"THE EFFECTIVENESS OF EDUCAPLAY ACTIVITIES TOWARDS STUDENTS' VOCABULARY MASTERY AT SMPN 25 BENGKULU CITY"

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ABSTRACT

This study aims to examine the effectiveness of Educaplay in improving vocabulary mastery of seventh-grade students at SMPN 25 Kota Bengkulu. The background of this research is the low vocabulary mastery of students due to conventional and monotonous teaching methods and the minimal use of interactive learning media. This study employed a quantitative approach with a quasi-experimental design (nonequivalent control group design). The population consisted of all seventh-grade students, with a sample of two classes: 26 students in the experimental class and 26 students in the control class. The research procedures included a pre-test, treatment for the experimental class using Educaplay for four meetings, conventional instruction for the control class, and a post-test. Data were analyzed using statistical tests with the assistance of SPSS version 27. The results showed a significant improvement in the experimental class compared to the control class, with the mean score increasing from 55.8 to 79.1 in the experimental class and from 49.7 to 66.8 in the control class. The independent t-test revealed t_calculated > t_table (4.596 > 2.009) with significance < 0.001, leading to the rejection of Ho and acceptance of Ha. The Partial Eta Squared value of 0.297 indicates that the use of Educaplay contributed 29.7% to the improvement of students' vocabulary mastery. In conclusion, Educaplay has a significant effect on students' vocabulary mastery. This media has the potential to serve as an innovative and effective interactive learning tool to enhance English vocabulary skills for junior high school students.

Keywords: Educaplay, vocabulary mastery, quasi-experiment

ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan media Educaplay terhadap penguasaan kosakata siswa kelas VII di SMPN 25 Kota Bengkulu. Latar belakang penelitian ini adalah rendahnya penguasaan kosakata siswa akibat metode pembelajaran konvensional yang monoton dan minimnya pemanfaatan media interaktif. Penelitian ini menggunakan metode kuantitatif dengan desain quasi-experimental (nonequivalent control group design). Populasi penelitian adalah seluruh siswa kelas VII, dengan sampel terdiri dari dua kelas,

masing-masing 26 siswa untuk kelas eksperimen dan 26 siswa untuk kelas kontrol. Prosedur penelitian meliputi pre-test, pemberian perlakuan pada kelas eksperimen menggunakan Educaplay selama empat pertemuan, pembelajaran konvensional pada kelas kontrol, dan post-test. Data dianalisis menggunakan uji statistik dengan bantuan SPSS versi 27. Hasil penelitian menunjukkan peningkatan signifikan pada kelas eksperimen dibandingkan kelas kontrol, terlihat dari kenaikan rata-rata skor dari 55,8 menjadi 79,1 pada kelas eksperimen, dan dari 49,7 menjadi 66,8 pada kelas kontrol. Uji t independen menunjukkan t-hitung > t-tabel (4,596 > 2,009) dengan signifikansi < 0,001, sehingga Ho ditolak dan Ha diterima. Nilai Partial Eta Squared sebesar 0,297 menunjukkan bahwa penggunaan Educaplay memberikan kontribusi sebesar 29,7% terhadap peningkatan penguasaan kosakata siswa. Kesimpulannya, penggunaan Educaplay berpengaruh signifikan terhadap penguasaan kosakata siswa. Media ini berpotensi menjadi alternatif pembelajaran interaktif yang inovatif dan efektif untuk meningkatkan kemampuan kosakata bahasa Inggris siswa SMP.

Kata Kunci: Educaplay, penguasaan kosakata, kuasi-eksperimen

A. Introduction

Vocabulary mastery is a fundamental component in learning English as a Foreign Language (EFL) because it directly affects students' ability to comprehend texts, express ideas, and communicate effectively. Vocabulary knowledge also plays a crucial role in supporting the development of other language skills, such as listening, speaking, reading, and writing. Students who possess adequate vocabulary mastery can understand learning materials more easily and use English more confidently, while those with limited vocabulary often face difficulties in developing overall language proficiency (Al-khawaldeh et al., 2023).

At SMPN 25 Bengkulu City, preliminary observations indicate that seventh-grade students still have low vocabulary mastery. This is attributed to conventional and monotonous teaching methods and the minimal use of interactive media. Vocabulary learning that relies solely on memorization, translation, and repetitive exercises tends to make students passive, bored, and less able to retain new words. These conditions demonstrate the need for innovative, engaging, and technology-based learning strategies to support effective vocabulary

development (Hasan et al., 2022; Perales & Ulla, 2025).

The rapid development of educational technology has significantly influenced language learning practices, including vocabulary instruction. Digital learning media can provide interactive, flexible, and learner-centered environments. One such medium is Educaplay, a web-based digital platform offering educational games such as quizzes, matching exercises, word searches, and vocabulary tasks. Educaplay enables students to practice vocabulary repeatedly in meaningful contexts, enhancing motivation, engagement, and long-term retention of words (Chowdhury et al., 2024; Tonda, 2026; Oeda, 2025).

Based on these observations, this study focuses on analyzing the effectiveness of Educaplay in improving vocabulary mastery of seventh-grade students at SMPN 25 Bengkulu City. The research problem is formulated as the low vocabulary mastery among students due to conventional teaching methods and limited use of interactive media, and whether Educaplay can significantly enhance their vocabulary learning outcomes.

The purpose of this study is to determine the effect of using Educaplay on students' vocabulary mastery. The study is expected to provide theoretical benefits by enriching research on game-based and technology-assisted learning, as well as practical benefits for teachers, students, and schools. Teachers can adopt Educaplay as an interactive teaching medium, students gain a more engaging learning experience, and schools are encouraged to integrate technology into teaching and learning activities. Additionally, this study can serve as a reference for future research on using digital media to develop students' vocabulary skills in EFL contexts.

B. Research Method

This research employed a quantitative method to examine the effect of Educaplay activities on students' vocabulary mastery. Quantitative research allows for testing objective theories by analyzing numerical data and examining the relationship between variables (Creswell & Creswell, 2023). It enables the collection of

measurable data, which are processed statistically to obtain valid and reliable results.

The study applied an experimental approach, specifically a quasi-experimental design using a nonequivalent control group design. In this design, two existing classes were selected as the experimental and control groups without random assignment. Both groups took a pre-test to measure their initial vocabulary mastery. The experimental group received treatment through Educaplay activities, while the control group was taught using conventional methods. After the treatment, both groups were given a post-test to assess the final vocabulary mastery. Comparison of pre-test and post-test scores, as well as between groups, was used to evaluate the effectiveness of Educaplay.

The population of this study consisted of all seventh-grade students at SMPN 25 Bengkulu City in the academic year 2026/2027, totaling 92 students distributed across three classes. Using purposive sampling, two classes were selected as the sample: Class VII B (30 students) as the experimental group and Class VII C (31 students) as the control group. Purposive sampling was chosen to ensure that the selected classes reflected conditions appropriate for examining the treatment effect (Sugiyono, 2003; Suryani & Herianti, 2023).

The primary instrument was a vocabulary test consisting of 20 multiple-choice questions administered as pre-test and post-test for both groups. The instrument was validated for content and reliability prior to use to ensure accuracy in measuring students' vocabulary mastery (Widodo et al., 2023).

Data collection in this study was carried out through a series of structured activities. First, a pre-test was administered to both the experimental and control groups to measure their initial vocabulary mastery. Following the pre-test, the experimental group received treatment using Educaplay activities over four sessions, each lasting 45 minutes, while the control group was taught using conventional methods. The Educaplay activities included interactive games, quizzes, and word search exercises designed to reinforce vocabulary learning in an engaging manner. After the treatment, a post-test was conducted

for both groups to assess the students' vocabulary mastery improvements. In addition to test scores, documentation such as attendance records and classroom activity photos were collected to ensure data validity and provide additional evidence of the implementation process.

Collected data were analyzed using SPSS version 27. Descriptive statistics were used to present the mean scores of pre-test and post-test for both groups. An independent t-test was conducted to determine whether there was a significant difference between the experimental and control groups. Statistical significance was considered at $p < 0.05$.

C.Result

The analysis of seventh-grade students at SMPN 25 Kota Bengkulu showed that the use of Educaplay significantly improved students' vocabulary mastery. The experimental group, which received Educaplay treatment, achieved a mean post-test score of 79.19, higher than the control group's mean score of 66.85.

1. Normality Test

Tabel 1. Normality Test Experiment Class

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.172	26	.046	.949	26	.223
Posttest	.120	26	.200*	.931	26	.084

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tabel 2. Normality Test Control Class

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.071	26	.200*	.977	26	.812
Post test	.122	26	.200*	.954	26	.282

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the results of the Shapiro–Wilk test, the significance values for the experimental class were 0.223 (pre-test) and 0.084 (post-test), while in the control class the significance values were 0.812 (pre-test) and 0.282 (post-test), all of which are greater than 0.05. Therefore, it can be concluded that the data are normally distributed and

meet the assumptions required for subsequent statistical analysis.

2. Homogenity Test

Tabel 3. Test of Homogenity of Variances Pre-Test

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Pre Test	Based on Mean	.037	1	50	.848
	Based on Median	.098	1	50	.756
	Based on Median and with adjusted df	.098	1	50.000	.756
	Based on trimmed mean	.039	1	50	.844

Tabel 4. Test of Homogenity of Variances Post-Test

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Post Test	Based on Mean	.154	1	50	.696
	Based on Median	.210	1	50	.648
	Based on Median and with adjusted df	.210	1	49.867	.648
	Based on trimmed mean	.163	1	50	.688

Based on the results of the homogeneity test, the significance value for the pre-test was 0.696 (> 0.05) and for the post-test was 0.962 (> 0.05). This indicates that the variance of the data in both the experimental and control groups is homogeneous, meaning that both groups have a similar level of variability. Therefore, the data meet the assumption of homogeneity and are suitable for further statistical analysis.

3. T-Test

Tabel 5. Independent Sample Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Ssig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
HasilPostTest	Eequal variances assumed	..154	..696	64.596	550	<<.001	112.346	12.687	86.950	117.742
	Eequal variances not assumed			64.596	549.581	<<.001	112.346	12.687	86.949	17.743

Based on the results of the independent sample t-test, the calculated t-value was 4.596, which is greater than the t-table value of 2.009 at a 5% significance level, with a two-tailed significance (Sig.) value of < 0.001. This indicates that there is a

statistically significant difference between the post-test scores of the experimental class, which used Educaplay activities, and the control class, which received conventional instruction. Therefore, the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Accordingly, the use of Educaplay has a significant effect on students' vocabulary mastery, demonstrating that students who learned through Educaplay achieved higher learning outcomes compared to those who learned through conventional methods.

4. F-Test

The Result Tests of Between-Subjects Effects

Tests of Between-Subjects Effects

Dependent Variable: Posttest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1981.558[a]	1	1981.558	21.119	<.001	.297
Intercept	277254.019	1	277254.019	2954.903	<.001	.983
Group	1981.558	1	1981.558	21.119	<.001	.297
Error	4691.423	50	93.828			
Total	283927.000	52				
Corrected Total	6672.981	51				

a. R Squared = ,297 (Adjusted R Squared = ,283)

Based on the results of the F-test, the Partial Eta Squared value was 0.297, indicating a moderate effect of 29.7%. The obtained F-value was 21.119, which is greater than the F-table value of 4.03, with a significance level of < 0.001. This demonstrates that the use of Educaplay activities has a statistically significant effect on students' vocabulary mastery. The findings indicate that the treatment applied to the experimental class contributed positively to improving students' vocabulary learning outcomes, confirming that Educaplay is an effective learning medium in enhancing vocabulary mastery for seventh-grade students at SMP Negeri 25 Kota Bengkulu.

D. Discussion

Based on the analysis of seventh-grade students at SMPN 25 Bengkulu, using Educaplay significantly improved students' vocabulary mastery. The experimental class, which received Educaplay activities, achieved a higher mean post-test score (79.19) than the control class taught with conventional methods (66.85).

Normality and homogeneity tests confirmed the data were suitable for further analysis. The independent t-test showed a significant difference ($t_{count} = 4.596 > t_{table} = 2.009$, $p < 0.001$), and the F-test indicated that Educaplay contributed 29.7% to vocabulary improvement ($F = 21.119$, $p < 0.001$), reflecting a medium effect size.

These results demonstrate that Educaplay is more effective than traditional methods, as it enables interactive, game-based vocabulary practice, immediate feedback, and repeated reinforcement. Students were more motivated and engaged, actively participating in learning activities, reducing boredom, and improving focus. Therefore, Educaplay can be considered an effective and innovative medium for enhancing vocabulary mastery among junior high school students.

E. Conclusion

Based on the results of this study, it can be concluded that the use of Educaplay activities has a significant effect on seventh-grade students' vocabulary mastery at SMP Negeri 25 Kota Bengkulu. The experimental class, which used Educaplay, achieved a higher mean post-test score (79.1) compared to the control class (66.8), indicating that students who engaged with interactive and game-based activities performed better than those who learned through conventional methods. Statistical analyses, including normality and homogeneity tests, as well as independent t-test and F-test, confirmed that the differences were significant, with a medium effect size (Partial Eta Squared = 0.297).

The findings suggest that Educaplay effectively supports vocabulary learning by providing repeated practice, immediate feedback, and meaningful engagement with the learning material. Students in the experimental class were more motivated, attentive, and actively involved in vocabulary exercises, which contributed to higher retention and understanding of new words. Therefore, Educaplay can be considered a practical and effective alternative learning medium for English vocabulary instruction, especially in junior high school contexts, helping teachers create a more interactive, engaging, and student-centered learning

environment. The study also emphasizes the importance of integrating digital game-based platforms to enhance motivation, participation, and overall learning outcomes in language education.

Based on the findings, several suggestions are proposed:

1. For Teachers: It is recommended to integrate Educaplay activities into regular vocabulary instruction and combine them with other instructional strategies to enhance both receptive and productive vocabulary skills.
2. For Students: Students are encouraged to engage with Educaplay independently and consistently outside of classroom hours to strengthen their vocabulary mastery and retention.
3. For Schools: Schools should support the use of digital learning media by providing adequate facilities and access to interactive platforms, enabling innovative and effective learning environments.
4. For Future Researchers: Further studies are encouraged to use larger sample sizes, longer treatment periods, or integrate Educaplay with other learning methods to examine long-term effects and explore its potential in different educational contexts.

This integrated conclusion and suggestion provide both the outcome interpretation and practical guidance, making it suitable for inclusion in an article or scholarly report.

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