

THE IMPACT OF EDUCANDY APPLICATION ON JUNIOR HIGH SCHOOL STUDENTS' VOCABULARY MASTERY

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Abstract

This study examined the impact of the Educandy application on eighth-grade students' vocabulary proficiency in recount texts and the significant differences in vocabulary mastery resulting from the use of Educandy as a digital learning tool at SMPN 3 Brebes. A quantitative quasi-experimental design utilizing a pre-test and post-test control group was implemented. The sample consisted of 64 students (32 in the experimental group; 32 in the control group). The experimental group acquired vocabulary using the Educandy application, whereas the control group learnt without it. Data were gathered utilizing a validated and reliable multiple-choice vocabulary assessment (30 questions) and evaluated by descriptive statistics, normality and homogeneity tests, paired-sample t-tests, and an independent-sample t-test. The experimental group's mean score rose from 65.03 (pre-test) to 73.59 (post-test), whereas the control group's score grew from 62.97 to 65.00. The paired-sample t-test revealed a significant enhancement in the experimental group ($t = -7.265$, $p = .000$), while the independent-sample t-test demonstrated a significant disparity between groups on the post-test ($t = -3.900$, $p = .000$). The data demonstrate that the Educandy application significantly enhances pupils' vocabulary mastery. Consequently, using digital learning programs like Educandy can function as an effective alternative technique to improve vocabulary acquisition in junior high school environments.
Keywords: Educandy Application; Vocabulary Mastery; Digital Learning Media; Quasi-Experimental Study;

1. INTRODUCTION

English is a mandatory subject in Indonesian junior high schools, aimed at enhancing students' proficiency in comprehending and utilizing the language across many situations. Students must attain mastery in four fundamental language skills: listening, speaking, reading, and writing. These abilities are supported by language components such as pronunciation, grammar, and vocabulary. Vocabulary is an essential element that supports the advancement of all language skills. Agustin (2022) asserts that vocabulary mastery facilitates efficient language comprehension and usage among students, but Parni Meri et al. (2022) elucidate that insufficient vocabulary knowledge might impede students' understanding and expression.

Mastery of vocabulary entails not only the memorization of word meanings but also the comprehension of their functionality in various settings. Nation (2001) asserts that vocabulary knowledge includes both receptive and productive skills, but Thornbury (2002) contends that vocabulary entails comprehension of meaning, form, and usage. In junior high school, vocabulary acquisition is intricately linked to text-based instruction, particularly including recount texts. Wardiman et al. (2008) elucidate that recount texts necessitate students to narrate past occurrences in chronological sequence, employing suitable linguistic elements such as past tense verbs and temporal conjunctions. Consequently, proficient vocabulary acquisition is crucial for students to comprehend and generate recount texts efficiently. Classroom observations at SMP N 3 Brebes revealed multiple issues in pupils' language acquisition.

A significant number of students has restricted language knowledge, which impairs their comprehension of educational content. Students frequently neglect freshly acquired vocabulary and experience challenges while utilizing terms in various circumstances. Moreover, vocabulary

training is sometimes conducted without the Educandy program, with educators depending on direct explanations and textbook activities. Such methodologies may result in diminished student involvement and decreased motivation throughout the learning process. Educational media significantly enhance students' comprehension and engagement in classroom activities. Lubis et al. (2023) assert that these media serve as instruments that enable educators to convey content efficiently and incite students' interest. The incorporation of digital learning media in English training can foster a more engaging and enjoyable educational environment, enabling students to actively engage with vocabulary items. Educandy is a digital learning application utilized for vocabulary instruction.

Pratiwi & Fadhilawati (2024) characterize Educandy as a web-based interactive platform that allows educators to design diverse vocabulary activities, including word searches, matching pairs, and multiple-choice quizzes. Students can engage in vocabulary drill through game-based activities that are both stimulating and significant. Prior research by Saputri et al. (2023) and Alchorni (2024) demonstrates that the implementation of Educandy enhances students' motivation and engagement in English language acquisition. Nonetheless, empirical research investigating its impact on vocabulary acquisition through a quasi-experimental approach at the junior high school level is still few.

This study examined the impact of the Educandy application on eighth-grade students' vocabulary mastery in recount texts and assessed whether a significant difference existed in vocabulary mastery between students utilizing the Educandy application and those employing traditional methods at SMPN 3 Brebes. A quantitative methodology utilizing a quasi-experimental design with experimental and control groups was implemented to acquire objective and accurate results. The experimental group acquired vocabulary using the Educandy program, whereas the control group did not utilize the Educandy application. This study concentrates on junior high school students, emphasizing the significance of vocabulary growth in fostering language skills. It seeks to elucidate how the Educandy application might improve students' vocabulary proficiency and cultivate a more stimulating learning atmosphere.

2. METHODOLOGY

This study utilized a quantitative methodology through a quasi-experimental design featuring pre-test and post-test control groups to investigate the impact of the Educandy application on students' vocabulary acquisition. The population comprised all eighth-grade students at SMP N 3 Brebes for the academic year 2025/2026. Utilizing purposive sampling, two classes with analogous characteristics and initial vocabulary proficiency were chosen as the sample, totaling 64 students. Thirty-two students were allocated to the experimental group, whereas thirty-two students were designated to the control group.

The research instrument consisted of a vocabulary test with multiple-choice questions pertaining to narrative text content. Initially, 50 items were created and tested on 31 students from a separate class to assess validity and reliability. According to the Pearson Product Moment analysis, 30 items were deemed valid and utilized for the pre-test and post-test. The reliability assessment with Cronbach's Alpha yielded a coefficient of 0.879, signifying strong internal consistency and validating the instrument's dependability for evaluating language proficiency.

The study was carried out during six meetings. Both groups were initially given a pre-test to assess their baseline vocabulary proficiency. The experimental group got teaching via the Educandy application through interactive exercises, including word searches, matching pairs, and quizzes pertaining to recount texts, whereas the control group was instructed without the use of

Educandy. Subsequent to the treatment period, both groups underwent a post-test under comparable conditions.

The collected data were analyzed using IBM SPSS Statistics 26. Descriptive statistics were utilized to obtain the mean and standard deviation of the scores. A Shapiro-Wilk normality test and Levene's Test for homogeneity were conducted to assess the adherence to parametric testing assumptions. A paired sample t-test was employed to evaluate improvement within each group, whilst an independent sample t-test was conducted to compare post-test outcomes between the experimental and control groups at a significance level of 0.05.

3. RESULTS AND DISCUSSION

Table 1 Descriptive Statistics

Group	Test	N	Minimum	Maximum	Mean	Std.Deviation
Experimental	Pre-test	32	50	80	65.03	8.864
Experimental	Post-test	32	57	87	73.59	9.449
Control	Pre-test	32	53	77	62.97	6.766
Control	Post-test	32	53	80	65.00	8.132

According to Table 1, both groups had comparable initial vocabulary proficiency. The experimental group attained a mean score of 65.03 in the pre-test, whereas the control group recorded a mean score of 62.97. The minor disparity between these averages suggests that both groups commenced from a similar baseline prior to the administration of the medication. Following the treatment period, the experimental group exhibited a significant enhancement, with the mean score rising to 73.59. Conversely, the control group had minimal enhancement, with the mean score increasing to 65.00. The experimental group had a mean increase of 8.56 points, while the control group demonstrated an improvement of merely 2.03 points. This comparative analysis indicates that pupils instructed with the Educandy application had superior enhancement in vocabulary proficiency relative to those who did not utilize the program.

Table 2 Paired Sample T-test

Pair	Mean Difference	T	Df	Sig. (2-tailed)
Pre-test – Post-test	-8.562	-7.265	31	.000

Table 2 shows a mean difference of -8.562 between pre-test and post-test scores, signifying superior performance in the post-test. The outcome was statistically significant ($t = -7.265$, $df = 31$, $p = .000$). This suggests that the utilization of Educandy positively influenced pupils' vocabulary acquisition.

Table 3 Independent Sample T-test

Group	N	Mean	Std.Deviation	T	df	Sig. (2-tailed)
Experimental	32	73.59	9.449			
Control	32	65.00	8.132	-3.900	62	0.000

Table 3 indicates that the experimental group attained a superior mean score ($M = 73.59$) relative to the control group ($M = 65.00$). The independent sample t-test yielded a t-value of -3.900, with 62 degrees of freedom and a significance level of 0.000. The significance value is below the alpha level of 0.05, leading to the rejection of the null hypothesis. This outcome signifies a statistically significant disparity in vocabulary proficiency between pupils instructed with the Educandy application and those without it.

The results indicate that the implementation of Educandy substantially enhanced pupils' language proficiency. The significant mean enhancement noted in the experimental group indicates that interactive and game-based learning activities afforded students repeated exposure to vocabulary within relevant settings. Students were prompted to actively engage with new vocabulary through activities such as word searches, matching exercises, and quizzes, rather than merely remembering them passively. This active participation certainly enhanced memory and comprehension of words associated with recount texts.

The results align with earlier studies by Saputri et al. (2023), which indicated that Educandy enhanced students' motivation and academic performance. Likewise, Simanungkalit et al. (2023) documented favorable outcomes of Educandy on vocabulary memory via interactive exercises. This study reinforces these findings by utilizing a quasi-experimental approach with a control group, therefore offering more robust empirical evidence concerning the efficacy of Educandy in junior high school environments.

In conclusion, the statistical evidence and comparison mean scores demonstrate that the incorporation of the Educandy application into vocabulary education can substantially improve students' vocabulary knowledge relative to instruction without the Educandy application. The results indicate that digital learning tools can function as an effective pedagogical approach to enhance vocabulary acquisition in recount text education.

4. CONCLUSION

This study aimed to examine the impact of the Educandy application on students' understanding of vocabulary in recount texts and to determine the major differences in vocabulary acquisition among eighth-grade students at SMPN 3 Brebes when utilizing Educandy as a digital learning tool. The statistical analysis indicates that the deployment of Educandy positively influenced students' vocabulary mastery, revealing a substantial difference between the experimental and control groups. The paired sample t-test indicated a significance value of 0.000 ($p < 0.05$), demonstrating that Educandy positively influenced students' vocabulary mastery. Additionally, the independent sample t-test showed a significance value of 0.000 ($p < 0.05$), signifying a statistically significant difference between the experimental and control groups. Students instructed with Educandy attained superior post-test scores relative to those who did not utilize the Educandy program.

The data indicated that the experimental group exhibited superior enhancement in language mastery compared to the control group. This indicates that the interactive and game-

based elements offered by Educandy facilitated students' active engagement with vocabulary items, especially within the context of recount tales. The utilization of digital learning material fostered a more engaging and stimulating educational atmosphere, hence enhancing vocabulary retention and comprehension.

Consequently, it can be inferred that the Educandy application is more successful than the absence of the Educandy application in enhancing students' vocabulary knowledge at the junior high school level. This study's findings offer empirical evidence that incorporating interactive digital applications into English training can improve vocabulary acquisition and foster more significant classroom involvement.

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