The Effectiveness of Rosetta Stone Application for Vocabulary Mastery of Sixth Graders in MI Hidayatul Mubtadiin Jubang-Brebes

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KEYWORDS	ABSTRACT
	This study aims to examine the effectiveness of Rosetta Stone application for vocabulary mastery of sixth graders in MI Hidayatul Mubtadiin Jubang-Brebes. This research was motivated by the common issues faced in vocabulary learning, including limited vocabulary, pronunciation difficulties, and monotonous teaching methods. A pre-experimental one-group pre-test and post-test design was used, involving 28 students. They underwent three sessions using Rosetta Stone to learn vocabulary related to verbs, school equipment, and aspirations. The data were analyzed using N-Gain, which resulted in a moderate improvement score (0.3777). The findings demonstrate that integrating technology-based tools like Rosetta Stone can significantly support vocabulary acquisition in primary education. The study highlights the potential of interactive applications in creating engaging learning environments and recommends their broader use in elementary English instruction. *Keywords: Rosetta Stone Application, Vocabulary Mastery, Technology-Based Learning*

Introduction

English has become an essential component of the elementary education curriculum, reflecting the increasing urgency of mastering a foreign language from an early age (Shobikah, 2018). However, English teaching at the elementary school level, particularly at MI Hidayatul Mubtadiin Jubang-Brebes, located in a rural area, still faces significant challenges. The main problem is students' low vocabulary mastery, even though vocabulary is the main foundation for developing the four language skills: listening, speaking, reading, and writing. This problem is exacerbated by the limited number of educators with adequate competence in teaching English, as well as the continued use of conventional learning methods that are less relevant to the characteristics and learning needs of today's students. At MI Hidayatul Mubtadiin Jubang-Brebes, for example, the majority of sixth-grade students still have not achieved the Minimum Completion Criteria (KKM) in English, due to their poor ability to memorize, pronounce, and use vocabulary appropriately and contextually (Madsen et al., 2023).

This problem is crucial to address because vocabulary is a fundamental component that determines students' success in understanding and using English. Without adequate vocabulary mastery, students will struggle to absorb information and express their ideas in the target language, ultimately hindering their achievement of the curriculum's core competencies (Rahmayani, 2022). Furthermore, the limited variety of media and learning strategies can make the learning process monotonous and uninteresting for students, thus reducing their motivation to learn. Therefore, innovative approaches are needed to increase student engagement and provide a more contextual and enjoyable learning experience (Debataraja & Daulay, 2024).

In response to these issues, this study aims to assess the effectiveness of the Rosetta Stone application in improving vocabulary mastery among sixth-grade students at MI Hidayatul Mubtadiin Jubang-Brebes. This application was chosen because it offers a multimodal learning method that combines text, images, and sound, and is equipped with speech recognition and immediate feedback features that facilitate contextual understanding and correct pronunciation. Therefore, this study not only seeks to evaluate the extent to which Rosetta Stone can improve student learning outcomes but also provides alternative solutions for teachers and students in utilizing technology as an effective and adaptive learning medium (Lutfia, 2024).

Method

This research used a quantitative approach with a pre-experimental design, specifically a one-shot case study, to evaluate the effectiveness of the Rosetta Stone app in improving elementary school students' English vocabulary mastery. The study participants consisted of 28 sixth-grade students at MI Hidayatul Mubtadiin Jubang-Brebes, selected because their average achievement was below the Minimum Completion Criteria (KKM) in English. This design was chosen because the school only has one class per grade, making it impossible to have a control group (Gay et al., 2014).

The learning intervention was conducted over three sessions, with each session focusing on a specific vocabulary category: verbs, school supplies, and goals or aspirations. The material was delivered through the Rosetta Stone app, which offers a multimodal audio-visual approach and context recognition through images and pronunciation by native speakers. This approach is designed to increase student active engagement in the learning process and strengthen vocabulary comprehension and retention (Huda & Kusumawanti, 2024).

To measure learning outcomes, a multiple-choice test instrument consisting of 25 questions was used, which was validated using the Pearson Product Moment technique and its reliability was tested to ensure measurement consistency. Pre-test and post-test data were analyzed using descriptive statistics to see the distribution of scores, as well as N-Gain calculations to assess the level of improvement in students' vocabulary mastery after the treatment was given. Through this method, the study aims to provide

a measurable and objective picture regarding the effectiveness of digital learning media in supporting the improvement of English language skills in elementary education (Hanif, 2016).

Results

This study was conducted in the 6th grade of MI Hidayatul Mubtadiin Jubang-Brebes, focusing on analyzing the effectiveness of the Rosetta Stone application in improving students' vocabulary mastery. This application was chosen because of its interactive and adaptive nature, designed to support contextual and communicative vocabulary acquisition. Involving 28 students who were purposefully selected from one class based on accessibility, time availability, and suitability with the research objectives, this study aimed to determine whether the use of Rosetta Stone could significantly improve students' vocabulary skills (Nurhidayah Nurhidayah & Ika Rakhmawati, 2024). Data were collected through pre-test and post-test instruments to assess changes in students' vocabulary mastery before and after the treatment. The main focus of this study was to compare pre-test and post-test scores to determine statistical significance, thus providing empirical evidence regarding the positive impact of digital media, especially Rosetta Stone, on elementary English learning.

Data Analysis

Data analysis in this study includes three main stages: validity testing, reliability testing, and the N-Gain test, each of which plays a role in evaluating the quality of the instrument and the effectiveness of the treatment provided. The validity test was conducted to assess the extent to which the test items were able to measure the intended construct, namely English vocabulary mastery, thus ensuring that the instrument accurately measured the variables studied. Next, the reliability test was used to determine the level of consistency and stability of the measurement results, which indicates the extent to which the instrument can produce reliable data in repeated measurements. Meanwhile, the N-Gain test was used to measure the level of improvement in student learning outcomes by comparing pre-test and post-test scores. The N-Gain calculation provides quantitative information regarding the effectiveness of the learning intervention, in this case the use of the Rosetta Stone application, on students' vocabulary mastery. Through these three types of analysis, the study not only ensured that the instrument used was valid and reliable but also provided an objective picture of the impact of the treatment on improving student competency (Avcu & Avcu, 2022).

Validity Test

From the validity test results on 50 questions using Pearson correlation analysis and significance (2-tailed), it was found that 25 questions met the validity criteria, namely having a significance value below 0.05 and a correlation coefficient above 0.30 (Alfiyah et al., 2025). Meanwhile, the other 25 questions were declared invalid because they did

not meet these requirements. Thus, 50% of the questions in the instrument were declared valid and suitable for use to measure students' vocabulary mastery. This validity indicates that half of the question instruments have adequate ability to measure the variables studied accurately and consistently.

Reliability Test

Table 1. Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
.889	25

Based on the reliability test results, a Cronbach's Alpha coefficient value of 0.889 was obtained from 25 questions, indicating a very high level of reliability and is included in the "very good" category according to quantitative research standards. This value reflects strong internal consistency between items in measuring student abilities. In general, a reliability value above 0.800 is considered very adequate to guarantee the reliability of the resulting data. Therefore, the instrument used in this study can be declared appropriate and reliable for the data collection process, both during the pre-test and post-test.

N-Gain Test

Table 2. N-Gain Test Results

Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
N-Gain	28	.07	1.00	.3777	.22671
Valid N (listwise)	28				

Based on the results of descriptive analysis of the N-Gain value of 28 students, an average value of 0.3777 was obtained with a standard deviation of 0.22671. The minimum N-Gain value achieved by participants was 0.07, while the maximum value reached 1.00. The average N-Gain value of 0.3777 indicates that the increase in student

learning outcomes is in the moderate category. Thus, it can be concluded that the use of the Rosetta Stone application in this study is quite effective in improving students'

vocabulary mastery after being given treatment, as indicated by the achievement of the N-Gain value which is in the moderate category.

Discussion

This study was conducted in sixth-grade students at MI Hidayatul Mubtadiin Jubang-Brebes to determine the effectiveness of the Rosetta Stone application in improving students' vocabulary mastery. The Rosetta Stone application was chosen because of its interactive and adaptive features, which support contextual and communicative vocabulary acquisition. A total of 28 students were purposively selected from one class based on accessibility, time availability, and suitability for the research objectives. This study aimed to determine significant improvements in students' vocabulary skills through the integration of technology-based media into the English language learning process (Yana Munthe, 2023). Effectiveness was assessed by comparing pre-test and post-test results, thus providing empirical evidence regarding the impact of digital learning tools, specifically Rosetta Stone, at the elementary level.

To ensure the credibility and relevance of the findings, several data analysis techniques were applied, including validity tests, reliability tests, and the N-Gain test. Validity tests were conducted using Pearson correlation to evaluate the extent to which each item measures the intended construct. Analysis of the 50 items showed that 25 met validity criteria (significance value <0.05 and correlation coefficient >0.30), confirming that 50% of the items were valid and appropriate for measuring vocabulary mastery. This indicates that half of the instrument's items had a strong relationship with the construct being measured and were suitable for use in this study.

Furthermore, the reliability test revealed a Cronbach's Alpha coefficient of 0.889 for the 25 valid items, indicating a very high level of internal consistency. This value places the instrument in the "very good" category, according to established quantitative research standards, and indicates that the items consistently measured students' vocabulary proficiency. Instruments with reliability values above 0.800 are considered very adequate and reliable for educational research purposes.

The effectiveness of the treatment was further analyzed using the N-Gain test, which evaluates the relative improvement in student performance by comparing pre-test and post-test scores. The analysis yielded an average N-Gain score of 0.3777 with a standard deviation of 0.22671. The lowest N-Gain value was 0.07, while the highest reached 1.00. Based on standardized interpretation criteria, these results are categorized as moderate improvement. These findings indicate that the use of the Rosetta Stone app is quite effective in improving students' vocabulary mastery. This moderate improvement confirms that the app can positively contribute to vocabulary

development, offering an engaging and flexible learning experience that supports student participation and retention (Apriandari, 2019).

The use of the Rosetta Stone app in vocabulary learning provides an effective alternative to technology-based learning. The use of multimedia elements such as images, sounds, and interactive exercises within the app not only enriches the learning environment but also increases student comprehension and motivation (As Sabiq & Sukirno, 2020). These study findings are consistent with previous research emphasizing the benefits of technology-based tools in language education. Therefore, the Rosetta Stone app can be considered a valuable complement to vocabulary instruction, especially in contexts where conventional methods fail to fully engage learners or produce significant learning outcomes (Prasetyo et al., 2018).

Conclusions

The results of the data analysis show that the use of the Rosetta Stone application in vocabulary learning in the sixth grade of MI Hidayatul Mubtadiin Jubang-Brebes has a significant impact on improving student learning outcomes. This can be seen from the significant difference between the pre-test and post-test scores after the application is implemented. Of the 50 questions tested, 25 questions were declared valid and used in the research instrument, this indicates that the selection of appropriate questions plays an important role in improving the quality and validity of the data. The reliability test produced a value of 0.889, indicating that the research instrument has very good stability in measuring students' abilities before and after treatment. In addition, the results of the N-Gain calculation of 0.3777 indicate that this technology-based learning intervention has a positive impact on students' mathematical understanding at a moderate level. These findings confirm that the Rosetta Stone application is effective in improving students' vocabulary mastery and show that technology-based innovation can be an alternative effective learning media.

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