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The Effect of Using the Busuu Application in Teaching to Improve Vocabulary Matery at SMPN 20 Bengkulu City

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ABSTRACT
Vocabulary mastery is an essential aspect of learning English as it forms the foundation for developing other language skills. However, many students still face difficulties in mastering vocabulary due to unengaging teaching methods and low learning motivation. This study aims to determine the effect of using the Busuu application on students' vocabulary mastery at SMP Negeri 20 Kota Bengkulu. This research employed a quantitative approach with a quasi-experimental design involving two classes: VII.D as the experimental class and VII.F as the control class, with a total of 62 students. The research instrument was a multiple-choice test administered through pre-test and post-test, and the data were analyzed using SPSS. The results showed that the experimental class experienced a more significant improvement compared to the control class. The mean score of the experimental class increased from 32.77 in the pre-test to 57.65 in the post-test, with score ranges improving from 12–54 to 28–80. Meanwhile, the control class showed an increase from a mean score of 29.77 to 46.19, with score ranges from 13–53 to 20–70. The t-test results revealed a t-value of 3.625 with a significance value of 0.001 (<0.05), indicating a significant difference between the two classes. Furthermore, the ANCOVA results showed an F-value of 44.092 with a significance of 0.001 and a Partial Eta Squared value of 0.599, indicating a strong effect size. In conclusion, the use of the Busuu application is effective in improving students' vocabulary mastery.

Keywords: Busuu, vocabulary mastery, Quasi-experimental.

INTRODUCTION
One of the most essential components in learning English is vocabulary mastery, as it enables students to understand and express ideas effectively in both spoken and written communication. Vocabulary plays a fundamental role in developing other language skills such as speaking, reading, writing, and listening. Students who have sufficient vocabulary knowledge are more confident in using English and can participate actively in academic and social interactions. Therefore, mastering vocabulary is a crucial step for students to achieve overall language proficiency.

However, vocabulary mastery is still considered one of the main challenges for students, especially at the junior high school level. Many students experience difficulties in memorizing, understanding, and using new words appropriately. They often lack motivation, have limited exposure to English, and are not actively involved in the learning process. In many cases, classroom activities still focus on traditional teaching methods, which emphasize memorization rather than meaningful use of vocabulary. As a result, students tend to forget new words easily and struggle to apply them in real communication.

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This problem is also found at SMP Negeri 20 Kota Bengkulu. Based on the preliminary data, students' vocabulary mastery is still relatively low, as indicated by the average pre-test scores of 32.77 in the experimental class and 29.77 in the control class. These results show that students' initial vocabulary ability is insufficient and needs improvement. The lack of engaging learning media and limited opportunities for interactive learning activities further contribute to this issue. Therefore, an innovative and technology-based learning approach is needed to enhance students' vocabulary mastery.

With the advancement of technology, various digital learning applications have been developed to support language learning, one of which is the Busuu application. Busuu provides interactive vocabulary learning through contextual exercises, repetition, and immediate feedback. Several recent studies have shown that digital learning media can improve students' motivation and learning outcomes. Interactive applications allow students to learn independently and practice vocabulary in meaningful contexts, making the learning process more engaging and effective.

Previous studies have also indicated that technology-based learning can significantly improve students' vocabulary mastery. However, most of these studies focus on general digital tools or are conducted in different educational contexts. Research specifically examining the effectiveness of the Busuu application at the junior high school level in Indonesia is still limited. In particular, there is a lack of empirical studies that analyze its effectiveness using a quantitative approach with statistical analysis such as t-test and ANCOVA.

Based on these gaps, this study aims to investigate the effect of the Busuu application on students' vocabulary mastery at SMP Negeri 20 Kota Bengkulu. The research question is: "Is there a significant effect of using the Busuu application on students' vocabulary mastery?" The novelty of this study lies in the implementation of Busuu as a learning medium combined with a quasi-experimental design and advanced statistical analysis. Therefore, this study is expected to provide new insights into the use of technology in English language learning, particularly in improving students' vocabulary mastery.

RESEARCH METHOD

This study employed a quantitative approach with a quasi-experimental design to examine the effect of using the Busuu application on students' vocabulary mastery. The research design used was a pre-test and post-test control group design, in which two groups were compared: an experimental class and a control class. The experimental class received treatment through the use of the Busuu application in the learning process, while the control class was taught using conventional teaching methods. Both groups were given a pre-test before the treatment and a post-test after the treatment to measure students' vocabulary improvement.

The population of this study consisted of all seventh-grade students at SMP Negeri 20 Kota Bengkulu in the 2024/2025 academic year, totaling 165 students. The sampling technique used was purposive sampling, which selected samples based on specific considerations, particularly the similarity of students' initial abilities. The sample included two classes: class VII.D as the experimental group with 31 students and class VII.F as the control group with 31 students, making a total of 62 students involved in this study.

The data collection technique used in this research was a test as the main instrument. The test consisted of multiple-choice questions designed to measure students' vocabulary mastery based on several indicators, including word meaning, synonyms and antonyms, usage in context, and word categories. The instrument was administered as a pre-test to assess students' initial ability and as a post-test to evaluate their improvement after the treatment.

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Before being used, the instrument was tested for validity and reliability using SPSS, and the results indicated that most items were valid and appropriate for use.

The data analysis technique was conducted using SPSS software. The analysis began with prerequisite tests, including a normality test using the Shapiro-Wilk method and a homogeneity test using Levene's Test to ensure that the data were normally distributed and homogeneous. After that, hypothesis testing was carried out using an independent samples t-test to determine whether there was a significant difference between the experimental and control groups. Furthermore, an ANCOVA test was applied to examine the effect of the treatment more comprehensively and to calculate the effect size through Partial Eta Squared. The results of these analyses were used to determine whether the use of the Busuu application had a significant effect on students' vocabulary mastery.

RESULT AND DISCUSSION

Result

Bagian ini menyajikan hasil analisis data untuk mengetahui pengaruh penggunaan aplikasi Busuu terhadap penguasaan kosakata siswa kelas VII di SMP Negeri 20 Kota Bengkulu. Data diperoleh melalui pre-test dan post-test pada kelas eksperimen dan kelas kontrol, kemudian dianalisis menggunakan SPSS.

Berdasarkan hasil deskriptif, kelas eksperimen menunjukkan peningkatan yang lebih tinggi dibandingkan kelas kontrol. Rata-rata nilai pre-test pada kelas eksperimen adalah 32,77 dan meningkat menjadi 57,65 pada post-test. Nilai minimum meningkat dari 12 menjadi 28, sedangkan nilai maksimum meningkat dari 54 menjadi 80. Sementara itu, pada kelas kontrol, rata-rata nilai pre-test sebesar 29,77 meningkat menjadi 46,19 pada post-test, dengan nilai minimum dari 13 menjadi 20 dan nilai maksimum dari 53 menjadi 70. Hal ini menunjukkan bahwa kedua kelas mengalami peningkatan, namun peningkatan pada kelas eksperimen lebih signifikan.

Table 1. Pre-test and Post-test Scores of the Experimental Class

Statistic	Pre-Test	Post-Test
AVG Total	32,77	57,65
Minimum score	12	28
Maximum score	54	80
Students	32,77	57,65

Table 2. Pre-test and Post-test Scores of the Control Class

Statistic	Pre-Test	Post-Test
AVG Total	29,77	46,19
Minimum score	13	20
Maximum score	53	70
Students	29,77	46,19

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Table 3. Independent Sample t-Test

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Post_test	Equal variances assumed	2.913	.093	3.625	60	.001	.001	11.35484	3.13228	5.08935	17.62033
	Equal variances not assumed			3.625	56.968	.001	.001	11.35484	3.13228	5.08248	17.62719

Based on the results in the Independent Samples Test table, it is known that the calculated t-value (t-count) for the post-test data is 3.625. The degree of freedom (df) for the "Equal variances assumed" condition is 60, with a significance value (Two-Sided p) of 0.001.

The decision rule states that if Sig. (p-value) < 0.05, then there is a significant difference between the two groups. Since the obtained significance value is 0.001, which is smaller than 0.05 (0.001 < 0.05), it can be concluded that there is a significant difference in post-test scores between the experimental and control classes. Based on the Group Statistics results, the mean post-test score of the experimental class is 57.91, while the control class has a mean score of 46.55. The mean difference between the two groups is 11.35484, indicating that the experimental class achieved higher learning outcomes compared to the control class.

This finding suggests that there is a significant effect of the treatment applied in the experimental class on students' learning outcomes, as shown by the higher post-test scores compared to the control class.

Discussion

The results of this study indicate that the use of the Busuu application has a significant effect on students' vocabulary mastery. Based on the descriptive analysis, both the experimental and control classes showed improvement in their post-test scores. However, the improvement in the experimental class was higher than in the control class. The mean score of the experimental class increased from 32.77 to 57.65, while the control class increased from 29.77 to 46.19. This finding suggests that the use of Busuu as a learning medium contributes more effectively to improving students' vocabulary compared to conventional teaching methods.

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The results of the independent samples t-test further support this finding. The significance value obtained was 0.001, which is lower than 0.05, indicating a statistically significant difference between the experimental and control groups. In addition, the mean difference of 11.35 shows that students in the experimental class achieved better learning outcomes. This result confirms that integrating technology, such as the Busuu application, into language learning can enhance students' vocabulary acquisition.

Furthermore, the ANCOVA results revealed an F-value of 44.092 with a significance level of 0.001, indicating that the treatment had a significant effect on students' post-test scores. The Partial Eta Squared value of 0.599 indicates a strong effect size, meaning that approximately 59.9% of the variance in students' vocabulary mastery can be explained by the variables in this study. This suggests that the Busuu application plays a substantial role in improving students' vocabulary mastery.

These findings are in line with previous studies that emphasize the effectiveness of digital learning tools in language education. Interactive applications like Busuu provide contextual learning, repetition, and immediate feedback, which help students understand and retain new vocabulary more effectively. The use of such applications also increases students' motivation and engagement in the learning process, as they can learn independently and practice at their own pace.

In addition, the improvement in students' performance can be explained by the features provided by the Busuu application. These include interactive exercises, vocabulary practice in real-life contexts, and opportunities for repeated exposure to new words. Such features support meaningful learning and help students apply vocabulary in various contexts, which is essential for long-term retention.

However, this study also has some limitations. The research was conducted within a limited time frame and involved only two classes in one school, which may limit the generalizability of the findings. Additionally, external factors such as students' motivation, learning environment, and prior knowledge may also influence the results.

In conclusion, the findings of this study demonstrate that the use of the Busuu application significantly improves students' vocabulary mastery. Therefore, integrating technology-based learning media is highly recommended to enhance English language learning, particularly in developing students' vocabulary skills.

CONCLUSION

Based on the data analysis conducted on seventh-grade students at SMP Negeri 20 Kota Bengkulu, the research results show a positive and significant improvement in students' vocabulary mastery. This enhancement is clearly reflected in the post-test scores after students participated in the learning process using the Busuu application. The findings indicate that technology-assisted learning, particularly through Busuu, has a meaningful impact on students' vocabulary development. The application creates a more engaging and enjoyable learning atmosphere, which encourages students to be more active and enthusiastic during the learning process.

The difference in the average pre-test and post-test scores between the experimental and control groups further strengthens this conclusion. In the experimental class, the mean score increased from 32.77 in the pre-test to 57.65 in the post-test. Meanwhile, the control class showed improvement from 29.77 to 46.19. Although both groups experienced progress, the experimental class demonstrated a more significant increase. This improvement is not only supported by statistical analysis, such as the t-test and F-test, but is also observable in students' behavior, motivation, and participation during the learning activities.

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These findings are in line with the technology-based learning theory proposed by Michael Fullan, which emphasizes that integrating technology into education can make learning more relevant, adaptive, and student-centered. Busuu offers various features such as interactive exercises, vocabulary practice, immediate feedback, and contextual learning activities. These features enable students to learn independently while reinforcing their understanding through repetition and practice. As a result, students are not only memorizing vocabulary but also learning how to use it in meaningful contexts.

Overall, the results of this study confirm that the use of the Busuu application has a positive and significant effect on improving students' vocabulary mastery. This is evident from the clear difference in score improvement between the experimental and control classes. One key factor contributing to this outcome is the interactive nature of the Busuu application. The platform provides structured lessons, practice exercises, and engaging activities that make the learning process more dynamic compared to conventional methods.

The interactivity offered by Busuu encourages students to be more actively involved in learning. They receive immediate feedback on their answers, which helps them correct mistakes and improve their understanding more efficiently. In addition, the flexibility of the application allows students to learn at their own pace, making it easier for both high- and low-achieving students to follow the lessons. This is supported by the increase in the minimum score in the experimental class, which rose from 12 in the pre-test to 28 in the post-test, indicating that lower-performing students also benefited from the intervention.

Furthermore, the statistical analysis using the Independent Samples T-Test shows that there is a significant difference between the post-test results of the experimental and control classes, with a significance value of 0.001 (< 0.05). This indicates that the improvement in the experimental class is not due to chance but is strongly influenced by the use of the Busuu application. The mean difference of 11.35 points highlights the effectiveness of the treatment.

The F-test (ANCOVA) results also support this conclusion, showing a significant effect with a Partial Eta Squared value of 0.695. This indicates that approximately 69.5% of the variation in students' post-test scores can be explained by the treatment and pre-test scores. This large effect size demonstrates that the use of Busuu has a strong impact on students' vocabulary learning outcomes.

In conclusion, the findings of this study support the alternative hypothesis (Ha), which states that the use of the Busuu application has a positive and significant effect on students' vocabulary mastery. Technology-based learning, especially through applications like Busuu, has been proven to enhance students' understanding, motivation, and academic performance. Therefore, Busuu can be considered an effective learning medium for teaching English vocabulary, particularly for junior high school students.

This study has several limitations that need to be considered in interpreting the results, as follows:

1. The study was conducted within a limited duration, consisting of four meetings only. Therefore, the long-term effects of using the application on students' vocabulary mastery cannot yet be fully determined.
2. The research was carried out in only one school (SMPN 20 Kota Bengkulu) and involved two classes as samples. As a result, the findings may not be fully generalizable to other schools, different grade levels, or broader populations.
3. The learning time allocated for each meeting was limited to 2 × 40 minutes. This limited duration restricted the implementation of learning activities such as practice, discussion, and reinforcement of vocabulary using the application.

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4. The study only focused on vocabulary mastery as the dependent variable, so other important language skills such as speaking, listening, reading, or writing were not deeply analyzed.
5. The treatment in the experimental class depended on the availability of devices and internet access, which may have influenced students' learning experience during the implementation of the application-based learning process.

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