

**THE EFFECT OF BUSUU APPLICATION ON STUDENTS VOCABULARY
MASTERY (A QUASI-EXPERIMENTAL STUDY OF SEVENTH GRADE
STUDENTS AT MADRASAH TSANAWIYAH NUR RAHMA IN BENGKULU
CITY)**

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ABSTRACT

This study aims to analyze the effect of using the Busuu application on English vocabulary mastery of seventh-grade students at Madrasah Tsanawiyah Nur Rahma in Bengkulu City. The research was motivated by the dominance of conventional teaching methods that led to low student motivation and passive participation in vocabulary learning. A quantitative approach with a quasi-experimental design was employed, involving seventh-grade Makkah as the experimental class and seventh-grade Madinah as the control class. The sample consisted of 29 students selected using total sampling technique. Data were collected through pre-test and post-test, then analyzed using Shapiro-Wilk normality test, Levene's homogeneity test, and Independent Samples t-test. The results showed that the post-test scores of the experimental class were significantly higher than those of the control class. The Independent Samples t-test yielded a t-value of 4.281 with a significance value of 0.000 ($p < 0.05$), indicating a significant difference between the two groups after the treatment. These findings demonstrate that the use of the Busuu application is effective in improving students' English vocabulary mastery. Based on the results, it can be concluded that the Busuu application has a significant effect on the English vocabulary mastery of seventh-grade students at Madrasah Tsanawiyah Nur Rahma in Bengkulu City. Therefore, the Busuu application can be used as Mobile-Assisted Language Learning (MALL)-based instructional media to support English vocabulary learning.

Keywords: Busuu application, Vocabulary Mastery, Mobile-Assisted Language Learning (MALL), Quasi-Experimental

A. Introduction

English plays an important role as an international language used in global communication, education, science, and technology. In learning English as a foreign language (English as a Foreign Language-

EFL), vocabulary mastery becomes one of the most fundamental aspects because it supports the development of the four main language skills: listening, speaking, reading, and writing. According to Girmen and Kaya (2019), vocabulary mastery

forms the foundation for students to understand and produce language effectively.

Similarly, Dhaifi et al. (2020) stated that vocabulary knowledge enhances communicative ability and functions as a key component in achieving language proficiency. Therefore, vocabulary learning not only emphasizes memorization but also involves meaningful practice that allows students to repeatedly use and understand new words in various contexts.

Nevertheless, many EFL students still experience difficulties in mastering English vocabulary. In classroom practice, vocabulary learning is often carried out through conventional methods such as teacher explanations and word memorization without adequate interactive activities.

As a result, students tend to become passive learners and show low motivation during the learning process. This condition is also found at MTs Nur Rahma Bengkulu. Based on observations and in-depth interviews with student teachers who carried out teaching practice at the

school on January 9, 2026, the English teaching and learning process is still dominated by one-way lecturing in which the teacher explains the material while students mainly listen.

Such learning conditions make the classroom atmosphere monotonous, causing students to lose interest and be less active in participating in learning activities. Indicators such as minimal interaction, frequent daydreaming, and low participation show that students' motivation to improve their vocabulary mastery is still relatively low.

In an era of rapid technological development, integrating digital technology into education is increasingly important to create a more engaging learning environment. One promising approach in language learning is Mobile-Assisted Language Learning (MALL), which enables students to access learning materials via mobile devices anytime and anywhere.

Digital game-based learning and gamification have also been widely used to make vocabulary learning more interactive and enjoyable.

Through technology-based learning media, students can practice vocabulary through various activities such as quizzes, games, challenges, and conversation simulations that can increase motivation and engagement in learning.

One technology-based application that can support vocabulary learning is Busuu. Busuu is a mobile language learning application that provides structured lessons, vocabulary exercises, pronunciation practice, and interactive activities. Based on the Technology Acceptance Model (TAM), AlDakhil and AlFadda (2022) found that users perceive Busuu as a useful and easy-to-use platform that supports autonomous learning.

Several previous studies also show the effectiveness of technology and game-based learning in improving vocabulary mastery. Vnucko and Klimova (2023) explained that Digital Game-Based Vocabulary Learning (DGBVL) can increase student engagement and facilitate language skill development through interactive and collaborative learning activities. Phong (2020) also emphasized that game-based learning creates a relaxed yet challenging learning

atmosphere that encourages active student participation and reduces language learning anxiety.

Specifically regarding Busuu, Susanto (2022) reported that the use of Busuu significantly improved students' vocabulary achievement and learning motivation. Similar findings were reported by Rizqiyyah (2020), who found that students had a positive attitude toward Busuu because the application allowed them to manage their learning independently and receive automatic feedback on their progress.

Although previous research findings are promising, the implementation of technology-based learning applications in some schools is still limited. At MTs Nur Rahma Bengkulu, digital learning media such as Kahoot and Quizizz have occasionally been used, but have not been systematically integrated into vocabulary learning.

Furthermore, immersive language learning applications like Busuu have not yet been implemented in the teaching process. This situation indicates a gap between theoretical and empirical evidence regarding the

effectiveness of mobile language learning applications and actual classroom practice that still relies on traditional teaching methods.

Considering these conditions, the integration of technology-based learning applications is highly needed to increase student engagement and vocabulary mastery. Therefore, this study aims to examine the effect of using the Busuu beginner-level application as the main medium for vocabulary learning in seventh-grade students of MTs Nur Rahma Bengkulu for the 2026/2027 academic year.

Through this research, it is expected that the findings can provide empirical evidence regarding the effectiveness of Busuu in improving students' English vocabulary mastery and contribute to the development of more interactive and technology-integrated English teaching practices.

B. Research Methodology

This study used a quantitative approach with a quasi-experimental design. This design was chosen because the research was conducted in real classroom settings where full

randomization of subjects was not possible, since students were already organized into administratively established class groups.

The study involved two groups: an experimental class and a control class, using a non-equivalent control group design. In this design, both groups were given a pre-test to measure students' initial ability, then the experimental group received treatment in the form of vocabulary instruction using the Busuu application, while the control group received instruction using YouTube instructional videos. After the treatment was completed, both groups were given a post-test to measure improvements in students' vocabulary mastery.

The study was conducted at Madrasah Tsanawiyah Nur Rahma, Bengkulu City, located on Pulau Bai. The research took place from May 11 to June 6, 2026. The population of this study was all seventh-grade students of MTs Nur Rahma Bengkulu City, which consisted of two classes, namely VII Makkah and VII Madinah, with a total of 29 students.

The sampling technique used was total sampling, in which all members of the population were taken as the research sample. Class VII Makkah, consisting of 15 students, was designated as the experimental class, while Class VII Madinah, consisting of 14 students, was designated as the control class.

The variables in this study consisted of two types: the independent variable and the dependent variable. The independent variable in this study was the use of the Busuu application, while the dependent variable was students' English vocabulary mastery.

Vocabulary mastery was operationalized as students' ability to recognize, understand, and use English vocabulary covering verbs, adjectives, nouns, and expressions related to daily conversation.

The research instrument used was a multiple-choice vocabulary test consisting of 60 items that had been tested for validity and reliability. The instrument trial was conducted at SMP Negeri 5 Bengkulu involving 30 students. Based on the validity test using the Product Moment correlation

formula, of the 60 items trialed, 42 items were declared valid and 18 items were declared invalid.

The instrument validity showed correlation coefficients ranging from 0.383 to 0.742 with a significance level of 5%. The instrument reliability test using Cronbach's Alpha formula produced a reliability coefficient of 0.921, which falls into the very high (highly reliable) category. In addition to validity and reliability tests, the instrument was also tested for item difficulty and discrimination power.

The difficulty index test showed a value of 67%, which falls into the medium category, while the discrimination power test showed a value of 50%, which is considered fairly good. Thus, the test instrument was declared suitable for measuring students' vocabulary mastery.

Data collection was carried out through three main stages. The first stage was administering the pre-test on May 11, 2026, to measure students' initial vocabulary ability before treatment. The second stage was administering the treatment, which was conducted over four meetings. In the first meeting (May

12, 2026), the material studied was "Nice to Meet You," focusing on greetings and introductions.

The second meeting (May 16, 2026) continued with introducing vocabulary about personal identity and simple everyday conversations. The third meeting (May 19, 2026) included vocabulary practice through pronunciation exercises and sentence practice using the Busuu application. The fourth meeting (May 30, 2026) focused on using vocabulary in simple dialogues and reinforcement exercises through the review feature in the Busuu app.

Meanwhile, in the control class instruction was conducted using YouTube instructional videos with the same material. The third stage was administering the post-test on June 6, 2026, to measure improvement in students' vocabulary mastery after receiving the treatment.

Data analysis in this study used parametric statistics with prerequisite tests first, namely normality and homogeneity tests. Normality was tested using the Shapiro-Wilk test because the sample size of each group was less than 30.

The decision criterion was that if the significance value is greater than 0.05, the data are considered normally distributed. Homogeneity was tested using Levene's test to determine whether variances between the two groups were homogeneous, with the criterion that if the significance value is greater than 0.05, the variances are considered homogeneous. After the prerequisite tests were met, hypothesis testing was carried out using the Independent Samples t-test to determine the difference in mean post-test scores between the experimental and control classes.

The decision criterion was that if the significance (2-tailed) value is less than 0.05, H_0 is rejected and H_a is accepted, which means there is a significant effect of using the Busuu application on students' vocabulary mastery. All statistical calculations in this study were assisted using SPSS version 27.

C. Result & Discussion

This study was conducted over four weeks from May 11 to June 6, 2026. Research data were obtained from the results of the pre-test and

post-test administered to the experimental class (VII Makkah) and the control class (VII Madinah).

The following presents the results of descriptive and inferential statistical analyses. Based on the results of the administered pre-test and post-test, data were obtained on students' vocabulary mastery scores for the experimental class and the control class. These data are presented in Tables 1 and 2 below.

1. Descriptive Analysis

Tabel 1 Descriptive Statistics of Pre-test and Post-test Scores for the Experimental

No	Pre-Test	Post test
1	55	90
2	45	78
3	43	76
4	47	81
5	43	81
6	45	83
7	52	86
8	50	88
9	43	83
10	48	78
11	50	83
12	52	88
13	40	71
14	48	78
15	48	81

Based on Table 1, the mean pre-test score for the experimental class was 47.33 with a standard deviation of 4.29, while the mean post-test score increased to 81.67 with a standard deviation of 5.16. The mean increase of 34.34 indicates an improvement in students' vocabulary mastery after receiving treatment using the Busuu application. All students in the experimental class showed score improvements from pre-test to post-test, with the largest gain occurring in the student who had the lowest initial score.

Table 2 Descriptive Statistics of Pre-test and Post-test Scores for the Control Class

No	Pre-Test	Post test
1	45	67
2	52	71
3	38	74
4	38	78
5	48	64
6	38	76
7	48	71
8	43	81
9	50	71
10	45	62
11	38	74
12	45	81
13	43	78

14 36 74

Based on Table 2, the mean pre-test score for the control class was 44.14 with a standard deviation of 5.31, while the mean post-test score increased to 73.00 with a standard deviation of 5.94. The mean increase of 28.86 indicates that students in the control class also experienced improvement in vocabulary mastery after participating in instruction using YouTube videos. However, the improvement in the control class was not as large as the improvement observed in the experimental class.

2. Classic Assumption Test

Before hypothesis testing was conducted, prerequisite tests were first performed, including normality and homogeneity tests. Normality was tested using the Shapiro-Wilk test because the sample size of each group was less than 30. The results of the normality test are presented in Figure 1 and 2

Figure 1 normality test results Experiment class

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	0.116	15	.200	0.973	15	0.894
posttest	0.130	15	.200	0.967	15	0.805

^a. This is a lower bound of the true significance.
^a. Lilliefors Significance Correction

Figure 2 normality test results Control class

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	0.210	14	0.095	0.924	14	0.253
posttest	0.151	14	.200	0.948	14	0.529

^a. This is a lower bound of the true significance.
^a. Lilliefors Significance Correction

Based on Figure 1 and 2, all data show significance values greater than 0.05. Thus, it can be concluded that the pre-test and post-test data for both the experimental and control classes are normally distributed.

Next, a homogeneity test was conducted using Levene's test to determine whether the variances between the two groups are homogeneous. The results of the homogeneity test are presented in Figure 3 and 4.

Figure 3 Homogeneity test results

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
pretest	Based on Mean	0.959	1	27	0.336
	Based on Median	0.958	1	27	0.336
	Based on Median and with adjusted df	0.958	1	26.790	0.336
	Based on trimmed mean	0.956	1	27	0.337

Figure 4 Homogeneity test results

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
posttest	Based on Mean	0.305	1	27	0.585
	Based on Median	0.191	1	27	0.666
	Based on Median and with adjusted df	0.191	1	26.424	0.666
	Based on trimmed mean	0.273	1	27	0.605

- The pretest data show a significance value of 0.336 (based on Mean), which is greater than 0.05; therefore, the variance of the pretest scores between the experimental and control classes is homogeneous.
- The posttest data show a significance value of 0.585 (based on Mean), which is also greater than 0.05; therefore, the variance

of the posttest scores between the two classes is homogeneous.

Thus, the homogeneity assumption is met for both datasets, and the Independent Samples t-test can be continued using the equal variances assumed option.

3. Hypothesis Test

After the prerequisite tests were satisfied, hypothesis testing was carried out using the Independent Samples t-test to determine the difference in mean post-test scores between the experimental class and the control class. The results of the Independent Samples t-test are presented in Table 5.

Figure 4.11 T-test results

Independent Samples Test									
		Levene's Test for Equality of Variances			t-Test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
posttest	Equal variances assumed	0.365	0.545	4.281	27	0.000	8.667	2.024	4.513 12.821
	Equal variances not assumed			4.280	25.995	0.000	8.667	2.024	4.484 12.849

Based on Table 5, the calculated t-value was 4.281 with degrees of freedom (df) = 27 and a significance value (2-tailed) of 0.000. The obtained significance value is less than 0.05, so H_0 is rejected and H_a is accepted.

This indicates that there is a significant difference between the mean post-test scores of the experimental class and the control

class. Therefore, it can be concluded that the use of the Busuu application has a significant effect on the English vocabulary mastery of seventh-grade students at MTs Nur Rahma Bengkulu City.

D. Conclusions

Based on the research results and discussion, it can be concluded that the use of the Busuu application has a significant effect on the English vocabulary mastery of seventh-grade students at MTs Nur Rahma, Bengkulu City.

The Independent Samples t-test showed a significance value (2-tailed) of 0.000 ($p < 0.05$) with a calculated t-value of 4.281, indicating a significant difference between the mean post-test scores of the experimental class (81.67) and the control class (73.00). Thus, H_0 is rejected and H_a is accepted. The effectiveness of the Busuu application is supported by its interactive features such as contextual material presentation, pronunciation practice with immediate feedback, repeated quizzes, and a progress-tracking system that enables autonomous learning.

The findings of this study are similar to previous research

conducted by (Nadya & Aswir, 2023). on learning using the Busuu application. That study showed that using the Busuu application has a significant impact on students' vocabulary learning and listening skills. Meanwhile, research by (Citrayasa, 2019)asa (2019) found that the Busuu application can provide several benefits in English learning, namely providing enjoyable learning and facilitating flexible-time English learning so students can more easily improve their language skills. Consistent with the findings of (Sholikhah et al., 2022), the Busuu application is one of the effective media for teaching English vocabulary to seventh-grade students because the Busuu application is considered capable of delivering enjoyable learning and motivating students to study the language. Likewise, (Lestari et al., 2025) found that vocabulary mastery learning using the Busuu application showed significant positive results in students' scores. This means there is a significant effect of using the Busuu application on improving students' vocabulary mastery. The use of the Busuu application has a positive and significant effect on student learning.

Mastery of learning technology-based, particularly through applications like Busuu, has been proven to improve students' understanding, motivation, and academic achievement. Therefore, Busuu can be considered an effective learning medium for teaching English, (Nasution & Susanto, 2026).

Considering previous research, this study is quite rare because most earlier studies focused on students' perceptions of using the Busuu application. The researcher conducted this study also based on suggestions from earlier researchers who hoped that experimental research could be carried out to see the implications of using the Busuu application in English learning to improve students' language abilities. Ultimately, this study has found that there is an effectiveness of using the Busuu application in the vocabulary mastery of seventh-grade students at MTs Nur Rahma.

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