

The Use of Artificial Intelligence in Improving Students' Speaking Skills

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Abstract

In today's globalized world, English language skills are essential for effective communication and opening up access to wider opportunities. Unfortunately, many junior high school students, especially in areas such as West Jakarta, face challenges in developing adequate speaking skills due to limited opportunities for interaction and practice. The learning methods used in schools often fail to provide the interactive and engaging environment needed to master speaking skills. To address these challenges, educators are increasingly turning to technological innovations, such as Artificial Intelligence (AI), to enhance the language learning experience. This study aims to determine the effectiveness of use artificial intelligence (AI) in learning English especially in improving students' speaking skills. Research methods that used are mixed-methods, combining quantitative and qualitative method. The research participants consisted of 30 junior high school students in the West Jakarta area. In this study, researchers used AI as a method of learning English, especially speaking skills. This research applies AI platforms, namely Canva and Vocaroo. The research results show there is a significant increase in speaking skills, after using AI. These findings support that the use of AI is effective in learning English, especially speaking skills. From the analysis carried out, it can be seen that the output Sig = 0.00. That is, the mean pre-test and post-test are different. So, it can be concluded that the application of Canva and Vocaroo media is effective in improving students' speaking skills and learning outcomes in General Conversation courses. The effectiveness of learning with Canva and Vocaroo media can also be seen from the average pre-test score of 67.92 and post-test of 85.84 which shows that learning outcomes have increased. Observations made in the learning process using Canva and Vocaroo media showed that the average student's speaking ability was in the good category and improved.

Keywords: *Artificial Intelligence, Speaking Skills, Technology*

1. Introduction

In today's digital era, the field of education has undergone a lot of transformations significantly through the integration of Artificial Intelligence (AI). This happens on the basis of the desire to develop the quality of the learning process which is more interesting. one of them in

learning English which is one of the most frightening things for students. With the implementation of technology, it is hoped that students will become more interested in learning English and can eliminate the mindset that learning English is difficult and boring. One of the skills most feared by students is speaking skill. English is considered an international language and is used all over the world, English serves to communicate with people living in different regions, states, countries and continents of the world. Speaking skills are the most important skills for acquiring foreign or second language learning. Among the four main language skills, speaking is considered the most important skill in learning a foreign or second language. According to (Bueno, A., 2006), speaking is one of the most difficult skills a language learner has to deal with. Speaking is considered the most important of the four English skills. Even students learn languages over the years, they find it difficult to speak in real-time situations when asked to.

This is what underlies researchers to conduct research by applying AI technology in the General Conversation class studied by second grade of Junior High School students at the first semester. Most students experience difficulties in learning speaking skills in general conversation courses. The strongest reasons for their difficulty are embarrassment and fear of making mistakes when pronouncing English vocabulary. These problems make researchers want to try other, more interesting learning techniques, namely by applying AI technology in learning. The AI technologies used are Canva and Vocaroo.

Canva is a platform for creating graphic designs and publishing content that is easier and faster than other graphic software (Alexandromeo, 2023). As a technology-based application, Canva provides a learning space for every teacher in carrying out a lesson by relying on technology-based learning media. Canva provides more attractive templates to engage students in the learning process. Various attractive templates can be presented in PowerPoint, providing colors, pictures, letters, and so on so that PowerPoint products made to convey material are more attractive (Gunawan, 2022). With the various features contained in Canva, it is hoped that it can assist researchers in providing solutions to problems that occur in General Conversation classes.

In addition, previous research which stated that Canva was effective in increasing students' interest in learning English also strengthened researchers in conducting research in General Conversation classes. Research conducted (Chamidah, 2022) show that the use of digital learning media in the form of padlet and canva applications is able to provide stimulation to increase students' interest, creativity, independence, and responsibility in learning English, in this case Siti applies it to writing skills class.

Canva is seen as capable of being used as a complete learning media that can support learning in the classroom. With Canva's features, teachers can design learning that is interesting and not boring. This was conveyed by (Pelangi, 2020) in her research entitled "Pemanfaatan Aplikasi Canva Sebagai Media Pembelajaran Bahasa dan Sastra Indonesia Jenjang SMA/MA."

The researcher also combined the Canva learning media with another AI technology, namely Vocaroo. Vocaroo is a voice recording tool designed to make it easy to create and share recordings for educators and others. Vocaroo is a cloud-based recording app that educators and their students can use to create recordings and share them easily via a regular link or by generating a QR code. This makes Vocaroo perfect for providing audio-based assignments, instructions, or quick feedback on student work. It can also be a great tool for getting students to share recorded assignments (Ofgang, 2022). Vocaroo is expected to be able to overcome the problems that occur

in the General Conversation class, namely students feel embarrassed and afraid of making mistakes in front of their friends. By using this application, researchers can still assess students' speaking skills without students feeling afraid and awkward. In addition, students also feel more free and confident when recording their voices using Vocaroo. The Vocaroo application is utilized to record the teacher's voice and generate a QR code for the recording. Meanwhile, the Canva application is used to add text, images, and the generated QR codes into the presentation (Sholehah et al., 2023).

Several studies have been conducted related to the implementation of the vocaroo in learning English. One of them is research conducted by (Juniszha & Binawan, 2022) A notable advantage of utilizing Vocaroo is the creation of interactive and easily accessible English lessons, enabling both teacher and students to engage in direct questioning and feedback on learning materials and topics. It also enriches online learning media so that teachers have many choices of platforms as innovative, interactive, interesting, and effective learning tools. Apart from that, according to (Pratama et al., 2021) the use of the Canva and Vocaroo applications, of course, they will be effective and easy to use when creating technology-based learning media, one of which is in the form of flashcards with audio innovations inserted on the flashcard in the form of a QR code. Another study on the use of Canva was carried out by (Yuliana et al., 2023) the results showed that Canva is an effective platform for creating creative, innovative, and collaborative learning videos. It aids educators in delivering content and simplifies the process for students to comprehend the learning materials. Canva is a useful tool for designing video-based learning resources. (Hidayati, 2023)(Febriyanti & Haryanto, 2024) stated in their research in SMPN 21 Semarang that utilizing the Canva application for English projects offers several benefits, including providing an engaging learning medium, enhancing student motivation, ease of use, and fostering creativity. Students have expressed positive perceptions, noting that Canva makes learning more enjoyable and supports the development of their creative skills.

2. Method

2.1 Research Design

This study uses a Mix Method Research with a qualitative-quantitative approach. Researchers using qualitative methods are more dominant than quantitative methods. Quantitative analysis is used to obtain data from the application of AI technology, in this case Canva and Vocaroo to encourage students to speak, while quantitative analysis is used to analyze supporting data about students' interest in using these methods. According to (Creswell, John W and Creswell, 2018) combining qualitative and quantitative approaches offers a more thorough and nuanced insight into a research problem. Mixed methods research aims to leverage the strengths of both approaches while addressing the limitations of relying on either one individually. This integration enables a deeper exploration of complex research questions.

2.2 Population and Sample OR Subject

The population for this study consists of second grade students at first-semester of the 2022/2023 academic year. These students are enrolled in five different classes, with a total of 197 participants. To select the sample, the study employed a random sampling method, which involved choosing students from specific categories. In this case, the selected category second grade students at first-semester of the 2022/2023 academic year, and a sample of 30 students was

chosen for the study. This sampling approach ensured that the participants represented the intended demographic.

For the data analysis, SPSS software was used to perform both descriptive statistic analysis and paired samples T-test analysis. Descriptive analysis provided an overview of the data by calculating basic statistics such as means and standard deviations, while the paired samples T-test was used to compare pre-test and post-test scores, assessing the effectiveness of the teaching methods employed in the study. By combining these analytical techniques, the study was able to gain insights into the impact of the intervention on the students' speaking abilities.

2.3 Instruments

In this study, researchers used three types of instruments, namely: observation form, speaking assessment rubric, and questionnaire.

a) Observation Form

The observation form was utilized as a tool to monitor and assess student participation throughout the course. This instrument allowed the researcher to observe students during class activities, providing valuable insights into their level of engagement and involvement. The form focused on several key areas, such as the students' enthusiasm for participating in class discussions and their active contributions to the learning process. Specifically, it measured how eager students were to participate, whether they were willing to speak up, and how frequently they offered their opinions or responded to questions.

By using this observation form, the researcher was able to track the students' progress in terms of confidence and involvement in the class over time. This form also helped identify patterns in student behavior, such as whether certain teaching strategies or learning activities encouraged more active participation. In essence, the observation form served as a qualitative measure of student engagement, allowing for a deeper understanding of how students were interacting with the lesson material and their peers.

b) Speaking assessment rubric

This rubric will be used to assess students' speaking skills based on the assignments they have completed throughout the course. The rubric includes several key aspects that are essential to effective speaking, such as fluency, accuracy of pronunciation, intonation, and grammar. Fluency will be evaluated by observing how smoothly students can communicate their ideas without unnecessary pauses or hesitations. Accuracy of pronunciation will assess how correctly students pronounce words, paying attention to clarity and comprehensibility. Intonation will focus on the students' ability to vary pitch and tone appropriately, reflecting natural speech patterns and helping convey meaning and emotion. Finally, grammar will be evaluated to ensure that students use correct sentence structures and verb forms during their speech.

By using this comprehensive rubric, the researcher will be able to provide a well-rounded assessment of each student's speaking ability. It will allow for specific feedback on areas of strength as well as areas for improvement. This detailed evaluation will help guide students in refining their speaking skills, focusing on the most important components that contribute to effective communication in a second language.

2.4 Data Analysis

Data collection techniques in this study consisted of:

a) Observation

Observation is a data collection method that uses direct or indirect observation (Riyanto, 2010). In this class observation, the object of observation is student activity in learning English, especially in General Conversation courses. Researchers use the observation form to make data collection more systematic, which contains a list of activities and student responses that might occur. Observations are intended to see and know about class conditions, especially student participation to show their activeness in class.

b) Speaking assessment

The assessment took the form of oral tests, with students being recorded via Vocaroo and their recordings uploaded to Canva. Subsequently, the results were evaluated by applying Brown's oral proficiency test scoring criteria, which involve grammar, fluency, pronunciation, and comprehension.

3. Results and Discussion

3.1 Research Findings

a) Effectiveness of Canva and Vocaroo Media:

The use of Canva and Vocaroo media in the General Conversation class has proven to be a powerful tool in enhancing students' speaking abilities. These platforms have significantly contributed to improving students' fluency and confidence in speaking. In addition to developing their speaking skills, the integration of these media has increased student engagement and comprehension of course content, leading to improved overall learning outcomes. This approach has created a more interactive and individualized learning experience, fostering better academic progress in speaking proficiency.

The progress in the speaking abilities of the in the General Conversation class is evident. The continuous exposure to speaking opportunities, coupled with the supportive atmosphere created through group discussions and feedback, played a key role in reducing anxiety and improving students' language skills. Below is an overview of the journey and progress in speaking abilities of these students throughout the course.

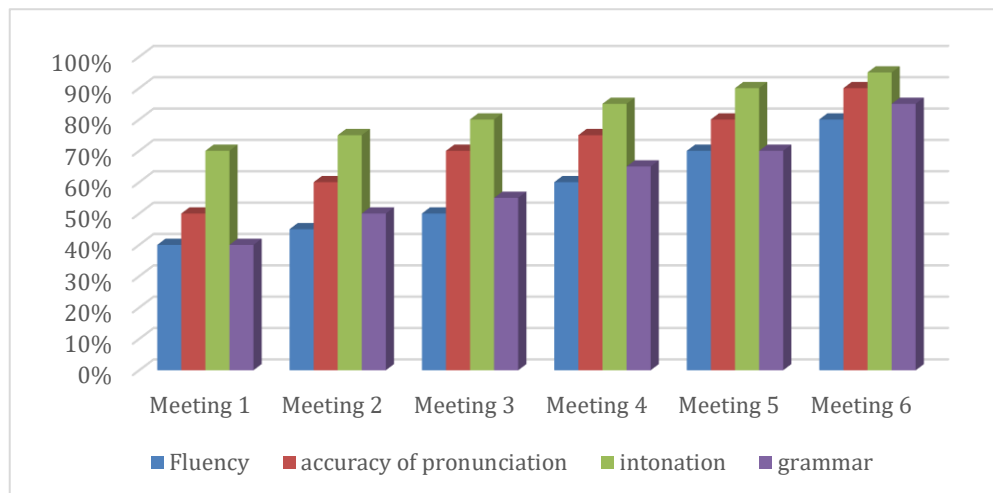


Figure 1. Chart of Students' Progress

This chart shows that with each meeting, students' speaking skills improved significantly across all aspects, especially in intonation and pronunciation, suggesting that the learning methods used (such as with AI tools like Vocaroo and Canva) were effective in developing these skills.

b) Statistical Significance

After conducting four lessons using Canva and Vocaroo media, the researcher administered a post-test to evaluate the progress of the students. The results of the pre-test and post-test were then analyzed to assess the impact of the digital tools on students' speaking skills and to measure any improvements over the course of the lessons. The analysis of these results provided valuable insights into the effectiveness of Canva and Vocaroo in enhancing students' language proficiency and engagement.

The researcher then processed the pre-test and post-test data using SPSS. The steps followed in the data processing are as follows: First, the researcher entered the pre-test and post-test data into SPSS. Each student (respondent) had two values: one for the pre-test and one for the post-test. Next, the researcher created variables for both the pre-test and post-test in SPSS.

Descriptive Statistics were then run to determine the average and standard deviation of the pre-test and post-test, helping the researcher better understand the data distribution. Following this, a Normality Test was conducted to assess the distribution of the data. This test, such as the Kolmogorov-Smirnov or Shapiro-Wilk test, checks if the data is normally distributed before proceeding with further analysis. The researcher then performed a Paired Sample T-Test. If the data is normally distributed, a paired sample t-test can be used to determine if there is a significant difference between the pre-test and post-test values.

Finally, the results were interpreted. SPSS provides a p-value (sig.) that indicates whether there is a significant difference between the pre-test and post-test. If the p-value is less than 0.05, it suggests a significant difference between the two tests, indicating that the intervention has positively impacted the students' learning outcomes.

Table 1 Descriptive Statistic

Statistics		Pretest	posttest
N	Valid	25	25
	Missing	0	0
Mean		67.92	85.84
Std. Error of Mean		1.491	.652
Median		68.00	85.00
Mode		65 ^a	90
Std. Deviation		7.455	3.262
Variance		55.577	10.640
Range		25	10
Minimum		55	80
Maximum		80	90
Sum		1698	2146

a. Multiple modes exist. The smallest value is shown

The results of the first-semester students' pre-test in the General Conversation course revealed that, based on descriptive analysis using SPSS 23 software, the highest pre-test score was 80, while the lowest score was 55. The average score of the pre-test was 67.92. In contrast, the post-test results showed an average score of 85.84, with the highest score reaching 90 and the lowest score at 80. This analysis was conducted to examine the differences between the pre-test and post-test scores, specifically to assess the impact of using Canva and Vocaroo media on improving speaking skills in the General Conversation course.

Before the comparative test analysis, the data normality test was carried out. The data normality test was carried out by the Kolmogorov-Smirnov test. Determination of the decision whether the data is normally distributed is to use an error rate of 5%. That is, the researcher takes the risk of being wrong in making a decision to reject a hypothesis that is as much as 5% correct and is correct in making a decision at least 95% because the smaller the error rate, the better the research. Here is a decision making with a statistical hypothesis.

If the significance value is > 0.05 , the residual value is normally distributed.

If the significance value is < 0.05 , the residual value is not distributed.

Table 2 Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.152	25	.139	.948	25	.221
posttest	.154	25	.131	.909	25	.029

a. Lilliefors Significance Correction

Based on the table above, all pre-test and post-test data show that sig Kolmogrov Sminor is > 0.05 , so the conclusion from this distribution is that it is normal. Because the research data is normally distributed, the research can be continued with paired comparative tests using paired samples T-test analysis to draw conclusions from the results of the analysis. The following is a comparison of the results of the pre-test and post-test carried out with statistical hypotheses.

Ho: If the Sig (2-tailed) value is <0.05 , there is a significant difference between the pre-test and post-test results.

H1: If the Sig (2-tailed) value is > 0.05 , there is no significant difference between pre-test and post-test results

Table 3 Paired Samples Test

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	Pretest - posttest	-17.920	6.946	1.389	-20.787	-15.053	-12.900	24	.000

The results of the data processing output show that the output Sig = 0.00. That is, there is a significant difference between the results of the pre-test and post-test. So, it can be concluded that the application of Canva and Vocaroo media is effective in improving students' speaking skills and student learning outcomes in general conversation courses. This can also be seen from the average pre-test score of 67.92, while the post-test is 85.84.

c) Improvement in Speaking Skills

The average pre-test score was 67.92, reflecting the initial level of students' speaking proficiency. After utilizing the Canva and Vocaroo media in the learning process, the average post-test score increase to 85.84, marking a significant improvement. This notable increase of 17.92 points demonstrates a clear advancement in students' speaking abilities, emphasizing the positive impact of these media tools on their speaking proficiency.

d) Student Performance Levels

During the learning process, observations revealed that most students' speaking skills were initially rated as "good." As the study progressed and students continued to interact with the Canva and Vocaroo media, their speaking abilities showed clear improvement. This development highlights the positive impact of the media tools, as students' performance steadily advanced, demonstrating increased confidence and proficiency in their speaking skills by the conclusion of the course.

e) Positive Learning Outcomes:

The findings demonstrate that the use of Canva and Vocaroo media resulted in noticeable improvements in both students' speaking skills and their overall academic performance in the General Conversation course. This progress is reflected in the substantial increase in post-test scores, as well as the observed enhancement in students' performance during class activities. The integration of these media tools not only fostered greater fluency and confidence in speaking but also facilitated a deeper engagement with the course content, ultimately leading to better learning outcomes throughout the course.

3.2 Discussion

Learning outcomes were measured through speaking tests, observations, and the distribution of questionnaires. The speaking test was administered twice: once before the implementation of Canva and Vocaroo media (pre-test) and once after their application (post-

test). A total of 30 students enrolled in the General Conversation course, participated in the tests. After conducting the pre-test, the subsequent lesson involved using Canva and Vocaroo media as part of the learning process. This allowed for a direct comparison of the students' performance before and after the integration of these digital tools, helping to assess their impact on the students' speaking skills and engagement in the learning process.

The researcher created a presentation accessible to all students through Canva media, with each student assigned one slide that they could design according to their preferences. For the first lesson on the topic of family, students were instructed to upload their family photos to their individual slides. Following this, they were asked to record a story about their family using the Vocaroo application. Once the recordings were completed, students would insert their audio files into the slides they had designed in the presentation created by the researcher.

The researcher then assessed each student's project, reviewing both the recordings and the design of their slides. After the assessment, the researcher provided feedback on the students' work, pointing out areas of improvement such as mispronunciations, incorrect grammar usage, or inappropriate word choices. The goal was to help students refine their speaking skills by addressing these issues and guiding them toward more accurate language use. It was hoped that with each new project and lesson, students would improve their speaking abilities, becoming more confident and precise in their language.

The overall results of the observations revealed that students' speaking abilities showed significant variation, with different factors influencing their performance. One of the main reasons for this variability was the students' level of comfort and confidence, which initially impacted their willingness to participate. During the first session, many students hesitated to speak. This was largely due to a fear of making mistakes or being judged by their peers. Some students lacked self-confidence, while others felt embarrassed, as they were still in the process of getting to know each other. These challenges were expected, given that the students involved in the study were first-semester students, many of whom were not yet accustomed to the classroom dynamics or comfortable with speaking in front of others.

However, by the following session, noticeable progress was observed. Students began to adjust to the learning environment, gradually overcoming their initial hesitations. With each successive meeting, they became more willing to share their opinions and engage in class discussions. This shift was largely attributed to their growing familiarity with the classroom setting and their peers. As the students became more comfortable with the learning process and the tools introduced, such as Canva and Vocaroo, their participation increased, and they began to demonstrate more confidence in their speaking abilities. By the end of the study, many students had become more active and engaged learners, showing significant improvement in their willingness to express themselves and contribute to the lessons. This progress highlights the positive impact of consistent practice and a supportive learning environment on enhancing students' speaking skills. This is certainly in line with research that has been previously conducted by (Hidayati, 2023). Vocaroo and Canva have the potential to increase student motivation in learning

The aspect of speaking ability, which is the primary focus of this research, showed varied results across the participants. Evaluating the indicators used to measure progress revealed noticeable differences in performance. For example, during the first meeting, students' accuracy

in pronouncing words was relatively low. Many struggled with correct pronunciation, reflecting a lack of familiarity and confidence in speaking. However, as the lessons progressed and the researcher conducted evaluations after each session, students showed significant improvement. With continuous practice and corrective feedback, they were able to refine their pronunciation and became more adept at producing words accurately and appropriately.

Another key aspect of the assessment was the use of grammar. Initially, students faced challenges in speaking with correct grammar. Many were unsure of how to structure their sentences properly, which led to frequent errors. This confusion was common, particularly as students were still becoming familiar with the rules of grammar in spoken language. However, with ongoing practice, guidance, and targeted exercises, these difficulties were gradually addressed. Over time, students became more comfortable and confident in using grammar correctly, and their ability to apply grammatical rules in conversation improved significantly.

Overall, the progress made in both pronunciation and grammar highlights the importance of consistent practice and focused feedback. Although the students faced initial struggles, their continuous engagement with the material and the supportive learning environment allowed them to gradually overcome these obstacles, leading to noticeable improvements in their speaking skills.

As the course progressed, students became increasingly comfortable speaking in front of their peers and no longer felt the same level of awkwardness or embarrassment. This change was largely due to the structure of the class, where after each project, the entire class listened to and reviewed each student's recording. This open sharing allowed students to learn from each other's mistakes and successes, creating a supportive environment where mistakes were seen as part of the learning process rather than something to be ashamed of. Knowing that everyone, including their classmates, was in the same boat helped reduce the fear of judgment, as students understood that their peers would not laugh or criticize them for making errors.

This shift in mindset helped foster a sense of camaraderie among the students, where the focus was on mutual learning and improvement. Over time, students became more willing to take risks in speaking, knowing that their mistakes were part of the journey toward mastering the language. The shared experiences and collective progress also contributed to building confidence, making it easier for students to speak up without fear of embarrassment.

4. Conclusion

Integrating Canva and Vocaroo into General Conversation classes has proven effective in enhancing students' speaking skills, as evidenced by a significant improvement from an average pre-test score of 67.92 to a post-test average of 85.84. This substantial increase underscores the positive impact of these digital tools on learning outcomes. Furthermore, consistent observations during the learning process revealed that students' speaking abilities improved notably, often reaching the "good" category. These findings highlight the potential of digital media, such as Canva and Vocaroo, to actively engage students and meaningfully develop their speaking skills.

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