

The Use of Ankiapp in Improving the Second Grade Students' Vocabulary Skill at MTs Negeri Gowa

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ABSTRACT

This research sought to assess the effectiveness of AnkiApp in enhancing vocabulary skill among second-grade students at MTs Negeri Gowa. The study background stemmed from the growing integration of digital tools in education and the need for engaging and effective vocabulary learning methods. A quasi-experimental design was implemented in this quantitative study. The investigation involved 60 learners, who were divided into two distinct groups: the experimental group (VIII.1) and the control group (VIII.2). The cohorts involved 30 learners. The experimental group received treatment using AnkiApp for four sessions, whereas the control group applied the textbook. The findings showed a significant improvement in the vocabulary skill of the experimental group compared to the control group. The experimental group's average score increased from 43.13 (pre-test) to 88.77 (post-test), while the control group's average score improved from 52.80 (pre-test) to 75.47 (post-test). The independent samples t-test revealed a significance value of 0.000 ($p < 0.05$), pointing to a significant difference in statistical terms between the two groups. This study implies that AnkiApp can be a valuable educational tool for teachers seeking to improve vocabulary instruction through engaging, interactive, and student-centered methods. Its effectiveness in fostering independent and enjoyable learning suggests that integrating digital applications like AnkiApp into language teaching can support students' vocabulary development and promote autonomous learning.

Keywords: *AnkiApp, Technology, Vocabulary Skill, Students.*

1) INTRODUCTION

Throughout the field of learning, digital tools offer numerous significant benefits. Aisy et al., (2024) posits that technology encompasses the development and application of tools, machines, materials, and processes designed to assist humans in problem-solving. This term frequently denotes the invention of new tools based on scientific principles and processes. . Uly & Nugraheni, (2024) stated In the 20th century, the definition of educational technology included slide projectors, radios, and later, direct graphics. Conversely, from the 15th to the 19th centuries, technology was primarily associated with tools such as tablets and books. This evolution indicates that educational technology has progressed from simple early forms to more complex applications integrated with various aspects

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of modern education. Nurillahwaty, (2022) asserts that technology serves as an effective medium for teaching and learning, playing a pivotal role in enhancing educational quality by supporting processes such as planning, development, utilization, management, and evaluation of learning resources. This highlights the potential of technology to integrate and personalize teaching and learning processes to better meet students' needs, ultimately facilitating access to information and augmenting interactivity and student engagement in learning.

The use of technology, such as mobile phones, is now permitted within the educational sector. Nento & Manto, (2023) asserts that the emergence of the COVID-19 virus originating in China in 2019, which significantly impacted both the economy and education, necessitated the widespread integration of technology. At MTs Negeri Gowa, the 8th-grade class the integration of tablets as instructional tools has become an essential component of the school's educational methods. These tablets are provided by the institution upon students' initial enrollment as a part of its commitment to delivering modern educational facilities. However, their usage is strictly regulated. Tablets are permitted solely for instructional purposes, such as accessing learning materials, participating in interactive quizzes, or completing digital assignments during classroom activities.

Technology plays a significant role in English language learning, particularly in developing students' vocabulary skill, offering various innovative methods to enhance their overall language competence. According to Santosa et al., (2023) the use of technology in vocabulary instruction predominantly involves educational tools. One such educational technology is video games. In addition, applications like AnkiApp represent a promising tool for improving vocabulary skill. AnkiApp is a digital flashcard system that utilizes an algorithm-based repetition system to assist users in efficiently memorizing and recalling information. This study draws upon the cognitive theory of multimedia learning proposed by Mayer (2009), which states that learning becomes more effective when information is delivered through multiple channels, such as text, image, and sound. Multimedia-based learning tools help students process and retain information more deeply, as the brain works

betten when it can integrate visual and verbal input simultaneously. In the case of AnkiApp, the combination of text and image in its dual-channel processing described by Mayer (2009), making it a suitable medium for enhancing vocabulary skill.

2) METHODS

This study employed experimental-research. According to Mills & Gay, (2019), experimental research is the only approach capable of testing theories to establish causality. This study adopted a quantitative approach to investigate the impact of utilizing the Anki-App on enhancing students' vocabulary skills. In this research, the population encompasses all individuals who satisfy the specified criteria for inclusion. Accurately defining and selecting the population is a critical initial step in the research process, as it impacts the validity and generalizability of the findings. For this research, the population consists of eighth-grade students at MTs Negeri Gowa. The number of students is 90 people and is divided into three classes namely VIII.1, VIII.2, and VIII.3. A sample is a segment of the population that acts as the primary source of data in a study. In essence, it represents a portion of the population intended to reflect the characteristics of the whole (Amin N.F et al., 2023).

Accurate sampling, in terms of both technique and size, is crucial to ensure that research results can be generalized. For the sampling technique, the researcher used Purposive Sampling. Amin N.F et al., (2023) explain that Purposive Sampling is a technique for selecting samples based on specific criteria. The selection of the classes was carried out by administering a pre-test beforehand. The class that obtained a higher score was designated as the control group, whereas the class that received a lower score was assigned as the experimental group. The experimental class is the class given treatment, while the control class is the class that is not given treatment. The total sample in this research was 60 students. VIII.1 class with 30 students as the experimental class and VIII.2 class with 30 students as the control class. In this research, there were several steps the researcher took to collect data; pre-test, treatment and post-test.

Table 3.1: *One-Group Pretest-Post-test Design*

Class	Pre-test	Treatment	Post-test
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Experimental	O ₁	X	O ₂
Control	O ₁		O ₂

In this study, the investigator used two classes: an experimental class and a control class. For data collection, the author of the study administered a pre-test, treatment, and subsequently a post-test to the students. In the experimental class, students utilized the Anki-App as an instructional medium, whereas in the control class, the investigator did not apply the use of the Anki-App. The results from the experimental and control classes were then compared to determine whether the use of the Anki-App significantly impacted the improvement of vocabulary skills among eighth-grade students at MTs Negeri Gowa. The tool employed by the researcher in this study is a vocabulary achievement test. This assessment consisted of 36 visual vocabulary items, which were given to both the experimental and control groups. Visual vocabulary assessment is a form of vocabulary evaluation that utilizes images accompanied by captions in Indonesian below them. The Students were required to translate the given captions into English based on the visual representations provided.

The researcher processed the data by employing the following steps:

1. The researcher determined students' pre-test and post-test scores using the following scoring

method:
$$X = \frac{\text{Student's correct answer}}{\text{Number of items tested}} \times 100$$

(Mills & Gay, 2019)

2. The researcher classified student scores as follows:

Table 3.2: *Classification of Students' Score*

No	Score	Classification
1	91 – 100	Excellent
2	81 – 90	Good
3	71– 80	Fairly Good
4	61 – 70	Fairly

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5	≤60	Poor
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(MTs Negeri Gowa)

3. For calculating the percentage of students, the researcher employed the subsequent formula:

$$P = \frac{f}{N} \times 100\%$$

Where:

P: Percentages

F: Frequencies

N: Number of students

(Mills & Gay, 2019)

4. In data analysis, if the significance level is less than 0.05, the hypothesis is accepted, indicating a significant difference. Conversely, if the significance level is greater than 0.05, the hypothesis is rejected, indicating no significant difference.

The data analyzed came from the pre-test and post-test scores of the eighth-grade students of MTs Negeri Gowa, who were the subjects of the study. The researcher used the Independent Samples T-test, performed with SPSS for Windows software, to analyze descriptive statistics, test for data normality, and test for data homogeneity.

3) RESULTS AND DISCUSSION

Results

The results obtained from the data analysis serve as the primary foundation for deriving the research findings. The data collection process was conducted through test analysis, which included both a pre-test and a post-test. Students' baseline vocabulary skill was assessed prior to the

intervention using the pre-test, and following the execution of the treatment, their vocabulary proficiency was re-evaluated through the post-test.

The following is the classification of students who scored on the pre-test:

Table 4.1: *The Rate Percentage of Students' Scores of Pre-Test*

No	Classification	Score	Experimental Class		Control Class	
			Frequency	Percentage	Frequency	Percentage
1	Excellent	91 - 100	0	0%	0	0%
2	Good	81 - 90	0	0%	0	0%
3	Fairly Good	71 - 80	1	3%	1	3%
4	Fairly	61 - 70	5	17%	10	33%
5	Poor	0 - 60	24	80%	19	64%
Total			30	100%	30	100%

Based on table 4.1, which presents the frequency and percentage distribution of students' scores in both the control and experimental groups, it is evident that the majority of students in both groups were in the poor category. In the experimental group, which consisted of thirty students, one (3%) as a fairly good, five (17%) as fairly, and twenty-four (80%) as poor. In comparison, the control group one (3%) as fairly good, ten (33%) as fairly scores, and nineteen (64%) as poor. After the treatment, the post-test results showed significant improvement:

Table 4.2: *The Rate Percentage of Students' Scores of Post-Test*

No	Classification	Score	Experimental Class		Control Class	
			Frequency	Percentage	Frequency	Percentage
1	Excellent	91 - 100	15	50%	2	7%
2	Good	81 - 90	10	33%	10	33%
3	Fairly Good	71 - 80	5	17%	10	33%
4	Fairly	61 - 70	0	0%	5	17%
5	Poor	0 - 60	0	0%	3	10%
Total			30	100%	30	100%

Based on table 4.2, which presents the frequency and percentage distribution of students' scores in the experimental and control groups after the treatment. In the experimental group, out of thirty students, fifteen (50%) as excellent, ten (33%) as good, and five students (17%) as fairly good,

indicating a significant improvement in vocabulary skill. On the other hand, in the control group, which also consisted of thirty students, two (7%) as excellent, ten (33%) as good, another ten (33%) as fairly good, five (17%) were fairly.

Table 4.3: *Descriptive Analysis of Pre-test and Post-test of the Two Classes*

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment	30	14	75	43,13	16,226
Post-test Experiment	30	75	100	88,77	8,597
Pre-test Control	30	25	75	52,80	13,720
Post-test Control	30	53	95	75,47	10,830
Valid N (listwise)	30				

Table 4.3 reveals that the mean pre-test score of the experimental group was 43.13, while the control group obtained a mean score of 52.80 from a total of 30 students. This finding suggests that the average score of the experimental group ($43.13 < 52.80$) was lower than that of the control group.

Meanwhile, the students in the control group obtained a post-test mean score of 75.47 with a standard deviation of 10.830, whereas the students in the experimental group achieved a higher post-test mean score of 88.77 with a standard deviation of 8.597. This reveals that the mean score of the experimental group ($88.77 > 75.47$) was higher than that of the control group.

The Levene test was employed to assess homogeneity, and the one-sample Kolmogorov-Smirnov test was utilized to evaluate normality. The results of these tests are presented in the following table:

Table 4.4: *The Normality Test*

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test Experiment	0,082	30	,200 [*]	0,958	30	0,280
Post-test Experiment	0,102	30	,200 [*]	0,976	30	0,702
Pre-test Control	0,141	30	0,132	0,945	30	0,121
Post-test Control	0,143	30	0,119	0,944	30	0,114

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

a. Lilliefors Significance Correction

Antikuta Winandana

As the obtained significance values exceed 0.05, it can be concluded that the residuals are normally distributed ($0.200 > 0.05$), ($0.132 > 0.05$), and ($0.119 > 0.05$).

Table 4.5: *The Homogeneity Test*

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Vocabulary Test Result	Based on Mean	0,291	1	58	0,591
	Based on Median	0,165	1	58	0,686
	Based on Median and with adjusted df	0,165	1	45,473	0,686
	Based on trimmed mean	0,292	1	58	0,591

The results of the homogeneity test indicate that the significance value of 0.591 exceeds the threshold of 0.05, suggesting that the data exhibit equal variance.

Table 4.6: *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	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Vocabulary test Result	Equal variances assumed	0,291	0,591	5,268	58	0,000	13,300	2,525	8,247	18,353
	Equal variances not assumed			5,268	55,160	0,000	13,300	2,525	8,241	18,359

The analysis revealed a statistically significant difference in vocabulary mastery between the two groups. The significance value obtained was less than 0.05, specifically <0.00 , indicating that the use of AnkiApp had a substantial positive effect on students' vocabulary acquisition. Consequently, the alternative hypothesis (H_1) is accepted.

Discussion

Based on these results, the null hypothesis (H_0), which states that the use of Anki--App has no significant effect in improving vocabulary skill of the second-grade students at MT's Negeri Gowa, is

rejected. Conversely, the alternative hypothesis (H_1), which posits that the use of Anki-App has a significant effect in improving vocabulary skill of the second-grade students at MTs Negeri Gowa is accepted. The mean difference between the two groups was 13.300 points, with the experimental group obtaining a higher average score than the control group. The standard error of the difference was 2.525, and the 95% confidence interval ranged from 8.247 to 18.353. These findings indicate that the use of AnkiApp had a positive and statistically significant effect on students' vocabulary skill. Therefore, it can be concluded that AnkiApp serves as an effective self-learning medium to enhance vocabulary acquisition among eighth-grade students.

The investigator selected the elementary level of vocabulary, as it was aligned with the students' proficiency who were sampled in this research. At this level, the vocabulary consists of commonly used words that are familiar and relevant to eighth-grade students, especially in the context of recount and narrative texts. The selected words include basic verbs, time expressions, adjectives, and nouns that are frequently found in daily communication and school materials. At present, a variety of instructional media can be employed to facilitate educational activities, in line with the rapid progress of information technology.

This study aligns with several earlier investigations that have demonstrated the effectiveness of AnkiApp and other digital flashcard tools in enhancing students' vocabulary skill. The research executed by Nender et al. (2022), Mujahidah et al. (2024), and Permata Yulsardi & Ratmanida (2021) share similarities with the present research, particularly in terms of the educational level, as all were conducted in junior high school contexts. These studies revealed significant gains in students' post-test scores after the implementation of AnkiApp or similar digital flashcard media. For example, Nender et al. (2022) Observed an increase in average scores from 53 to 90, while Mujahidah et al. (2024) Reported an improvement from 26.6 to 68.4. Likewise, in this study, 50% of students were classified as "excellent" in the post-test following the treatment with AnkiApp. The consistency of these outcomes at the same educational level supports the conclusion that AnkiApp is a powerful tool in helping vocabulary skill among middle school students.

Referring to the findings of this study, the conclusion is that students who received treatment using the AnkiApp to enhance their vocabulary skill achieved significantly higher scores. This study reveals that the AnkiApp is beneficial for EFL learners, as it facilitates more effective vocabulary memorization and supports autonomous learning. Compared to other language learning applications,

AnkiApp offers a unique feature through its spaced repetition system (SRS), which helps learners retain vocabulary more efficiently over time. In line with this, Syamsiar (2023) emphasizes that AnkiApp is a technology-based flashcard application equipped with a spaced repetition feature, specifically designed to enhance students' memorization efficiency. Despite these advantages, this study also found a minor limitation: although most students experienced noticeable improvement, several students still obtained scores within the "fairly good" range (71–80) after the treatment.

4) CONCLUSIONS

Anki-App has been shown to be an efficient and useful learning aid in boosting vocabulary skills among second-grade students at MTs Negeri Gowa. The implementation of this application in the classroom setting contributed significantly to students' vocabulary acquisition. Referring to the findings and interpretation shown in earlier sections, the mean scores of the experimental group serve as strong supporting evidence of its effectiveness. Specifically, the students' average score increased substantially from 43.13 in the pre-test to 88.77 in the post-test. This notable improvement demonstrates that Anki-App, as a digital flashcard-based tool, can effectively facilitate memorization, repetition, and reinforcement of vocabulary items, particularly in an EFL (English as a Foreign Language) context.

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