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ENHANCING EIGHTH-GRADE STUDENTS' VOCABULARY MASTERY THROUGH THE SIMPLER DIGITAL APPLICATION

Genta Juanda

Samudra University, Langsa, Aceh, Indonesia
Corresponding author's email: juandagenta05@gmail.com

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Abstract
This study investigated the effect of the Simpler application on the vocabulary mastery of eighth-grade students at SMP Negeri 1 Simpang Jernih. Vocabulary mastery is a basic component of English learning because it supports listening, speaking, reading, and writing. Preliminary observation showed that students had limited vocabulary knowledge and often relied on teacher translation. To respond to this classroom problem, the Simpler application was used as a digital learning medium that offers vocabulary exercises, repetition, contextual examples, and interactive tasks. This research employed a quantitative approach with a pre-experimental one-group pre-test and post-test design. The participants were 23 eighth-grade students selected through purposive sampling. The treatment was conducted in five learning sessions, and the students completed a 20-item vocabulary test before and after the treatment. The data were analyzed using descriptive statistics, a paired sample t-test, and effect-size interpretation. The results showed that the mean score increased from 32.61 in the pre-test to 45.87 in the post-test, with a mean gain of 13.26 points. The obtained t-value was 6.247, which was higher than the t-table value of 2.074 at the 5% significance level. The effect size was also large, which indicates that the improvement was meaningful in this classroom context. These findings suggest that the Simpler application can support vocabulary learning when it is used with clear teacher guidance, repeated practice, and collaborative activities. However, the findings should be interpreted carefully because the study used one class only and did not involve a control group.

Keywords: *Simpler Application, Vocabulary Mastery, Digital Learning, CALL, Pre-experimental Design*

INTRODUCTION

In the contemporary digital era, technological advancement has influenced many aspects of education, including English language learning. Digital media can provide learners with wider access to learning resources, interactive tasks, and flexible practice outside the classroom.

English plays an important role in academic life, communication, tourism, business, and social media. Therefore, students need to develop sufficient English competence to participate in various communicative situations.

In learning English, students need to master four language skills: listening, speaking, reading, and writing (Tarigan, 2008). They also need to understand important language components, such as pronunciation, grammar, and vocabulary (Celce-Murcia et al., 2010). Among these components, vocabulary is fundamental because students cannot understand texts, express ideas, or participate in communication without adequate word knowledge. Vocabulary knowledge also supports fluency, comprehension, and confidence in using English.

Previous studies have shown that digital learning tools and Computer-Assisted Language Learning (CALL) can support vocabulary learning. Chen et al. (2019) found that a vocabulary learning application with self-regulated learning features improved learners' performance and motivation. Enayati and Pourhosein Gilakjani (2020) also showed that CALL instruction can improve EFL learners' vocabulary learning through systematic practice and repeated exposure. More recent work on computer-assisted vocabulary learning also emphasizes the role of interactive activities, feedback, and retention-oriented practice (Kristanto et al., 2024). However, studies on specific classroom use of the Simpler application in Indonesian junior high school contexts remain limited. This gap makes the present study relevant because it examines how Simpler works in a real classroom with students who have low vocabulary mastery and limited digital resources.

Based on observations conducted at SMP Negeri 1 Simpang Jernih in December 2024, the students' vocabulary mastery was still low. Most students had difficulty understanding basic English vocabulary and answering simple English questions. They tended to wait for the teacher to translate the material into Indonesian. The teacher also still used conventional techniques, such as asking students to read texts and find word meanings in a dictionary. This learning pattern made students less active and less motivated to practice vocabulary.

To address this problem, teachers need learning media that can increase practice, motivation, and student engagement. One possible medium is the Simpler application. Simpler is a mobile-assisted language learning application that provides short vocabulary lessons, grammar support, example sentences, practice exercises, and repetition-based activities. These features can help students meet new words more often, connect words with context, and review vocabulary after the first exposure. The application can also support independent and collaborative learning because students can work individually or in groups while completing vocabulary tasks.

Therefore, this study examined the use of the Simpler digital application to enhance students' vocabulary mastery. The study focused on two research questions: 1) Is there a significant difference between students' vocabulary scores before and after learning through the Simpler application? 2) How was the Simpler application implemented in vocabulary learning? The answers to these questions are expected to give practical insight for English teachers who want to integrate digital applications into vocabulary instruction.

METHODS

This research used a quantitative approach with a pre-experimental design. The specific design was a one-group pre-test and post-test design. This design was selected because the study aimed to compare students' vocabulary achievement before and after the treatment. According to Sugiyono (2013), experimental research is used to examine the effect of a treatment under

certain conditions. In this study, the treatment was the use of the Simpler application in vocabulary learning.

The population of this study was the eighth-grade students of SMP Negeri 1 Simpang Jernih in the 2024-2025 academic year. The sample consisted of 23 eighth-grade students who were selected through purposive sampling. This sampling technique was used because the selected class showed low vocabulary mastery during preliminary observation and was available to follow the complete treatment schedule. The use of one class was suitable for the pre-experimental design, but it also became one limitation because the study did not involve a comparison group.

The instrument used in this study was a vocabulary test. The test consisted of 20 items with a maximum score of 100. The items measured vocabulary meaning, synonym and antonym recognition, word use in simple sentences, and vocabulary in everyday conversations. Each correct answer was scored 5 points, while each incorrect answer was scored 0. The test items were arranged based on the vocabulary materials practiced during the treatment and were reviewed to ensure content relevance to junior high school vocabulary learning. The same test format was used in the pre-test and post-test to measure students' progress consistently.

Table 1. Vocabulary Test Blueprint

No.	Vocabulary Aspect	Number of Items	Purpose
1	Meaning in context	8	To measure students' ability to identify word meaning from short contexts
2	Synonym and antonym	4	To measure lexical relation awareness
3	Word use in simple sentences	4	To measure students' ability to use vocabulary appropriately
4	Vocabulary in daily conversation	4	To measure vocabulary recognition in communicative expressions

The research procedure consisted of three main stages: pre-test, treatment, and post-test. The pre-test was conducted in the first meeting to identify students' initial vocabulary mastery. The treatment was implemented in five learning sessions. In the first session, the teacher introduced the Simpler application and guided students to explore vocabulary features. In the second and third sessions, students practiced vocabulary through application-based exercises and short contextual examples. In the fourth session, students worked in small groups because several students had limited access to smartphones. In the fifth session, students reviewed vocabulary through repetition activities and completed guided practice before the post-test. The post-test was administered after the treatment to measure students' vocabulary improvement.

The collected data were analyzed using SPSS 24. The analysis included descriptive statistics, score classification, and paired sample t-test. Before conducting the paired sample t-test, the researcher checked the distribution of the paired scores as part of the normality assumption for parametric testing. The paired sample t-test was used because the study compared two related scores from the same participants. In addition, the effect size was calculated using Cohen's d for paired samples by dividing the t-value by the square root of the number of participants. This calculation helped show the practical strength of the score improvement, not only its statistical significance.

FINDINGS AND DISCUSSION

The findings were obtained from the pre-test and post-test scores of 23 eighth-grade students. The analysis aimed to determine whether the use of the Simpler application improved students' vocabulary mastery. This section presents the results separately from the discussion so the data can be read more clearly before interpretation.

Table 2. Descriptive Statistics of Students' Vocabulary Scores

Test	N	Total Score	Mean Score	Mean Gain
Pre-test	23	750	32.61	-
Post-test	23	1055	45.87	13.26

Table 2 shows that the students' total pre-test score was 750, with a mean score of 32.61. After five sessions of treatment using the Simpler application, the total post-test score increased to 1055, with a mean score of 45.87. The mean gain was 13.26 points. This increase indicates that students achieved better vocabulary scores after learning through the application.

Table 3. Classification of Students' Vocabulary Scores

Category	Pre-test Frequency	Pre-test Percentage	Post-test Frequency	Post-test Percentage
Very Poor	4	17.4%	0	0%
Poor	16	69.6%	10	43.5%
Average	3	13.0%	10	43.5%
Good	0	0%	3	13.0%
Very Good	0	0%	0	0%

Table 3 shows a positive shift in score classification. In the pre-test, most students were in the poor category, and some students were in the very poor category. After the treatment, no students remained in the very poor category. The number of students in the average category increased, and three students reached the good category. This distribution shows that students made measurable progress after the treatment, although many students still needed further practice.

Table 4. Paired Sample T-test Result

N	Mean Gain	df	t-value	t-table	Significance Level	Effect Size	Decision
23	13.26	22	6.247	2.074	5%	1.30	Significant and large effect

Table 4 shows that the obtained t-value was 6.247, while the t-table value was 2.074 at the 5% significance level with 22 degrees of freedom. Since the t-value was higher than the t-table value, the difference between the pre-test and post-test scores was statistically significant. The effect size was 1.30, which can be interpreted as a large effect in this classroom context. This means that the score improvement was not only statistically significant but also practically meaningful for the students in this sample.

The findings show that the Simpler application had a positive effect on students' vocabulary mastery. The students' mean score improved from 32.61 to 45.87 after five learning sessions. This result supports the idea that digital vocabulary learning can help students practice words more frequently and interactively. The finding is in line with Chen et al. (2019), who

reported that vocabulary applications can improve learning performance and motivation when they include structured practice and learning support. It also supports Enayati and Pourhosein Gilakjani (2020), who found that CALL instruction can strengthen vocabulary learning through repeated exposure and technology-assisted practice.

The improvement may also relate to the features of the Simpler application. The application provides short vocabulary tasks, contextual examples, grammar support, and repetition activities. These features gave students more opportunities to meet and review English words. Repeated exposure is important in vocabulary learning because students need to encounter a word several times before they can remember and use it confidently. This explains why students performed better after using the application during several learning sessions.

Another factor that supported the result was collaborative learning. Because not all students had direct access to smartphones, the teacher asked students to work in groups during some sessions. This condition encouraged students to discuss meanings, compare answers, and help each other understand vocabulary items. This learning process is consistent with Vygotsky's (1978) view that social interaction can support learning because students can build understanding through collaboration and guidance.

However, the result should be interpreted carefully. Although the students' scores improved significantly, the post-test mean score was still 45.87, which remained in the average range. This indicates that the Simpler application helped students improve, but the treatment duration was not long enough to produce high vocabulary achievement for most students. Students may need longer implementation, more guided practice, and integration with other strategies such as vocabulary notebooks, oral practice, sentence production, and regular review.

The design of the study also limits the strength of the conclusion. The research used a one-group pre-test and post-test design without a control group. Therefore, the improvement cannot be compared with students who learned through another method. Future research should use a quasi-experimental or true experimental design with a control group, a larger sample, and longer treatment. Future studies may also examine students' motivation, retention, and ability to use vocabulary in speaking or writing tasks.

CONCLUSION

This study examined the use of the Simpler digital application to enhance the vocabulary mastery of eighth-grade students at SMP Negeri 1 Simpang Jernih. The findings showed that students' mean score increased from 32.61 in the pre-test to 45.87 in the post-test. The paired sample t-test also showed that the obtained t-value of 6.247 was higher than the t-table value of 2.074 at the 5% significance level. These results indicate that students' vocabulary mastery improved after learning through the Simpler application.

The use of the Simpler application created a more interactive learning environment. Its vocabulary exercises, contextual examples, and repetition activities helped students practice and review words more actively. For English teachers, the application can be used as a supporting medium for vocabulary instruction, especially when teachers combine it with guidance, group work, and follow-up classroom activities.

Nevertheless, the conclusion should be limited to the context of this study. Because the research involved only 23 students and used no control group, the findings cannot be generalized broadly to all junior high school students. Future researchers are recommended to involve more participants, compare Simpler with other teaching media, extend the treatment period, and

examine students' vocabulary retention after several weeks. In this way, future studies can provide stronger evidence about the role of digital applications in vocabulary learning.

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