

USING THE EWA APPLICATION TO IMPROVE ENGLISH ACHIEVEMENT

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ABSTRACT

The present study aimed to examine the effect of using the EWA application on students' English achievement. This study employed a quasi-experimental design with a quantitative approach involving 55 eighth-grade students of SMPN 2 Bontonompo Selatan, consisting of 30 students in the experimental group and 25 students in the control group. To measure students' English achievement, both groups were administered pre-tests and post-tests consisting of multiple-choice items covering several aspects of English skills. The data were analyzed using statistical procedures, including normality and homogeneity tests, followed by hypothesis testing using an independent samples t-test. The results revealed that the experimental group obtained a higher post-test mean score ($M = 65.00$) than the control group ($M = 32.56$), with a statistically significant difference ($t = 10.503, p < 0.001$). This finding indicates that students who were taught using the EWA application showed better improvement compared to those who were taught without using the application. Therefore, it can be concluded that the use of the EWA application has a significant effect on students' English achievement. The findings of this study suggest that integrating digital learning applications can enhance students' learning outcomes in English.

Keywords: Ewa Application, English Achievement, Quasi-experimental design

1) INTRODUCTION

English plays a crucial role in global communication, education, and access to information. In the digital age, the integration of information technology has significantly transformed English language learning. Learning is no longer limited to traditional classroom settings, as digital platforms such as mobile applications, online media, and AI-based tools provide more flexible and interactive learning opportunities. Previous studies have shown that the use of technology can enhance students' English learning outcomes by increasing accessibility and engagement (Hidayat et al., 2022).

However, improving students' English achievement remains a major challenge, particularly at the junior high school level in Indonesia. Many students still experience difficulties in mastering English due to limited vocabulary, lack of practice, and low participation in the classroom. In

addition, teacher-centered instructional methods and the limited use of engaging learning media often result in monotonous learning environments, which negatively affect students' performance (Rengur et al., 2024). Furthermore, students may experience decreased learning interest and achievement due to difficulties in adapting to changes in learning systems (Susanti et al., 2024).

A preliminary observation conducted at SMPN 2 Bontonompo Selatan revealed similar issues. Students showed low participation and faced difficulties in understanding English materials, while their achievement levels were still below the Minimum Competency Criteria (KKM). According to Adani (2024), these problems are influenced by limited exposure to English, insufficient opportunities for independent practice, and the lack of interactive learning media. Therefore, there is a need for innovative learning tools that can support students' learning more effectively.

One potential solution is the use of digital learning applications, particularly the EWA application. EWA is an interactive mobile application designed to support English learning through various features such as vocabulary practice, listening activities, and personalized learning experiences. This is in line with Dual Coding Theory, which suggests that learning is more effective when verbal and visual information are processed simultaneously, thereby enhancing comprehension and memory retention (Paivio, 1986). Previous studies have indicated that digital learning applications can improve students' learning outcomes and engagement (Lin et al., 2017). However, research specifically examining the effectiveness of the EWA application in improving students' English achievement is still limited.

Therefore, this study aims to examine the effect of using the EWA application on students' English achievement at SMPN 2 Bontonompo Selatan. This study is expected to contribute to the development of innovative digital learning media and provide empirical evidence on the effectiveness of the EWA application in English language learning.

2) METHODS

The research approach used in this study was a quantitative approach, applying a quasi-experimental research design. According to Creswell (2014), quasi-experimental design involves the use of an experimental group and a control group without random assignment of participants. This design was chosen because it allows the researcher to examine the effect of a treatment in a real classroom setting where full control of variables is not possible.

This study employed a quantitative method, which refers to the process of collecting and analyzing numerical data to explain relationships between variables and to test hypotheses. The quantitative approach was considered appropriate because this study aimed to examine the effect of using the EWA application on students' English achievement through statistical analysis.

Population is defined as the entire group of individuals who share certain characteristics relevant to the research. The population of this study consisted of 566 students of SMPN 2 Bontonompo Selatan. A sample is a subset of the population that represents the whole. In this study, 55 students were selected as the sample, consisting of 30 students from class VIII-A and 25 students from class VIII-B.

The sampling technique used in this study was purposive sampling. According to Gay et al. (2011), purposive sampling involves selecting participants based on specific characteristics and considerations. The researcher selected class VIII-A and VIII-B because of the similarity in students' academic abilities, the availability of the English teacher, and the suitability of the class schedule for conducting the research.

In this research design, class VIII-A was assigned as the experimental group and class VIII-B as the control group. Both groups were given a pre-test before the treatment to measure their initial English achievement. The experimental group received treatment using the EWA application for six meetings, while the control group did not receive the treatment. After the treatment, both groups were given a post-test to evaluate the students' English achievement.

The research design used in this study was a non-equivalent control group design, which can be illustrated as follows:

Experimental Class	O ₁	X	O ₂
Controlled Class	O ₃	-	O ₄

Explanation:

O₁ : Pre-Test for Experimental Class

O₂ : Post-Test for Experimental Class

O₃ : Pre-Test for Controlled Class

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O₄ : Post-Test for Controlled Class

X : Treatment

- : No treatment

The data obtained from the pre-test and post-test were analyzed using statistical procedures. The analysis included normality testing using the Kolmogorov–Smirnov test and homogeneity testing using Levene’s test. After the assumptions were met, an independent samples t-test was conducted to determine whether there was a significant difference between the experimental and control groups.

3) RESULTS

This section presents the findings of the study on the effect of the EWA application on students’ English achievement. The results were obtained from the analysis of pre-test and post-test scores of both the experimental and control groups. Table 1 presents the distribution of research participants in both groups.

Table 1. Distribution of Research Participants

Group	Number of Students		Total	Description
	Male	Female		
VIII A	13	17	30	Experiment Class
VIII B	9	16	25	Control Class
Number of research samples			55	

The data showed that the total number of participants involved in this study was 55 students, consisting of 30 students in the experimental group and 25 students in the control group.

Pre-test and Post-test Results

There were two groups involved in the study. One was referred to as the experimental group, where the students learned with the EWA Application. The second group was the control group,

where the students learned through teacher-centered instruction using textbooks and explanation-based methods. The data of the learning achievements of students were collected through pretests prior to learning and posttests subsequent to learning. The pretest and posttest scores of each group are compared below:

Table 2. Pre-test and Post-test Results

	Pre-test Experiment	Post-test Experiment	Pre-test Control	Post-test Control
Mean	56,083	65,000	43,100	32,560
N	30	30	25	25
Std. Deviation	14,8510	11,0055	15,5168	11,8702
Minimum	32,5	42,5	10,0	15,0
Maximum	85,0	87,5	72,5	65,0

The statistical results showed that the experimental group's mean score increased from 56.08 (SD = 14.85) in the pre-test to 65.00 (SD = 11.01) in the post-test, while the control group's mean score decreased from 43.10 (SD = 15.52) to 32.56 (SD = 11.87). To determine the significance of this difference, further analysis was conducted using an independent samples t-test based on the results of normality and homogeneity test.

Statistical Assumption Test Results

This study conducted preliminary tests before testing the main hypothesis. A normality test was carried out to determine whether the data were normally distributed, and a homogeneity test was conducted to examine the equality of variances across groups. Both tests were essential for determining the appropriate type of hypothesis test to use, whether parametric or non-parametric.

Normality Test Result

Table 3. Normality Test Result

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest Experiment	,085	30	,200*	,970	30	,533
Posttest Experiment	,110	30	,200*	,972	30	,591
Pretest Control	,161	25	,094	,968	25	,588
Posttest Control	,146	25	,176	,947	25	,213

The normality test results indicated that all datasets were normally distributed, as the Shapiro–Wilk significance values for both experimental and control groups were greater than 0.05. Therefore, the assumption of normality was fulfilled, allowing the use of parametric statistical analysis.

Homogeneity Test Result

Table 4. Homogeneity Test Result

	Levene Statistic	df1	df2	Sig.	
Pre-test	Based on Mean	,105	1	53	,747
	Based on Median	,050	1	53	,824
	Based on Median and with adjusted df	,050	1	50,606	,824
	Based on trimmed mean	,111	1	53	,740
Post-test	Based on Mean	,136	1	53	,714
	Based on Median	,042	1	53	,838
	Based on Median and with adjusted df	,042	1	51,793	,838
	Based on trimmed mean	,100	1	53	,753

The Levene test indicates that the significance value for both tests (pretest and posttest) is greater than 0.05. This indicates that the variation differences in data between the experiment group and the control group remain identical in pretest and posttest. Thus, the condition for equal variance has been satisfied.

Hypothesis Results

Table 5. Hypothesis Testing Result

Variable	t-value	df	Sig. (2-tailed)	Result
Posttest	10.503	53	0.000	Significant

The t-test results indicated that the significance value was 0.000, which is lower than 0.05. This shows that there was a significant difference in posttest scores between the experimental and control groups. The experimental group achieved a higher mean score than the control group, suggesting that the use of the EWA application positively influenced students' English learning achievement.

This indicates that the application of EWA assisted in enhancing students' English achievement. The test indicates a huge disparity in learning achievement between the class that has been using the EWA app and the class that has been using conventional methods. The second class scored lower in post-testing than the first class. The findings in the t-test indicated that the difference was significant ($p < 0.05$).

4) DISCUSSION

The research reveals that employing the use of the EWA application as a learning medium in class VIII A raised the English test results. It is evident since posttest average increased from 56.08 to 65.00. Application rate of Grade VIII B declined from 43.10 to 32.56. The experimental class consisted of 30 samples, and the control class consisted of 25. The decline in the control group can be explained by the use of conventional methods that are still teacher-centered, so that students are less motivated and do not have the opportunity to practice independently. This is consistent with the findings of Susanti et al. (2024), which emphasize that monotonous methods can reduce students' interest and learning achievement.

The study concurs with Mayer (2001), who contends that effective multimedia learning materials aid in understanding and remembering better with the aid of pictures and audio. Bunari et al. (2024) also attest to the above in regard to the assertion that students' interest in learning can be augmented through interactive learning resources. Interactive lessons, videos, and games in the EWA app are aimed at engaging students.

The test results show a significant difference between the experimental group and the control group after conducting the Independent Samples t-test, since the significance value ($p = 0.000$) is lower than 0.05. This indicates that the use of the EWA application significantly improves students' English learning achievement. Therefore, it can be concluded that the EWA application has a positive effect on students' performance in learning English.

These findings can also be explained through Dual Coding Theory proposed by Paivio (2006), which states that individuals process information through two cognitive systems: verbal and visual. When learning materials combine words, sounds, and images, students are more likely to understand and retain information effectively. The EWA application integrates audio, text, images, and interactive exercises, which activate both processing systems simultaneously. Therefore, the improvement in students' English achievement be associated with the principles of Dual Coding Theory.

The alternative hypothesis (H1) indicates that the learning English achievement of students who utilized the EWA application differ from the outcomes of students who utilized the conventional approach. This outcome also addresses the first research question within this study, which is whether the use of the EWA application impacts students' English learning achievement.

5) CONCLUSION

Based on the results of the study, it can be concluded that the use of the EWA application significantly improves students' English achievement at SMPN 2 Bontonompo Selatan. Students in the experimental class who used the EWA application showed an increase in their average posttest score from 56.33 to 64.73, while the control class experienced a decrease from 43.00 to 27.88. The Independent Sample t-Test confirmed that this difference was statistically significant ($p = 0.000 < 0.05$). These findings provide a clear answer to the first research question, namely that the use of the EWA application does improve students' English achievement..

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