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The Effectiveness of Suno AI (Artificial Inteligence) Based English Song to Improve Student's Vocabulary

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ABSTRACT

This study investigates the effectiveness of Suno AI, an artificial intelligence-based English song learning tool, in enhancing vocabulary mastery among eighth-grade students at a junior high school in Jepara. The background of the research stems from the challenges students face in acquiring vocabulary using conventional methods. The objective of this study is to determine whether Suno AI can significantly improve students' vocabulary acquisition. A quasi-experimental research design was employed, with an experimental class receiving instruction using Suno AI and a control class following traditional vocabulary learning methods. Pre-test and post-test data were collected and analyzed using statistical methods, including the Shapiro-Wilk test for normality, the Levene test for homogeneity, and a paired-sample T-test to assess the effectiveness of the intervention. The findings indicate a significant improvement in the vocabulary mastery of students in the experimental class compared to the control class, demonstrating that AI-powered learning tools can enhance engagement and retention. This research contributes to educational technology by highlighting the potential of AI applications in language learning, paving the way for more interactive and effective vocabulary instruction.

Keyword: vocabulary mastery; artificial intelligence; Suno AI; English learning; and educational technology.

I. INTRODUCTION

Education and English are closely connected each other, as English is a universal language widely used for communication and learning, especially in a technology-driven world. English is also the second language commonly used in education, making it an essential skill to master (Atasheva, 2024; Saddina, 2021). In Indonesia, English is part of the curriculum, particularly in science and education, with a focus on four key skills: reading, listening, writing, and speaking. Although English mastery takes time, it is an important communication tool for daily life. For example, when traveling abroad, English serves as a global language that helps people from different countries communicate and understand each other (Hidayat et al., 2024).

The role of the curriculum in education is crucial in shaping a country's educational progress, from planning to implementation Hidayat et al., (2024). A well-developed curriculum ensures quality education and prepares students for real-world challenges. However, curriculum reform alone does not guarantee effective change in daily school practices Shi et al., (2023). Teachers and institutions must actively adapt and apply the curriculum in a way that benefits students and enhances learning outcomes.

II. LITERATURE REVIEW

English skills

English proficiency is built upon four essential skills: reading, listening, writing, and speaking, each playing a crucial role in communication and academic success (Hidayat et al., 2024). Reading facilitates comprehension and knowledge transfer between writers and readers, though challenges such as limited resources and low motivation affect learning outcomes (Prasetiya, 2021). Reading itself is a basic competency in the learning process that connects readers and writers (Fitriyah, 2021). The importance of reading must be encouraged by students' interest and habits in reading, one of which is increasing vocabulary. Apart from that, there are other basic skills.

Listening Skills

Listening, an active skill, requires extensive practice to interpret spoken language effectively, aiding in better understanding and retention of information (Lewier & Nendissa, 2020; Maghfiroh et al., 2024). Writing is a complex process that demands creativity, vocabulary mastery, and grammatical accuracy (Agustina et al., 2023). Meanwhile, speaking is considered the most challenging skill as it requires confidence, fluency, and a strong vocabulary, yet many students struggle due to fear of mistakes and limited proficiency (Ningsih et al., 2024). The integration of

these four skills is essential in developing overall English competence, particularly in adapting to modern educational and technological advancements.Reading is a fundamental English skill that helps students understand texts and transfer information between writers and readers (Hidayat et al., (2024). According to a research conducted by Prasetiya, (2021) teaching reading, especially online, can be challenging due to limited resources, low student motivation, and insufficient vocabulary Teachers use strategies like pictures, vocabulary exercises, and reading aloud to improve comprehension. Similarly, listening is an important skill that requires extensive practice. It helps students understand spoken English through various activities like songs, lectures, and online videos Maghfiroh et al., (2024). Listening involves not just hearing but also interpreting meaning and responding effectively (Lewier & Nendissa, 2020). Good listening skills help students understand native speakers better and retain information more easily Fetriani et al., (2020).

Writing skills

Writing itself is an important skill in academic life, as well as in human life. Writing is an active and productive activity and requires a regular way of expressing ideas, thoughts, knowledge, insights, and experiences (Maulidah & Aziz, 2020; nur Aziz & Sabella, 2021)beside that. According to a research conducted by Agustina, et al., (2022) Writing is a complex skill that requires creativity and strong vocabulary knowledge, including word formation, spelling, and academic vocabulary Meanwhile, speaking is the most difficult skill because it requires confidence, good listening skills, and knowledge of vocabulary and grammar.

Speaking Skills

Speaking is essential for everyday communication, but many students struggle with it due to fear of making mistakes and a lack of vocabulary Ningsih et al., (2024). Overcoming these challenges is important for improving English proficiency in education and daily life. Vocabulary is a key factor in speaking because good communication depends on strong vocabulary and proper grammar. Vocabulary plays an important role in all language skills, including listening, speaking, reading, and writing Nurammida et al., (2024). A strong vocabulary helps individuals express their ideas clearly, understand information accurately, and engage in meaningful conversations Haque, n.d., (2024). However, many students face difficulties in learning vocabulary. They struggle with understanding word meanings, remembering verbs, recognizing sentence patterns, and pronouncing words correctly (Language & Prima, 2024). These

challenges make it harder for students to communicate effectively. Therefore, improving vocabulary skills is essential to help students become more confident and fluent in English Fauziningrum et al., (2023). In vocabulary learning, there are problems that are both critical and often encountered, including the low value of student vocabulary in schools, besides that vocabulary learning media that are still traditional and conventional so that students find it difficult to understand the meaning, difficult to remember new vocabulary, difficult to understand the meaning or vocabulary in a sentence, therefore, in vocabulary learning it needs to be supported by new digital media based on digital technology, for example the use of artificial intelligence (AI). Therefore, learning English vocabulary needs to be supported by digital technology that is capable and easy to understand for students.

Techonology and Suno Artificial Inteligence

In the digital technology 4.0 era, English and technology are deeply interconnected, with advancements in artificial intelligence (AI) transforming education and communication (Coccia, 2021). Technology facilitates learning by enhancing accessibility, efficiency, and engagement, making English proficiency—particularly vocabulary mastery—essential for adapting to technological developments (Aditama et al., 2022; Jamaliyah & Wulandari, 2022; Prayudi et al., 2021). A strong vocabulary foundation supports reading, writing, speaking, and listening skills, which are crucial for academic success and effective AI utilization (Sibanda et al., 2025; Suci, 2022). One of the uses of artificial intelligence (AI) based device technology and online platforms that can improve academic writing skills is the use of the ChatGPT tool (Pasaribu & Sibagariang, 2025). Apart from ChatGPT, there are several AIs that can be used to improve various student abilities, including Grammarly, Quillbot (Pasaribu & Sibagariang, 2025). Therefore, the use of AI in developing student skills is important. AI-based English education integrates digital tools to improve language acquisition, fostering adaptive and inclusive learning environments (Liu et al., 2023; Nasar et al., 2024; Purwanto et al., 2020). to improve writing skills, besides that to improve vocabulary skills you can use, one notable AI tool in this domain is Suno AI, a platform that merges artificial intelligence with musicology to create engaging, lyrical learning materials (Pokhrel, 2024; Pratomo, 2024). Studies reveal that Suno AI enhances vocabulary mastery, pronunciation, and comprehension, leading to an 85% improvement compared to traditional

methods (Hijriyah et al., 2025). Moreover, it boosts students' motivation, listening skills, and creativity, particularly among elementary and junior high school students (Nezhyva et al., 2025). The novelty this research is examining the SUNO AI to improve Vocabulary mastery of junior high school student's eight grade in jepara, while the objective of the research is to find out whether SUNO AI is effective to improve vocabulary mastery or not

III. METHOD

This study employed a quantitative approach used quasi-experimental design according to a research conducted by Siedlecki, (2020) to determine the effectiveness of using song-based Sunno AI media in improving vocabulary skills of 8th grade students of junior high school in jepara. In this case, the independent variable (X) is the use of Sunno AI, and the dependent variable (Y) is students' vocabulary mastery. This study used purposive sampling technique according to a research conducted by (Nyimbili & Nyimbili, 2024) to get the information and data needed. In conducting this study, the researcher used a sample of 34 people from one of the classes, namely class VIII G. From a population of 315 people in class 8 of junior high school in jepara. The reason in choosing the class, because that class have middle-low score about vocabulary. The data collection technique used in this study is in the form of a test containing 20 multiple choice questions (after test validity) with content validity (Aithal & Aithal, 2020). The test is used to obtained the score student's before and after treatment. In this study, researchers used data analysis of the inferential analysis type, where this type of analysis was used to test the researcher's hypothesis and was proven by using the T-test in analyzing the data Fiandini et al., (2024). By using SPSS version 27.

IV. RESULT AND DISCUSSION

The data used in this study were obtained from the results of the pre-test and post-test of students in class VIII of junior high school in jepara. Especially the sample of this study, namely class VIII G. The pre-test data of this study were collected when the learning treatment using Suno AI media to teach students had not yet been implemented. After the learning treatment using Suno AI media to teach students in class was implemented. Including providing learning materials, post-test data were collected.

Pre-test results

Before starting the treatment, an initial test was conducted to determine the extent of students' knowledge in learning vocabulary. This test was followed by 68 students. With a different initial test schedule due to the different schedules for

the two classes. namely on January 22, 2025 and on January 31, 2025

Table 1. statistic of pre-test result of experimental class

Highest Score	65
Lowest Score	15
Average Score	31,61765

Table 2. statistic of pre-test result of control class

Highest Score	90
Lowest Score	25
Average Score	46,94444

The Result of Post-test After getting treatment, a post-test was carried out to determine students'

Knowledge for acquiring the vocabulary. The test was taken by 68 students from two classes. The post-test was conducted on 19th february 2025 and on 20 february 2025

Table 3. statistic of post-test result of experimental class

Highest Score	75
Lowest Score	30
Average Score	50,97222

Table 4. statistic of post-test result of control class

Highest Score	90
Lowest Score	30
Average Score	48,61111

Normality of Pre-test and Post-test Results

The Shapiro-Wilk test was used with SPSS 27 to conduct the normality test. When using the Shapiro-Wilk test, it is taken into account that the number of samples used is less than 50. If the significance value is more than 0.05, the Shapiro-Wilk test results are considered normal. according to a research conducted by (Hidayaty et al., 2022) that research uses the normality test to be said to be normal if sig. more than 0.05 like the results of this study which states that sig. 0.052› 0.05, it can be declared normal and it can be stated that the experimental class and control class are normal and can be continued with the next test. Beside that according to a research conducted by (Sequeira & Borges, 2024) that in his research states that the shapirowilk test is a statistical test used to assess whether certain data samples follow a normal distribution, this test is very useful if the sample size is small to medium. If the sig. value resulting from this test is less than 0.05 then the null hypothesis is rejected, this indicates that the data does not follow a normal distribution.

Table 5. Test of Normality

Shapiro Wilk			
	Statistic	f	Sig.
Pre-test Experiment Class	.866	4	<.001
Pre-test Control Class	.918	4	.014
Post-test Experiment Class	.944	4	.083
Post-test Control Class	.910	4	.008

Homogeneity of Pre-test and Post-test

The homogeneity test in this study was conducted using SPSS and the Levene statistical test. Data must come from a homogeneous population in accordance with the terms of acceptance of H0 if the significant value is more than 0.05 or 5%. According previous study conducted by (Dewi et al., 2024) that in his research is if sig. based on mean is greater than 0.05, it can be concluded that the variants of the post-test data of the experimental class and control class are the same or homogeneous. With this conclusion, researchers can continue testing using parametric statistics, namely the T test. Beside that according to a research conducted by (Jamal, 2025) that in his research state Levene's test for homogeneity of variance across experimental and control groups. Many statistical tests, including ANOVA and t-test, assume that the variances of the various groups being compared are approximately equal. If the sig. value is greater than 0.05, it can be concluded that homogeneity is maintained and parametric testing can be applied.

Table 6. Test of Homogenity

Test of Homogeneity of Variances				
	Levene Statistic	Df1	Df2	Sig.
Pre-test Result	1.030	1	34	.314
Post-test Result	.073	1	34	.788

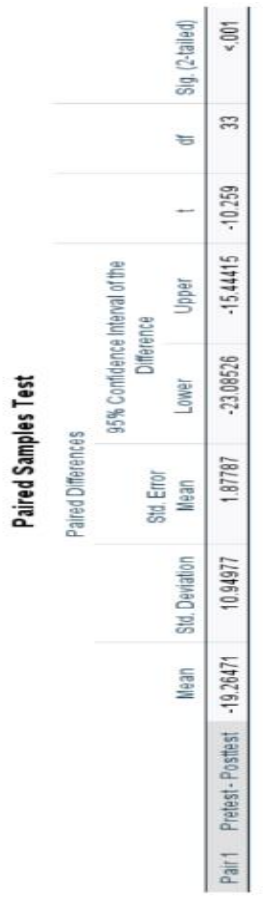
Hypothesis testing

The paired-samples T-test technique was used for hypothesis testing in this study. The sig value of the paired T-test (2.Tailed) must be less than 0.05

The following decisions should be made using the significant values of SPSS 27.

H1: if the sig value. (2. Tailed) < 0.05 then Suno AI media is effective on influencing the dependent variable. vocabulary mastery in class VIII students of junior high school in jepara.

H0: if the value of Sig. (2-tailed) › 0.05 then Suno AI media is not effective on vocabulary mastery of 8th grade students of junior high school in jepara.



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	-19.26471	10.94977	1.87787	-23.08526	-15.44415	-10.259	33	<.001

Figure 1. Paired sample T-test

From the table above, it can be concluded that the use of Suno AI is effective on vocabulary mastery of class VIII students of junior high school in jepara, this is evidenced by the results of hypothesis testing using paired sample Ttest. Because the sig. value obtained is 0.01 smaller than 0.05, it can be concluded that H0 is rejected and H1 is accepted. According previous study conducted by (Novian et al., 2025) Stated in his research that the hypothesis can be accepted if sig ‹ 0.05 PJBL worksheets based on the local potential of the Gandong River effectively improve the critical and creative thinking skills of E stage students with students whose learning does not use LKPD PjBL based on the local potential of the Gandong River on water pollution material. While the hypothesis is rejected if sig › 0.05 then the PjBL Worksheet Based on the Local Potential of the Gandong River is not effective in improving the critical and creative thinking skills of E grade students with students who do not use the PjBL Worksheet Based on the Local Potential of the Gandong River on water pollution material.

In this study, Suno AI media is effective on vocabulary mastery in class VIII students of junior high school in jepara based on the test results. The researcher examined the vocabulary value before and after using Suno AI. Before the instrument was given to the sample class, the researcher conducted a trial to students of class VIII D junior high school in jepara to ensure its validity. The results of the trial and content validation showed that of the 50 questions given, there were 30 invalid questions and after 30 invalid questions, the researcher conducted a retest with 20 valid questions to see the validity of the questions.

After the initial test and final test were given, the test results were summed up. Researchers found that the experimental class score increased a lot more than the control class after seeing the test results. The test results can corroborate that result. The average pre-test score of the experimental class was 32.08, while the control class score was 46.32. This shows how the average of the two classes is different. However, in the post-test, the experimental group received an average score of 50.88, while the control group had a score of 47.94.

This can be proven by testing the hypothesis findings using paired sample T-test analysis in SPSS version 27. If Sig. ‹ 0.05, the H1 criterion is accepted, and if Sig. › 0.05, the H0 requirement is rejected. The T-test results have a Sig value, according to the results of the hypothesis test analysis using the paired sample T-test. H1 is accepted and H0 is rejected with a 2-tailed 0.01 with a significance value of 0.05, where 0.01 ‹0.05. In the same line (Nuriyah et al., 2024) stated in his research on the application of digital storytelling if sig. less than 0.05 then H1 can be accepted. in other words Suno AI can improve students' vocabulary skills in junior high school in jepara

Based on the previous data, the significant increase shows that the use of Suno AI at junior high school was successful in improving students' vocabulary. Suno AI media is one of the artificial intelligence (AI) media that teachers can use in English lessons to help students improve their vocabulary. After analyzing the test results, it can be concluded that the application of Suno AI media is effective in improving the vocabulary mastery of grade VIII students of junior high school and that the use of Suno AI media can improve the vocabulary ability of grade VIII students of junior high school.

V. CONCLUSION

This study examined the effectiveness of using Suno AI media in enhancing the vocabulary mastery of eighth-grade students at a junior high school in Jepara. The research involved both an experimental and a control class, where students' vocabulary knowledge was assessed before and after the implementation of Suno AI. Prior to the learning treatment, a pre-test was conducted to determine the students' initial level of vocabulary mastery. Following the intervention, a post-test was administered to assess any improvements. The results indicated that the students in the experimental class, who were taught using Suno AI media, demonstrated a significant increase in their vocabulary knowledge compared to those in the control class, who

did not receive the same treatment. Statistical analysis confirmed that the improvement in the experimental class was not a result of random chance but rather the impact of Suno AI as a learning tool. The study further examined the normality and homogeneity of the data using appropriate statistical tests to ensure reliability and validity. The normality test confirmed that the data from both groups followed a normal distribution, making them suitable for further statistical analysis. The homogeneity test revealed that the variance in both groups was similar, allowing for the use of parametric tests such as the paired-sample T-test. The hypothesis testing results supported the claim that Suno AI media significantly influenced students' vocabulary acquisition. The findings indicated that the use of Suno AI media provided a more engaging and effective learning experience, leading to better retention and comprehension of vocabulary. Additionally, the study validated the effectiveness of the research instrument before conducting the actual tests. A trial was conducted with a different class to ensure that the test items were valid and reliable. The initial test included a set of questions, but after evaluating their validity, only a portion of them were considered suitable for the final assessment. This step reinforced the credibility of the study's findings. The comparison between the pre-test and post-test results further highlighted the progress made by the students who were exposed to Suno AI media. The experimental group exhibited noticeable improvement in vocabulary mastery, whereas the control group showed minimal progress.The findings of this study align with previous research that emphasizes the positive impact of integrating artificial intelligence in education. Suno AI, as an AI-powered learning tool, provided students with an interactive and engaging learning environment that helped them acquire new vocabulary more effectively. The study suggests that AI-based educational media can serve as a valuable supplement to traditional teaching methods, allowing students to develop their language skills in a more dynamic and accessible way. The success of this approach implies that integrating AI technology in language learning may lead to improved educational outcomes. In conclusion, the research provides strong evidence that Suno AI media is an effective tool for enhancing vocabulary mastery among junior high school students. The significant improvement observed in the experimental class confirms that AI-powered learning tools can be beneficial in the classroom. By incorporating AI-driven methods into English lessons, teachers can create a more interactive and student-centered learning

experience. The study highlights the potential of AI in revolutionizing education, particularly in language acquisition, and encourages further exploration into the use of technology to enhance learning outcomes.

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