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ELSA Speak as Mobile Assisted Language Learning To Improve Students' Speaking Skill

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Abstrak *– Penelitian ini bertujuan untuk mengeksplorasi apakah terdapat perbedaan yang signifikan dalam kemampuan berbicara siswa antara mereka yang diinstruksikan dengan aplikasi ELSA Speak dan mereka yang tidak, di antara siswa kelas dua belas di SMAN 6 Kota Serang. Dengan menggunakan pendekatan penelitian kuantitatif dengan metode quasi-eksperimental, peneliti meneliti 60 siswa kelas dua belas dari SMAN 6 Kota Serang, yang terdiri dari 30 siswa dari kelas XII MIPA-6 sebagai kelompok eksperimen dan 30 siswa lainnya dari kelas XII MIPA-3 sebagai kelompok kontrol. Metode pengumpulan data meliputi observasi, pre-test, treatment, dan post-test. Analisis melalui uji t menghasilkan hasil yang mengungkapkan: skor kemampuan berbicara rata-rata untuk kelompok eksperimen adalah 76,93, sedangkan untuk kelompok kontrol adalah 64,26. Selain itu, nilai t-hitung adalah 8,46, melebihi nilai t –tabel sebesar 1,67 pada tingkat signifikansi 5%. Perbedaan antara t-hitung yang diperoleh dan nilai tttabel mengarah pada penerimaan hipotesis alternatif (Ha) dan penolakan hipotesis nol (Ho). Pada intinya, temuan ini menunjukkan adanya perbedaan yang signifikan dalam kemampuan berbicara antara kelompok yang menggunakan aplikasi ELSA Speak dan kelompok yang tidak. Oleh karena itu, hasil ini menegaskan pentingnya mengintegrasikan alat pembelajaran bahasa berbasis teknologi seperti ELSA Speak ke dalam kurikulum pendidikan, karena telah terbukti efektif dalam meningkatkan kemampuan berbicara siswa dan memfasilitasi akuisisi bahasa yang lebih efektif.*

Kata Kunci: ELSA Speak, Kemampuan Berbicara Bahasa Inggris, Mobile Assisted Language Learning

Abstract *- This study endeavors to explore whether there exists a significant discrepancy in students' speaking proficiency between those instructed with the ELSA Speak application and those without it, among twelfth-grade students at SMAN 6 Kota Serang. Employing a quantitative research approach with a quasi-experimental method, the researcher examined 60 twelfth-grade students from SMAN 6 Kota Serang, comprising 30 students from XII MIPA-6 as the experimental group and another 30 students from XII MIPA-3 as the control group. Data collection methods encompassed observation, pre-tests, treatment, and post-tests. Analysis via t-test yielded revealing results: the mean speaking proficiency score for the experimental group was 76.93, while for the control group it stood at 64.26. Furthermore, the calculated t-value was 8.46, surpassing the critical t-value of 1.67 at a significance level of 5%. This disparity between the obtained t-value and the critical t-value led to the acceptance of the alternative hypothesis (Ha) and the rejection of the null hypothesis (Ho). In essence, the findings suggest a significant disparity in speaking proficiency between the group using the ELSA Speak application and the group without it. Consequently, these results underscore the importance of integrating technology-based language learning tools such as ELSA Speak into educational curricula, as they have demonstrated efficacy in enhancing students' speaking skills and fostering more effective language acquisition.*

Key words: ELSA Speak, Speaking Skill, Mobile Assisted Language Learning.

INTRODUCTION

In today's technological era, the integration of technology in language teaching and learning has become increasingly prominent (Shadiev & Yang, 2020). Language educators are constantly exploring innovative methods to enhance students' language proficiency, particularly in areas such as speaking skills. The emergence of Mobile Assisted Language Learning (MALL) has revolutionized traditional language learning approaches, offering learners convenient and flexible avenues to improve their language abilities (Rajendran & Md Yunus, 2021).

As technology continues to reshape the way we interact and collaborate, strong speaking skills are essential for conveying complex concepts, persuading audiences, and engaging in meaningful dialogue across digital channels (Akhter et al., 2021). Moreover, in fields such as artificial intelligence and voice-activated technologies, the mastery of speaking skills is integral for creating and interfacing with cutting-edge innovations, underscoring its relevance in driving technological advancements forward (Kehing & Yunus, 2021). In this dynamic landscape, individuals equipped with proficient speaking abilities are better positioned to harness the transformative potential of technology, facilitating innovation, collaboration, and progress in the digital age (Kadamovna, 2021).

Speaking skill holds paramount importance in language acquisition as it reflects a learner's ability to effectively communicate and interact in real-life situations. The act of speaking extends beyond the mere construction of grammatically accurate sentences; instead, it encompasses a wide array of elements including mechanics, functionalities, pragmatics, and social dynamics (Nurazizah et al., 2023). However, mastering speaking skills often poses challenges to language learners, requiring dedicated practice and exposure to authentic language contexts (Jaelani & Zabidi, 2020). Not every student possesses proficient speaking skills in various situations, as this ability is contingent upon individual circumstances in language learning. Each student encounters distinct challenges when it comes to speaking, which can be discerned by examining various aspects of speech proficiency.

Prior to commencing the research, on June 8th, 2023, the researcher undertook observations, which involved interviewing teachers and observing classroom teaching and learning activities at the twelfth grade of SMAN 6 Kota Serang. Through this preliminary observation, the researcher identified several issues indicating that certain students encountered challenges in learning English, particularly in speaking proficiency. These issues included a lack of confidence among some students when speaking English, difficulties in effectively articulating ideas in English among others, and a sense of disengagement with traditional methods of learning speaking skills.

To solve the prior problems, the teachers need media in teaching speaking. Mobile applications designed specifically for language learning, such as ELSA Speak, have garnered attention for their potential to enhance speaking proficiency. ELSA Speak utilizes cutting-edge speech recognition technology and innovative teaching methodologies to provide personalized feedback and tailored exercises, thereby offering learners a unique opportunity to refine their pronunciation and fluency (Karim et al., 2023).

The role of Generation Z in using smartphones has great potential to be positively directed in supporting English learning (Haetami, 2023). As digital natives, members of Generation Z are adept at navigating smartphone applications, making ELSA Speak easily accessible and convenient for integrating language learning into their daily routines.

Numerous prior research endeavors have delved into the subject of instructing English through the utilization of "ELSA Speak." In a study by (Elsani et al., 2023), the effectiveness of the ELSA Speak App in improving English speaking proficiency among students in the Department of English Education at UIN Jakarta was explored. The research revealed that the ELSA Speak App significantly contributes to the development of fluency and accuracy in English as a Foreign Language (EFL) students' speaking abilities. Particularly noteworthy is the app's ability to encourage autonomous learning, facilitated by its prominent feature of AI instant feedback.

Another study was conducted by (Kholis, 2021). He conducted a research to examine the use of ELSA Speak for teaching pronunciation at English Department of Nahdlatul Ulama University of Yogyakarta. The findings demonstrated that ELSA Speak has the potential to enhance students' pronunciation proficiency. Furthermore, the app's array of features, including instant feedback, facilitated precise pronunciation among the students. A study of similar significance was conducted by (Samad & Ismail, 2020), wherein they investigated the impact of ELSA Speak on the pronunciation proficiency of students enrolled in the English program at STKIP Muhammadiyah Enrekang. Their findings underscored the effectiveness of the ELSA Speak application in improving the pronunciation skills of first-semester students at STKIP Muhammadiyah Enrekang.

While there is existing literature on the efficacy of various language learning applications, there remains a notable gap in research specifically focusing on the impact of ELSA Speak on the speaking proficiency of high school students in this region. The effectiveness of ELSA Speak as a Mobile Assisted Language Learning (MALL) tool for improving speaking skills warrants investigation, particularly in the context of high school students at SMAN 6 Kota Serang. Therefore, conducting an experimental research study to assess the effectiveness of ELSA Speak

in enhancing students' speaking skills at SMAN 6 Kota Serang will contribute valuable insights to both the field of language education and the practical implementation of technology-assisted language learning tools.

RESEARCH METHODOLOGY

The researcher employed a quantitative research approach with a quasi-experimental methodology for this study. As per (Creswell, 2008), quasi-experimental research integrates a greater number of treatments to ensure internal validity compared to genuine experimental research designs. In this particular study, the quasi-experimental method represents a practical compromise between actual experimentation and the inherent complexities of human linguistic behavior under investigation, given that the selected groups were subject to examination. Drawing from prior research, the quasi-experimental approach amalgamates multiple facets to assess the data's validity across two distinct groups.

The study focused on Grade 12 students attending SMAN 6 Kota Serang during the 2022/2023 academic year. Due to the large population size, the researcher opted to select a representative sample, recruiting two classes from the 12th grade cohort at SMAN 6 Kota Serang to conduct a quasi-experimental study. These classes were designated as the control group and the experimental group, respectively. The sampling technique employed in this research was purposive sampling, as outlined by (Jakni, 2016) where participants were selected based on specific criteria. The control group, XII MIPA-3, consisted of 30 students who had not received instruction in speaking skills using the ELSA Speak application. Conversely, the experimental group, XII MIPA-6, also comprised 30 students, who were taught speaking skills utilizing the ELSA Speak application.

The primary instruments utilized in this study included pre-tests and post-tests, designed to assess proficiency in speaking skills across various indicators such as accent, grammar, vocabulary, fluency, and comprehension, as identified by (Hughes, 2002). The data collected by the researchers requires further analysis to determine the presentation and discussion format for the findings section. To analyze the data, the researcher employed normality and homogeneity testing. Then, the t-test was also calculated to examine the hypothesis. As per (Hartono, 2009), the t-test is employed to evaluate the null hypothesis concerning the average difference between two samples. In the context of this study, namely, the 12 MIPA-3 and 12 MIPA-6 groups, the t-test was utilized to examine the hypothesis and ascertain whether there exists a statistically significant difference between the means of the two samples.

RESULTS AND DISCUSSION

Results

Following the collection and analysis of data, the researcher will now present the findings of this study in this section. Essentially, the primary aim of this research is to assess the efficacy of utilizing the Elsa Speak application for teaching speaking skills. During an interview conducted with a teacher regarding speaking instruction in the classroom, it was disclosed that the teaching approach emphasizes structured speaking exercises focusing on real-life scenarios and pertinent topics. Teaching methodologies encompass activities such as role-playing, debates, and presentations, with student performance evaluated through various means including classroom discussions, presentations, as well as audio or video recordings. Additionally, recognizing the challenges faced by students who may feel apprehensive or encounter difficulties in public speaking, efforts are made to cultivate a supportive classroom atmosphere and implement tailored exercises aimed at bolstering their self-assurance, thus constituting integral components of the instructional approach.

a. Pre-Test of Experiment Group and Control Class

As previously detailed in the research methodology, the study's population comprised 60 twelfth-grade students from SMAN 6, Kota Serang, with a sample consisting of 30 students from XII MIPA-6 as the experimental class and another 30 students from XII MIPA-3 serving as the control class. The calculation below was calculated by SPSS application:

Tabel 1. Pre-Test

Experiment Group		Control Group	
Mean	40.17	Mean	37.80

Median	42.00	Median	39.00
Mode	34	Mode	35[a]
Minimum	27	Minimum	17
Maximum	51	Maximum	54

The SPSS analysis yielded valuable insights into the pre-test scores of both the experimental and control classes, indicative of the speaking skill proficiency levels among twelfth-grade students at SMAN 6 Kota Serang before the introduction of the ELSA Speak treatment. Within the experimental class, the mean pre-test score was computed at 40.17, with a median of 42.00 and a mode of 34, illustrating a distribution slightly skewed towards lower scores. This suggests a central tendency around the mid-range of scores, with a relatively balanced spread of scores across the range, from a minimum of 27 to a maximum of 51. Conversely, in the control class, the mean pre-test score was slightly lower at 37.80, accompanied by a median of 39.00 and a mode of 35, indicating a comparable distribution pattern with a marginally lower central tendency. Notably, the range of scores in the control class was broader, spanning from a minimum of 17 to a maximum of 54, suggesting greater variability in speaking skill levels among students.

These findings provide a foundational understanding of the students' speaking skill proficiency levels across both classes, serving as a basis for subsequent analysis to evaluate the efficacy of the ELSA Speak intervention on post-test scores. By delineating the pre-treatment speaking skill levels, researchers can discern any changes or improvements resulting from the intervention, thereby informing future instructional strategies and interventions aimed at enhancing students' speaking proficiency. Additionally, these insights offer valuable context for educators and stakeholders, aiding in the development of targeted interventions and tailored support mechanisms to address specific areas of need and foster enhanced language learning outcomes among students.

b. Post-Test of Experiment Group and Control Class

After given the treatment, post-test was employed for both of classes. The treatment was difference for both of classes. The experiment class was treated ELSA Speak for their speaking skill while the control class was only treated using conventional teaching media. The calculation below was calculated by SPSS application:

Tabel 2. Post-Test

Experiment Group		Control Group	
Mean	76.93	Mean	64.267
Median	75	Median	65
Mode	75	Mode	65
Minimum	70	Minimum	50
Maximum	85	Maximum	77

The SPSS analysis revealed noteworthy insights into the post-test scores of both the experimental and control classes, shedding light on the effectiveness of the ELSA Speak treatment in enhancing students' speaking skills among twelfth-grade students at SMAN 6 Kota Serang. Within the experimental class, the post-test scores demonstrated a substantial improvement, with a mean score of 76.93, a median of 75, and a mode of 75. These metrics indicate a notable central tendency around the mid-range of scores, suggesting a consistent enhancement in speaking proficiency across the cohort. Furthermore, the range of scores spanned from a minimum of 70 to a maximum of 85, showcasing a significant increase in the upper bounds of achievement following the implementation of the ELSA Speak intervention.

Conversely, the post-test scores in the control class exhibited more modest improvements, with a mean score of 64.267, a median of 65, and a mode of 65. While these metrics indicate a comparable central tendency to the experimental class, the overall improvement appears less pronounced. The range of scores in the control class ranged from a minimum of 50 to a maximum of 77, showcasing a narrower range of achievement compared to the experimental group. These findings underscore the efficacy of the ELSA Speak treatment in fostering significant improvements in students' speaking skills, as evidenced by the substantial enhancements observed in post-test scores within the experimental class. Such insights provide valuable guidance for educators and stakeholders seeking to implement targeted interventions aimed at enhancing language learning outcomes among students.

b. T-Test Calculation

The subsequent procedure involves conducting the t-test as a means of hypothesis testing. The data utilized for the t-test computation were derived from the post-test results of both the experimental and control classes. The subsequent tables present the post-test scores of the students:

Table 3. Post-Test Score for T-Test Calculation

X_1	X_2	x_1	x_2	x_1^2	x_2^2
75	69	-1.5	5.7	2.25	32.49
75	77	-1.5	13.7	2.25	187.69
83	68	6.5	4.7	4.25.	22.09
85	73	85	9.7	72.25	94.09
77	76	0.5	12.7	0.25	161.29
84	64	7.6	0.7	56.25	0.49
70	65	-6.5	1,7	42.25	2.89
83	64	6.5	0.7	42.25	0.49
83	56	-6.5	-7.3	42.25	53.29
74	50	-2.5	13.7	6.25	187.69
75	56	-1.5	-7.3	2.25	53.29
75	58	-1.5	-5.3	2.25	28.09
75	65	-1.5	1,7	2.25	2.89
70	50	-6.5	13.7	42.25	187.69
70	53	-6.5	-10.3	42.25	106.09
85	69	-8.5	5.7	72.25	32.49
83	58	6.5	-5.3	42.25	28.09
74	58	-2.5	-5.3	42.25	28.09
74	68	-2.5	4.7	42.25	22.09
75	64	-1.5	0.7	2.25	0.49
74	76	-2.5	12.7	6.25	161.29
81	68	4.5	4.7	20.25	22.09
82	65	5.5	1,7	30.25	2.89
75	76	1.5	12.7	2.25	161.29
83	68	6.5	4.7	42.25	22.09
70	65	-6.5	1,7	42.25	2.89
74	60	-2.5	-3.3	6.25	10.89
75	64	-1.5	0.7	2.25	0.49
75	65	-1.5	1,7	2.25	2.89
74	60	-2.5	-3.3	6.25	10.89
ΣX1= 2295	**ΣX2= 1901**	**ΣX= 4**	**ΣX_2= 81.6**	**ΣX_1^2= 719.25**	**ΣX_2^2= 1629.5**

From the table above, the researcher obtained data as follows ΣX1 = 2295, ΣX2 = 1901, ΣX_1^2 = 719.25, and ΣX_2^2 = 1629.5. Moreover, the researcher compares the result of post-test from both group by using t-test formula as follows:

$$\frac{M_1 - M_2}{\sqrt{\left\{\frac{\sum X_1^2 + \sum X_2^2}{N_2 + N_2 - 2}\right\}\left\{\frac{N_1 + N_2}{N_1 . N_2}\right\}}}$$

$$t_0 = \frac{76.5 - 63.3}{\sqrt{\left\{\frac{719.25 + 1629.5}{30 + 30 - 2}\right\}\left\{\frac{30 + 30}{30 . 30}\right\}}}$$

$$t_0 = \frac{13.2}{\sqrt{\{40.95\}\{0.06\}}}$$

$$t_0 = \frac{13.2}{\sqrt{2.45}}$$

$$t_0 = \frac{13.2}{1.56} = 8.46$$

Based on the result of t-test, the researcher obtained some data, the mean of experiment group is 76,93 and the mean of control group is 64.26. besides the value of t-test is 8,46 and t-table is 1.67. Moreover, the researcher compared t_t with t_0 on degree of significance 5% and the result showed that t-test bigger than t-table, $t_t > t_0$ or 8,46 > 1.67. In brief, from t-test, it can draw a conclusion that Ha or alternative hypothesis is accepted. Meanwhile, H_0 or null hypothesis is rejected. In other words, we can be inferred that there is significant difference between group which use Elsa Speak Application and group which did not use Elsa Speak Application.

Discussion

Implementing the ELSA Speak application to enhance the speaking skills of twelfth-grade students at SMAN 6 Kota Serang involves a multifaceted approach aimed at optimizing the effectiveness of this innovative tool. Firstly, educators can integrate ELSA Speak into their curriculum by incorporating structured speaking exercises and activities that leverage the app's features. These activities can range from individual pronunciation practice to group discussions and oral presentations, allowing students to engage with the material in diverse ways while receiving real-time feedback on their pronunciation and speaking proficiency. Additionally, educators can design lesson plans that align with the specific topics and themes covered in the ELSA Speak curriculum, ensuring a cohesive and integrated learning experience.

Secondly, it is essential to provide comprehensive training and support to both teachers and students to maximize the benefits of ELSA Speak. Teachers can undergo professional development workshops or training sessions to familiarize themselves with the app's functionalities and instructional strategies for integrating it into their teaching practices effectively (Ngoc et al., 2024). Likewise, students can receive orientation sessions or tutorials on how to navigate the ELSA Speak app and make the most of its features for improving their speaking skills . By empowering both teachers and students with the necessary knowledge and skills, schools can create an environment conducive to effective language learning and communication.

The results of this research demonstrate significant improvements in the speaking skills of twelfth-grade students at SMAN 6 Kota Serang following the implementation of the ELSA Speak application. The pre-test scores revealed that students in both the experimental and control classes exhibited relatively similar levels of speaking proficiency before the intervention. However, post-test scores indicated a substantial enhancement in speaking skills among students who received the ELSA Speak treatment compared to those in the control group. This results is also supported by previous study such as (Elsani et al., 2023), the effectiveness of the ELSA Speak App in improving English speaking proficiency among students in the Department of English Education at UIN Jakarta. On the other hand, pronunciation skill can also be improved through ELSA Speak. As previous study by (Kholis, 2021). He studied ELSA Speak's impact on pronunciation teaching at the English Department of Nahdlatul Ulama University of Yogyakarta, finding it enhanced students' skills with features like instant feedback. A study of similar significance was conducted by (Samad & Ismail, 2020), wherein they investigated the impact of ELSA Speak on the pronunciation proficiency of students enrolled in the English program at STKIP Muhammadiyah Enrekang.

Specifically, the experimental class, which utilized the ELSA Speak application as part of their learning process, demonstrated a marked improvement in post-test scores, with a significantly higher mean score compared to the control class. This improvement suggests that the ELSA Speak intervention effectively facilitated the development of students' speaking skills, enabling them to articulate ideas more fluently and accurately.

Furthermore, the analysis of post-test scores revealed a consistent pattern of improvement across various metrics, including mean, median, mode, and range. These findings indicate a notable enhancement in speaking proficiency among students who engaged with the ELSA Speak application, underscoring its effectiveness as a tool for language learning and skill development.

The ongoing assessment and monitoring are crucial aspects of implementing the ELSA Speak application to ensure its efficacy and address any challenges or areas for improvement. Schools can establish regular checkpoints or assessments to track students' progress in speaking proficiency and identify areas where additional support may be needed. The integration of AI technology within Elsa Speak is prominently demonstrated through its adeptness in voice recognition. Utilizing this speech analysis, Elsa Speak evaluates the proficiency of one's English speaking skills and subsequently suggests tailored methods for enhancing them (Hung et al., 2021). Additionally, feedback

mechanisms can be put in place to gather insights from both teachers and students on their experiences with ELSA Speak, allowing for continuous refinement and adaptation of instructional approaches. By fostering a culture of continuous improvement and feedback, schools can optimize the impact of the ELSA Speak application in enhancing students' speaking skills and fostering their overall language development.

Overall, this research provides compelling evidence supporting the efficacy of the ELSA Speak application in improving the speaking skills of twelfth grade students of SMAN 6 Kota Serang. By leveraging innovative technology and interactive learning methods, educators can enhance language instruction and empower students to communicate effectively in English, thereby preparing them for academic success and future professional endeavors.

CONCLUSION

Before the researcher gave treatment both of experimental class and control class, the researcher got mean score of pre-tests from experimental class was 40.16 and control class was 38,6. It means that the students' speaking skill at twelfth grade of SMAN 6, Kota Serang as sample of the research have relatively same both experimental class and control class. After the researcher giving treatment by using Elsa Speak Application for XII MIPA 6 as experimental class and without using Elsa Speak Application for XII MIPA 3 as control class, the researcher got mean of post-test score from experimental class was 76,93 and control class was 64,26. Students' speaking skill got different increase. Experimental class got higher increase after giving treatment than control class.

The use of Elsa Speak Application as a new media to improve students' speaking skill at twelfth grade of SMAN 6, Kota Serang has been showed that means score from experimental class after giving treatment as new method got higher score than control class (76,93 >64,26). In addition the result of t-test, the researcher obtained some data, the mean of experiment group is 76,93 and the mean of control group is 64.26. besides the value of t-test is 8,46 and t-table is 1.67. moreover, the researcher compared tt with to on degree of significance 5% and the result showed that t-test bigger than t-table or 8,46 > 1.67. In brief, from t-test, it can draw a conclusion that Ha or alternative hypothesis is accepted. Meanwhile, Ho or null hypothesis is rejected. In other words, it can be inferred that there is significant difference between group which use Elsa Speak Application and group which did not use of Elsa Speak Application. In summary, the findings suggest that the Elsa Speak Application has a substantial impact on enhancing students' speaking skills at the twelfth grade of SMAN 6, Kota Serang.

The implications of this research are profound, suggesting that the integration of the Elsa Speak Application into language learning curricula can significantly enhance students' speaking skills. By leveraging technology-based tools like Elsa Speak, educators can provide more effective and engaging learning experiences, leading to improved language acquisition outcomes. Furthermore, this research underscores the importance of adopting innovative approaches to teaching, emphasizing the potential of digital resources to augment traditional instructional methods and meet the evolving needs of students in today's technologically driven educational landscape.

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