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# Using Speakerly AI to Improve Speaking Skills: An Experimental Study on EFL Learners

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**Abstrak**
Penelitian ini menggunakan pendekatan kuantitatif. Penelitian ini menggunakan desain penelitian eksperimental, desain kuasi-eksperimental, untuk mengungkap efektivitas Speakerly AI dalam meningkatkan kemampuan berbicara mahasiswa di STKIP Tomakaka Tiwikrama. Penelitian ini dilakukan di STKIP Tomakaka Tiwikrama, Jl. Moh. Hatta, Kabupaten Pasangkayu. Sampel penelitian adalah mahasiswa semester dua Jurusan Pendidikan Bahasa Inggris, tahun ajaran 2024-2025, yang berjumlah enam belas mahasiswa. Sampel diambil dengan menggunakan teknik Purposive Sampling di mana delapan mahasiswa dipilih sebagai kelompok eksperimen dan delapan mahasiswa sebagai kelompok kontrol. Perlakuan yang mengintegrasikan aplikasi Speakerly AI untuk latihan berbicara pada kelompok eksperimen dan metode tradisional pada kelompok kontrol dilakukan selama empat minggu. Data dikumpulkan melalui skala Likert dan tes berbicara. Hasil menunjukkan bahwa nilai t-observasi melebihi nilai t-kritis (12,452 > 1,873), menunjukkan bahwa Speakerly AI signifikan dalam meningkatkan kemampuan berbicara mahasiswa. Selain itu, persepsi keseluruhan mahasiswa adalah 4,11 dari 5,00, yang menunjukkan bahwa mahasiswa memandang Speakerly AI secara positif, terutama pada aspek kegunaannya.

***Kata kunci:*** *Kecerdasan Buatan (AI), Keterampilan Berbicara Siswa, Speakerly AI*

**Abstract**
This study employs quantitative approach. This study used an experimental research design, specifically a quasi-experimental design, to reveal the effectiveness of Speakerly AI in improving students' speaking skills at STKIP Tomakaka Tiwikrama. This study was conducted at STKIP Tomakaka Tiwikrama, Jl. Moh. Hatta, Pasangkayu Regency. The sample of study were the second semester students of English Education Department, in academic year 2024-2025, which was totally sixteen students. The sample was taken by using Purposive Sampling technique where eight students chosen as experimental group and eight students as control group. The treatment which integrating Speakerly AI for speaking practice in experimental group and traditional method in control group was carried out in four weeks. Data was collected through Likert scale and speaking test. The result showed that the t-observed value exceeded the t-critical value (12.452 >1.873), indicated that the Speakerly AI was significant in improving students' speaking skills. In addition, the overall students' perception was 4.11 from 5.00, indicated that the students perceived Speakerly AI positively, especially at the usefulness aspect.

Keywords: Artificial Intelligence (AI), Students' Speaking Skills, Speakerly AI

## Introduction

Speaking is recognized as a central component of communicative competence in English language learning. It plays a crucial role in enabling learners to participate in academic discussions, engage in real-world interactions, and build confidence in using English as a tool for communication. Despite its importance, speaking is considered particularly challenging for many students, especially when English is learned as a foreign language (Lestari & Nugraha, 2023; Normawati et al., 2023; Omar, 2023).

In learning speaking, students often struggle with several aspects including pronunciation, fluency, vocabulary use, and self-confidence, which hinder their overall communicative performance (Raj Sharma, 2024). Traditional classroom settings usually offer limited time for individual speaking practice, making it difficult for learners to develop.

The emergence of Artificial Intelligence (AI) has begun to reshape language learning environments (Chisega-Negrilă, 2023). AI-based applications like chatbots, pronunciation evaluators, and interactive speaking tasks, offer new opportunities for learners to practice speaking independently (Dennis, 2024).

These apps can provide real-time feedback, track learners' progress, and create realistic conversational simulations, which are difficult to achieve consistently in conventional classrooms. According to Zou et al. (2023), with features such as instant pronunciation correction, automatic scoring, and personalized learning pathways, AI-based tools can help overcome students' speaking barriers and support more effective learning experiences.

Recent educational research highlights the increasing acceptance and effectiveness of technology-enhanced learning in improving language skills (Yang & Chen, 2007). However, while many studies explore the use of digital tools in reading, writing, and vocabulary development, fewer investigations focus specifically on the effect of AI-based applications on speaking competence. Moreover, not all educational settings have fully integrated AI into classroom practice, and empirical data on the use of AI in boosting speaking abilities, particularly in local or developing educational contexts (Vera, 2023). This gap creates a need for research that examines how AI-based app, such as Speakerly AI, can be utilized as supplemental tools to enhance students' speaking performance.

The use of AI-based applications such as Speakerly AI in English teaching holds significant promise, yet requires further evaluation. Understanding their effectiveness can help educators refine instructional strategies and support learners with more engaging, personalized, and interactive speaking practice. Therefore, this study formulated two research questions: (1) is there a significant difference in speaking skills between students using Speakerly AI and those using traditional methods?, (2) what are students' perceptions toward using Speakerly AI for improving speaking skills?. Based on these research questions, this study investigates the significant difference in speaking skills between students using Speakerly AI and those using traditional methods. In addition, this study also investigates students' perceptions toward the use of Speakerly AI.

Speakerly AI is one-promising AI tool designed to improve speaking skills, a language-learning application that uses conversational AI, voice recognition, and instant feedback to help learners practice speaking more frequently and confidently. It allows students to learn natural conversations with AI tutor, practice pronunciation, receive instant corrections,

and participate in topic-based speaking activities. Such interactive features help students develop fluency, accuracy, vocabulary use, and confidence. This aligns with the communicative language teaching principles, which focus on meaningful communication and the authentic language use. Moreover, Speakerly AI provides opportunities for individualized practice, enabling students to speak as much as they want without feeling embarrassed or judged by classmates.

Previous studies on digital apps and AI-based language learning such as Duolingo Max, ELSA Speak, Praktika AI, ChatGPT Voice, and other AI-based language learning applications, have shown good impact on speaking performance and learners' motivation (Alfathdil et al., 2025; Fitria et al., 2023; Nunez et al., 2025; Sitorus & Hz, 2025). However, research specifically focusing on Speakerly AI in improving students' speaking skills is still limited. Most existing research highlights general AI-based learning apps, while Speakerly's interactive conversational functions remain underexplored, especially in Indonesian EFL classrooms.

Therefore, investigating the significance of Speakerly AI to improve speaking skills is essential to understand whether this application can be used in the speaking class. This study is expected to provide empirical evidence related to the use of Speakerly AI for enhancing students' oral communication abilities.

## Methods

This research is using quantitative approach. According to Creswell (2014), quantitative research is research that explains phenomena by collecting numerical data, analyzed by using statistics. This study used an experimental research design, specifically a quasi-experimental, to examine the effectiveness of Speakerly AI in improving students' speaking skills. According to Creswell (2014), quasi-experimental designs are experimental situations in which the researcher does not have full control over the task of participants to groups, but still applies an intervention and compares groups.

This study was conducted at STKIP Tomakaka Tiwikrama Pasangkayu, Jl. Moh. Hatta, Pasangkayu District. The sample of the research were the second semester students of STKIP Tomakaka Tiwikrama majoring English Education study program, academic year 2024-2025, with total number of sixteen students. In this study, the sample was taken by using Purposive Sampling technique. The sample were selected based on specific criteria relevant to the research objectives. Students with similar initial speaking skill levels were selected, where eight students were chosen as experimental group and other eight students were chosen as control group. The students that divided into two groups in this study were considered having similar speaking skills levels, based on the result of the learning outcomes from the last semester.

The data was taken through Likert scale and test. Test was used to collect information regarding students' speaking skill. Meanwhile, the Likert Scale was used to collect data regarding students' perception on the use of Speakerly AI in speaking class. The data collection consists of four phase; preparation, pre-test, treatment (intervention), and post-test. For data analysis, statistical analysis was used to find out whether Speakerly AI had a significant impact on students speaking skills.

## Results and Discussion

### Results

In this study, there are five procedures executed to gain the result of the study. The procedure begun with preparation stage. In preparation stage, the

subjects were selected where the students divided into two groups; experimental and control group. On experimental group, participants were accepting learning intervention by using the Speakerly AI app, while on control group, received traditional speaking instruction without the app. After that, the Speakerly AI was chosen for supplemental tool for speaking practice. The last, the instruments for gathering the data related to students speaking skills improvement and their perception were prepared.

Secondly, administering the pre-test. In this stage, both groups were given the same test before treatment. The purpose of this phase was to determine students' initial speaking abilities and verify equivalence between the two groups before intervention.

Third, executing the treatment (intervention). In this phase, students in the experimental group used the Speakerly AI for speaking practice in four weeks. There were 2-3 session every week, and every session run in one and a half hour. The activities included: engaging in AI-generated conversations, practicing pronunciation with instant feedback, and completing speaking tasks and dialogues. For control group, it received traditional speaking lessons such as dialog memorization, pronunciation practice, and vocabulary activities. No AI tool was used during the lessons.

Fourth, After the treatment period was over, the post-test conducted. Here, both groups took the same speaking test used in the pre-test. After that, the test was evaluated using the same rubric and raters to maintain reliability. Then, Scores were compared to determine improvement.

Fifth, analyzing the data. In this phase, statistical analysis was used to determine whether the AI-based app (Speakerly AI) had a significant impact on the speaking skills improvement. Also, the Likert scale was analyzed to reveal students' perception.

In this study, there are four aspects that are typically measured regarding the students speaking skill. It includes: pronunciation, fluency, grammar, and accuracy.

The result of the pre-test and post-test that have been taken from the two groups is demonstrated in the following table:

**Tabel 4.1** The pre-test and post-test data between experimental and control group

| Experimental group | $T_1$ | $T_2$ |
|---|---|---|
| Mean | 52.50 | 71.88 |
| Std.Deviation | 12.55 | |
| Control group | $T_1$ | $T_2$ |
| Mean | 56.25 | 60.00 |
| Std.Deviation | 13.25 | |

*Source: test result*

After administering the pre-test, next phase then conducted by doing intervention. During the phase of intervention (treatment), Speakerly AI was used in the class as suplemental tool for improving speaking skills. After that, the post-test then administered. By seeing the data comparison demonstrated in table. 4.1, specifically to the the mean score for experimental group, there is a huge gap of the score between the two.

During the research, the pre-test and post-test was administered to see whether students' speaking skills had improved. The teacher used an oral test that completed in ninety minutes for each group. The analysis of pre-test and post-test result can be seen in the following table:

**Table 4.2** The data of pre-test and post-test from experimental group

| Category | Range | X1 | | X2 | |
|---|---|---|---|---|---|
| | | n | % | n | % |
| Excellent | 85-100 | 0 | 0 | 1 | 12.5 |
| Good | 70-84 | 1 | 12.5 | 4 | 50 |
| Fair | 55-69 | 1 | 62.5 | 3 | 37.5 |
| Poor | 40-54 | 5 | 12.5 | 0 | 0 |
| Very Poor | 0-39 | 1 | 12.5 | 0 | 0 |
| Total | | 8 | 100 | 8 | 100 |

*Source: test result*

By seeing the result, shown in the table 4.2, there were 12.5% participants who was in the "Very Poor" position in the first test. However, 0% participant was in this category in the second test. Next, in the "Poor", there were 62.5% of participants. However, 0% participant was in this place on the second test. Next, there were 12.5% participants in "Fair" position. However, there were 37.5% participants in this position in the second test. Futhermore, there were 12.5% participants in "Good" in the first test. However, 50% participants achieved "Good" position in the second test. Meanwhile, 0% who was in the "Excellent" category. However, there were 12.5% participants achieved the "Excelent" in the post-test.

The pre-test and post-test also administered to the control group, to see the improvement made by the students by using traditional method of teaching speaking such as: dialog memorization, pronunciation practice, and vocabulary activities).

**Table 4.3** The data of pre-test and post-test from control group

| Category | Range | X1 | | X2 | |
|---|---|---|---|---|---|
| | | n | % | n | % |
| Excellent | 85-100 | 0 | 0 | 0 | 0 |
| Good | 70-84 | 1 | 12.5 | 1 | 12.5 |
| Fair | 55-69 | 4 | 50 | 6 | 75 |
| Poor | 40-54 | 3 | 37.5 | 1 | 12.5 |
| Very Poor | 0-39 | 0 | 0 | 0 | 0 |
| Total | | 8 | 100 | 8 | 100 |

*Source: test result*

By seeing the result, shown in the table 4.3, 0% participant who was in the "Very Poor" category, both in the pre-test and post-test. In the "Poor" category, there were 37.5% participants in the pre-test. However, there were 12.5% participants in this category in the post- test. Next, there were 50% participants in "Fair" place in the pre-test. However, there were 75% participants in this place in the post-test. Futhermore, there were 12.5% participants in "Good" category, both in pre-test and post-test. Meanwhile, 0% partcipant in the "Excellent" category, both in pre-test and post-test.

To determine whether there is a significant difference between two means from experimental and control group, the independent sample t-test using SPSS program was administerd. The result of the statistical analysis can be seen in the following table:

**Table 4.4** the independent sample t-tests

| Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
|---|---|---|---|---|
| f | t | df | Sig. (2-tailed) | Std. Error Difference |
| .625 | .984 | 16 | .000 | 1.915 |

Source: SPSS data analysis

As shown in the table above that Sig. (2-tailed) < α (0.000 < 0.05), the null hypothesis is rejected. This indicates a statistically significant difference between the experimental and control groups, lead us to the conclusion that the use of Speakerly app to improve speaking skills at STKIP Tomakaka Tiwikrama was significant in result compared to the traditional method.

Furthermore, to reveal the significant level of the experimentation itself, the $t_{obs}$ value and $t_{crit}$ value then compared. The comparison is shown in the table below.

**Table 4.5** The comparison between t-observed and t-critical value

| $t_{obs}$ | $t_{crit}$ | Sig.(2-tailed) |
|---|---|---|
| 12.452 | 1.873 | .000 |

*Source: SPSS data analysis*

The data above shows that the t-test value exceeded the t-table value, where the t-observed value is 12.452 and t-critical value is 1.873 (12.452 >1.873). Therefore, it can be inferred that after using Speakerly AI, students' speaking skills was significantly improved.

Regarding the students perception on Speakerly app use, there are five domain

that become the aspects of measurement using Likert Scale. The summary of the Likert Scale is provided in the following table.

The table above shows the students perception in five different aspects, including the usefulness, usability, engagement, speaking confidence, and feedback quality provided by Speakerly AI app. From the result, we can see that the mean score of the overall aspects is 4.11 from 5.00, which indicates that the students perceived Speakerly positively, especially to its usefulness. In addition, students reported positive perceptions regarding the use of Speakerly. They felt more motivated to practice speaking, experienced reduced anxiety in speaking, and it encourage their willingness to speak. The app provided a practical benefit that allowed them to practice anytime and anywhere. This indicates that Speakerly not only enhance speaking skill, but also contributes to increase learners' confidence and engagement.

**Discussion**

The results of the tests demonstrated and indicated an improvement in speaking skills after using Speakerly AI learning app. Students were able to speak more fluently with fewer pauses, apply more accurate pronunciation patterns, and utilize a wider range of vocabulary in their spoken responses. In addition, grammar errors were reduced, and students exhibited better sentence structure. These improvements suggest that the app's real-time feedback, pronunciation analysis, conversational simulations, and personalized learning played an important role in supporting speaking development.

As shown in table 4.4 that Sig. (2-tailed) $< \alpha$ ($0.000 < 0.05$), indicated the null hypothesis is rejected. This demostrated a statistically significant difference between the experimental and control groups, lead us to the conclusion that the use of Speakerly app was significant in improving students' speaking skills at STKIP Tomakaka Tiwikrama compared to the traditional method. Moreover, as seen from the table 4.5, the t-observed value (12.452) exceeded the t-critical value (1.873). Since $12.452 > 1.873$, the null hypothesis is rejected. This indicates a statistically significant difference between the groups.

Furthermore, by seeing the result of data analysis demonstrated in the table 4.1, the findings of the study indicate that the mean score of the experimental group was higher than the control group. It showed that learners who used Speakerly showed greater improvement in speaking skills compared to those who received traditional method. Therefore, this result suggests that the integration of AI-based app such as Speakerly in speaking practice can provide benefits to EFL learners, especially in enhancing speaking skill.

Overall, the higher mean score in the experimental group than control group reveals that Speakerly AI effectively supports students' speaking development. This is because Speakerly provides real-time, individualized feedback, enable learners to identify pronunciation errors, fluency and vocabulary issues, and grammatical inaccuracies.

Unlike traditional methods, which rely on teacher feedback, Speakerly allows students to practice repeatedly without time limitations or teacher presence. The automated system and personalized learning provided by the Speakerly AI app appears to play an important role in enhancing students speaking skills.

Previous studies regarding the use of AI-based language learning applications such as ELSA speak, Praktika AI, Duolingo Max, and Chat GPT Voice, have demonstrated that it can improve speaking skill. For example, a study conducted by Widi et al. (2025) revealed that students speaking ability significantly improved by using Duolingo application. Similarly, a

study conducted by Ustunbas (2024) showed that students speaking ability significantly improved by using Chat GPT Voice. Meanwhile, a study conducted by Karim et al. (2023) and Rahman et al. (2024), demonstrated significant improvement of students speaking competence by using ELSA Speak.

Similary to the studies above, the present study also explores how an AI-based tool supports EFL learners' speaking development through automated feedback, repeated practice, and speech recognition features. However, unlike the language learning apps mentioned above, Speakerly AI offers adaptive conversational simulations, personalized difficulty levels, and real-time dialogue-based feedback, which makes the learning experience more interactive than the pronunciation-focused tools used in those studies. This study is contributed in expanding the literature by examining an AI-based language learning app than a drill-based pronunciation app, providing new insight into speaking performance in communicative contexts.

## CONCLUSION

The findings of this study indicate that the use of Speakerly AI significantly enhances the students speaking skills at STKIP Tomakaka Tiwikrama. Students who participated in speaking practice using Speakerly AI demonstrated significant improvements in overall speaking performance compared to those who participated in traditional classroom. In addition, students showed positive perceptions regarding the use of Speakerly AI. The results indicate that Speakerly AI not only enhance speaking skill, but also contributes to increase learners' confidence and engagement.

This study has several pedagogical implications. AI-based language learning applications can complement speaking class, helping teachers overcome time and resource limitations in speaking practice. However, despite its promising results, this study has several limitations: due to a short period of intervention, it may not fully capture the long-term effects of using Speakerly on speaking proficiency. In addition, other language skills (listening, reading, and writing) were not examined, although they may interact with speaking development.

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