to English language teaching in Indonesia, particularly in terms of speaking skills. This research helps teachers to create more effective teaching strategies by focusing on the difficulties experienced by SMK students in developing their speaking skills. Thus, it can help teachers to concentrate more on improving vocabulary, grammar, and practice-based teaching strategies, such as using more diverse learning media.

Learning media refers to materials used by teachers to effectively convey or organize information for students. Efficient use of these materials can enhance student engagement and make learning more enjoyable (Dhamayanti, 2021). Learning activities utilize various types of media, including audiovisual and visual materials. Visual media includes visual elements like pictures, photos, and maps, while audio media includes radios, podcasts, and linguistic laboratories. Audiovisual media combines auditory and visual elements like educational videos or television programs (Sari, 2019). In the modern era, learning media is not limited to books and whiteboards. Technology has made it easier and more engaging, allowing teachers to become more creative in their use of ICT. Digital technology is an essential component of learning media, and it is widely available and accessible via web browsers and cellphones. In the twenty-first century, teachers often use artificial intelligence in their learning media to make learning more enjoyable.

Artificial intelligence (AI) has become increasingly prevalent in education, offering customized, interactive, and adaptable educational experiences that cater to individual student needs. AI facilitates information transfer and enhances the effectiveness of English language learning by utilizing various learning technologies. Teachers and students use AI as a learning media, particularly when learning English. AI in language learning is a computer program or software that assists users in learning and enhancing their proficiency in a foreign language (Font de la Vall & Araya, 2023). It allows learners to access resources and receive feedback independently, fostering student autonomy in language training (Rusmiyanto, et al., 2023). The integration of AI into education and learning processes aids in English learning. One AI tool used in this study is a stimuler application to improve students' speaking skills at vocational schools. Overall, AI plays a crucial role in the education process.

The Stimuler application is an AI-powered platform designed to enhance English language proficiency by providing immediate feedback on vocabulary, grammar, and pronunciation. It analyzes users' written and spoken English pronunciation using artificial intelligence, offering immediate feedback and suggestions for improvement. This real-time feedback allows users to rapidly and effectively enhance their speaking skills (Jha, 2023). The application was released on January 12, 2022, and has been downloaded over 1,000,000 times with a community of over 900,000 users from over 200 countries. Stimuler is created by professionals, including an IELTS 8.5 scorer and a world champion in public speaking. It offers the best IELTS practice, providing users with a comprehensive understanding of their skills in speaking English. The platform provides over 100 conversation themes for small talk practice and a Live Video IELTS Mock Test that uses AI to simulate the real IELTS experience. Users receive specific suggestions to develop their skills following each session.

The artificial intelligence stimuler applications have received top-tier venture capital support from Silicon Valley, Japan, and India and have been awarded the Best software with AI-2023 by Google Play worldwide. It is accessible to everyone, especially non-native English speakers who may have difficulties pronouncing words correctly and using grammar. Teachers must select the proper learning media to impact both the learning process and student results. Fun learning media, such as Stimuler applications, can pique students' enthusiasm and help them overcome their fear of the language, ultimately improving their performance when studying English.

There are several previous studies that related to this study. The first previous studies by (Niah & Pahmi, 2019) The study aims to enhance students' speaking and listening abilities using the Duolingo application. The results show that students in class VIII.1 and VIII.2 demonstrated significantly improved speaking and listening abilities, with the corresponding "t" table exceeding the "t" value. This suggests the effectiveness of using Duolingo to help junior high school students improve their speaking and listening skills. The research is related to previous studies, which used artificial intelligence tools like Duolingo to study speaking and listening. However, this study focuses solely on speaking abilities, unlike previous studies which focused on both. The research method used is unique, employing the ASSURE model approach.

The second related research by (Zakiah, Riandi, & Gumelar, 2023) The purpose of this study is to determine whether class X students at SMAN 15 Pandeglang have any impact over the application use of ELSA-Speak in English pronunciation. The hypothesis testing findings show that there is a significant effect of utilizing the ELSA-Speak application on English class X students at SMAN 15 Pandeglang in terms of acquiring language pronunciation (0.00 < 0.05). Based on the findings of previous research, researchers aim to conduct new studies with different applications and focuses. In order to determine the effectiveness of utilizing the application, researchers will focus on speaking abilities.

The third previous research by (Kholis, 2021) The purpose of this research is to use the English Speech Assistant (ELSA) Speaking App to help students in higher education, namely English Department students at Yogyakarta Nahdlatul Ulama University (UNU), pronounce the language more accurately. The study's findings demonstrate that ELSA Speak can help students pronounce words more accurately. The average value achieved

from teaching cycles two to four in the classroom shows this. It goes without saying that ELSA Speaking aids students in pronouncing words more clearly and fluently. Because artificial intelligence (AI) can aid and enhance language learning, there is a similarity between the researcher's current research and previous research on the topic. The difference is, previous research focused on pronunciation ability. Another difference is the method used, research participants, and the applications used during learning.

The fourth previous studies by (Adekola, Adeoye, Akande, & Akpan, 2021) research focuses on text-to-speech and speech-to-text translation for normal students. The study uses literature review evaluation to develop text-to-speech theory. The research aims to improve classroom and school communication by creating a mobile application for translation and storing previous talks. This research is relevant to ongoing studies on the use of stimuler applications in teaching English, specifically in relation to speech-to- text learning. The last previous studies by (Fitria, 2021) explores the role of AI technologies in English Language Teaching (ELT). It reveals that AI offers a personalized learning environment, allowing students to practice English based on their interests, career needs, and current skills. AI provides a realistic simulated discussion platform, enhancing practical skills like writing. The accessibility of various educational technologies makes English learning easier. The research is relevant to current research, particularly the use of AI as a stimuler application to improve vocational school students' speaking skills.

Based on the explanation above, the researcher found several previous researches related to the research the researcher conducted. As for what the researcher found, there were similarities and differences with previous studies. What this research has in common with previous research is that learning uses artificial intelligence and several previous researches used a quantitative approach. while the difference with previous research is that the theory or skills studied is different from previous researcher. Apart from the application theory or artificial intelligence used in the research, it is certainly different, this research uses the Stimuler application while previous research used the Duolingo and Elsa applications. Even though the participants used were different, the researchers used vocational school students as participants in this research. Therefore, with similarities and differences with previous researchers, this research focuses on examining the effect of use stimuler to improve vocational school students' speaking skills. where the application of stimuler is artificial intelligence used in learning which is expected to improve students' speaking skills.

Thus, with the aim to improve the speaking skills of vocational students, researcher will examine the effectiveness of using stimuler applications as learning media in this study. Researchers are interested in studying vocational students by using artificial intelligence using stimuler applications to improve students' speaking skills because of the phenomenon observed by previous researchers, who claimed that vocational students struggle to speak.

METHODS

This study utilizes quantitative methods and an experimental research design. In quantitative research, numerical data are gathered through controlled, objective measurement in order to test or answer presumptions (Ary, Jacobs, Sorensen, & Walker, 2014). In this research researcher employed a quasi-experimental design. The quasi-

experimental designs involve a minimum of two subject groups. The treatment is administered to one group (independent variable). The second group is either not given any treatment at all or is given treatment at a different intensity. Pretest and posttest also employed in this study. A pretest gives participants in an experiment a measurement of a trait or quality before they are given a treatment. A posttest is a measurement of a quality or trait that is given to experimental participants following a treatment (Creswell & Guetterman, 2019). Thus, the researcher will give a pretest to the students before starting treatment, and a posttest after the completion of the treatment.

The study samples comprised all of the students from two classes, one of which was the experimental class and the treatment was the application of stimuler. The students in the other class were the control group, they did not get the treatment. The population was eleventh grade students of SMK Kartika XIX-3 Kota Cirebon. The students in this study are split into two groups: 22 students in the experimental group and 16 students in the control group. The research involved an experiment using pre- and post-test equipment to evaluate speaking skills. Students from experimental and control classes took a pre-test before treatment, which focused on improving speaking skills through stimuler application exercises. After the experimental group received the treatments, both classes took a post-test to assess the improvement in English proficiency and the application's effectiveness in improving speaking skills. The five areas that the researcher uses to categorize students speaking skills are accuracy, vocabulary, comprehension, fluency, and pronunciation. Thus, using these five factors, the researcher will evaluate the student's English-speaking skills.

The outcomes of the two groups the experimental group and the control group were compared by statistical analysis of the pretest and posttest data. To ascertain whether the average posttest scores of the two groups differed significantly, the researcher calculated the average score. In order to analyze the students' speaking skills, the researcher employed an assessment rubric based on (Ilinawati, Sijono, & Elisa, 2021), which divides the skills into five levels: poor (1–50), fair (51–60), average (61–70), good (71–79), and excellent (80–100). The purpose of this rubric is to ensure that the assessment of speaking skills is conducted thoroughly and impartially.

FINDINGS AND DISCUSSION

This study seeks to evaluate the effectiveness of the Stimuler application as a learning media to improvinfg students' speaking skills in vocational schools. Following a month of research employing the quasi-experimental method, data was collected from pre-tests and post-tests administered to two groups of students: the experimental group utilizing the Stimuler program and the control group employing conventional methods. The research showed that the average pre-test scores of the experimental and control groups were comparatively equal. Nonetheless, following the intervention with the Stimuler application as a learning media, the experimental group showed a marked improvement in their speaking abilities.

Table 1
The Result of Mean Score of Pre-Test and Post-Test

Mean Score	Pre-Test	Post Test
Control class	64,8	68,7
Experiment calss	65,4	80,5

Based on the data presented, it is clear that there is a considerable difference in improvement between the control and experimental classes in the speaking ability test, both before and after treatment. In the control group, the average pre-test score was 64.8, indicating the students' starting speaking skills before they started using standard learning methods. After using this strategy, students speaking skills improved slightly, with an average post-test score of 68.7. Although there was a 3.9-point improvement, it was small and demonstrated that the standard learning method had no meaningful impact on improving students' speaking skills. Meanwhile, in the experimental class, the average pre-test score was 65.4, nearly identical to that of the control class, indicating that both groups' beginning skill was roughly balanced before to the treatment utilizing the Stimuler application. The experimental class's average post-test score climbed significantly to 80.5 following the treatment utilizing the Stimuler application as a learning media. This 15.1-point improvement demonstrates that the Stimuler application is effective at improving students speaking skills.

The results of the research have significant effects for teaching English in vocational school environments. First, the results highlight the superiority of technology. based learning resources, such the Stimuler app, over traditional approaches for enhancing speaking skills. The experimental group's student's notable gains in confidence and fluency show that interactive technology offers possibilities for practice and simulations of real-world communication that aren't always available in traditional classroom learning. Second, this study shows how apps like Stimuler can help students who are passive in their English speaking overcome their difficulties. Speech recognition technology's dialogue simulation capability allows students to practice without worrying about criticism or embarrassment, two things that frequently stand in the way of learning in the classroom. Their speaking abilities and confidence both improve as a result, and this is subsequently evident in how well they perform in class. These results also suggest that technology-based learning has a lot of promise for curriculum integration, both as a valuable component of the teaching approach and as an extra learning media. Considering the growing demand for proficiency in the English language in the industry, particularly for students enrolled in vocational schools who will soon be entering the workforce.

The data collected show that the treatment offered to the experimental class using the Stimuler application was far more effective in improving students' speaking skills than a conventional learning method used in the control class. The large improvement in the experimental class demonstrates that technology-based interactive learning media can improve language learning outcomes, particularly speaking skills. On the other hand, the limited improvement in the control class demonstrates that the conventional method does not make the greatest contribution in this aspect. The posttest results of the control class and experimental class based on the scoring rubric are as follows:

Table 2
Rubic Score Posttest of Control Class

Test Score	Levels of speaking	Frequency
1-50	Poor	-
51-60	Fair	-
61-70	Average	12
71-79	Good	4
80-100	Excellent	-

Table 3
Rubic Score Posttest of Experiment Class

Test Score	Levels of speaking	Frequency
1-50	Poor	-
51-60	Fair	-
61-70	Average	-
71-79	Good	8
80-100	Excellent	14

The posttest rubric score table above shows a striking difference between the control group and the experimental group in the level of students' speaking skills after the treatment. In the control group, 12 students (most) were in the "Average" category with scores between 61-70, while 4 students were in the "Good" category with scores between 71-79. No students reached the "Excellent" category or were below the "Average" category. This shows that conventional learning methods only produce moderate improvements in students' speaking skills, with the majority of students still at the intermediate level. In contrast, in the experimental group using the Stimuler application, the posttest results showed much better improvements. A total of 14 students were in the "Excellent" category with scores between 80-100, and 8 students were in the "Good" category with scores between 71-79. No students were in the "Average" category or below. This illustrates that the majority of students in the experimental group achieved a very good level of speaking skills after using the Stimuler application as a learning medium.

The results showed that the Stimuler application was significantly more effective in improving students' speaking skills compared to conventional methods. The experimental group using this application successfully improved their speaking skills, especially in the five main components (accuracy, fluency, pronunciation, vocabulary, and comprehension), with the majority of students achieving the "Excellent" level. Interactive features, such as conversation simulations and independent practice, helped students practice without pressure and reduced speaking anxiety. In contrast, conventional methods were less successful in providing sufficient challenges to develop students' speaking skills to their full potential.

One of the primary reasons for the Stimuler app's success in improving students' speaking skills is its interactive elements, which simulate real-world communication situations. These features allow students to practice live dialog using speech recognition technologies. This technology not only helps students improve their speaking skills. Students can be better trained to understand the context of a conversation and respond

more correctly through two-way interaction that mimics a real conversation. This is critical in language teaching, particularly for students who are passive and lack the confidence to speak up in class. This feature allows students to practice alone without feeling uneasy or fearing direct criticism from teachers or classmates, which is sometimes a barrier to active participation.

Furthermore, using the Stimuler app helped students gain confidence in speaking English. Students feel more at ease and confident after using technology-based practice elements and conversation simulations to practice in a secure and controlled environment. Students can correct their own mistakes without fear of being observed by others, which is a common source of anxiety while speaking in public. Over time, the confidence they earned from these exercises translated into real-world classroom circumstances, where they felt more prepared and confident to speak in front of their classmates. The improvement was most obvious in the fluency component, where students became more fluent and spontaneous in expressing their views in English, implying that the application not only gives technical benefits but also promotes emotional development during the learning experience.

CONCLUSION

The study concluded that using the Stimuler application as a learning media has been shown to be effective in improving students' speaking skills in vocational schools. According to the study's findings, students' speaking skills improved significantly in the experimental class that utilized the Stimuler application when compared to the control class that employed conventional teaching methods. Students in the experimental class improved their average post-test score by 15.1 points, whereas the control class improved by only 3.9 points, indicating that the traditional method is less effective in enhancing pupils' speaking skills. Students who used this application showed significant improvements in important components of speaking such as accuracy, fluency, pronunciation, vocabulary, and comprehension. The majority of students in the experimental group achieved the "Excellent" level, while most students in the control group only achieved the "Average" and "Good" levels.

The Stimuler application was effective in improving students' speaking skills because of its interactive elements that simulate real-world communication scenarios while also allowing students to practice independently and repeatedly. Furthermore, the program helps students gain confidence in public speaking, particularly fluency. Overall, using interactive app-based technology like Stimuler improves language acquisition, particularly speaking skills. Based on these findings, it is recommended that vocational schools and other educational institutions consider integrating interactive learning technologies, such as the Stimuler application, into their curricula to optimize language learning outcomes, especially in speaking skills. The use of this technology allows students to be more independent in learning and strengthen their speaking skills in real-world contexts. In addition, for future research, it is recommended that further studies be conducted to explore the use of similar applications at other levels of education, such as in junior high schools and universities.

REFERENCES

Adekola, O., Adeoye, E., Akande, O., & Akpan, S. (2021). A text to speech and speech to text application for students with hearing and speaking impairments. *International Journal of Computer Techniques*, 6-14.

Ary, D., Jacobs, L. C., Sorensen, C., & Walker, D. (2014). *Introduction to research in education*. Wadsworth Cengage Learning.

Creswell, J., & Guetterman, T. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education.

Dhamayanti, F. I. (2021). EFL students' perception and motivation toward Quizizz as e-learning media in English e-classroom. *Education of English as Foreign Language Journal (EDUCAFL)*, 70-77.

Fitria, T. N. (2021). The use technology based on artificial intelligence in English and learning. *ELT Echo: The Journal of English Language Teaching in Foreign Language Context*, 213-223.

Font de la Vall, R. R., & Araya, F. G. (2023). Exploring the benefits and challenges of AI-language learning tools. *International Journal of Social Sciences and Humanities Invention*, 569-7576.

Ilinawati, Sijono, & Elisa, H. (2021). The study of the students' speaking performance in demonstrating product advertising. *Journal of English Education Literature and Linguistics*, 59-70.

Islam, W., Ahmad, S., & Islam, M. (2022). Investigating the problems faced by the university EFL learners in speaking English language. *International Journal of TESOL & Education*, 47-65.

Jha, R. (2023, March 21). *Stimulator: Future English communication platform*. LinkedIn. https://www.linkedin.com/pulse/stimulator-future-english-commnication-platform-rakesh-kumar-jha

Kholis, A. (2021). Elsa Speak app: Automatic speech recognition (ASR) for supplementing English pronunciation skills. *Pedagogy: Journal of English Language Teaching*, 1-14.

Niah, S., & Pahmi. (2019). The utilization of Duolingo to improve the speaking and listening skills of junior high school student in Pekanbaru. *Advances in Social Science, Education and Humanities Research*, 54-59.

Pramono, T. P. (2022). Improving students' ability in speaking of procedural text with Balabolka ('Text to Speech'). *ELite Journal: International Journal of Education, Language, and Literature*, 73-78.

Rao, P. S. (2019). The importance of speaking skills in English classrooms. *Alford Council of International English & Literature Journal (ACIELJ)*, 6-18.

Rusmiyanto, Huriati, N., Fitriani, N., Tyas, N. K., Rofi'i, A., & Sari, M. N. (2023). The role of artificial intelligence (AI) in developing English language learner's communication skills. *Journal of Education*, 750-757.

Sari, Y. N. (2019). YouTube as a learning media to improve the student's speaking ability in 21st century. *JELTL (Journal of English Language Teaching and Linguistics)*, 263-273.

Zakiah, I., Riandi, & Gumelar, R. E. (2023). The effect of English Language Speech Assistant (ELSA) Speak application on students' pronunciation mastery at the tenth grade of SMAN 15 Pandeglang in academic year 2022/2023. *Jurnal Pendidikan Tambusai*, 23109-23114.