CHAPTER IV
RESULT AND DISCUSSION

A. Research Finding

1. Location Profile

MI Al Manar is an elementary Islamic school located in Menoro, Sedan District, Rembang Regency, Central Java. This institution operates under the auspices of the Ministry of Religious Affairs. Here is a description and elaboration of MI Al Manar:

Establishment History: MI Al Manar was founded in 1962, which means it has been in existence for several decades. This signifies its long-standing commitment to providing Islamic education and general knowledge to students in the region.

Curriculum Implementation: MI Al Manar currently follows curriculum guidelines. This indicates that the school adheres to the educational standards set by the government, encompassing both general and religious curriculum.

Leadership: MI Al Manar is overseen by an operator named M. Sholihuddin. Strong leadership can contribute to effective and high-quality management of the school.

Accreditation: The school has achieved a grade B accreditation status with a score of 84 in 2018 from the National Accreditation Board for Schools/Madrasahs (BAN-S/M). This is an indication that the school has met the required educational standards and is reliable in providing education to its students.

Facilities: MI Al Manar continually develops its educational facilities over the years. This includes an adequate number of classrooms and facilities such as LCD projectors and a library. These facilities can assist students in their learning.

MI Al Manar plays a crucial role in providing Islamic and general education to children in the Menoro area, Sedan District, Rembang Regency, Central Java. With its long history, good accreditation, and evolving educational

facilities, MI Al Manar contributes to improving the education level in its community.

2. Instrument Validity and Reliability Testing

The validity test is conducted by using Pearson product-moment correlation with the decision-making criteria as follows: a. If the calculated r > the tabulated r, then the questionnaire item is considered valid. b. If the calculated r < the tabulated r, then the questionnaire item is considered not valid.The validity test in this research was conducted on 40 questionnaire items, which will be used for both the pretest and posttest, with 20 items each. The results of the validity test in this research are as follows:

Table 4.1
Instrument Validity Testing

Question Number	Calculated r	Tabulated r	Description
1	0,573	0,361	valid
2	0,373	0,361	valid
3	0,520	0,361	valid
4	0,449	0,361	valid
5	0,509	0,361	valid
6	0,454	0,361	valid
7	0,493	0,361	valid
8	0,536	0,361	valid
9	0,509	0,361	valid

Question Number	Calculated r	Tabulated r	Description
10	0,565	0,361	valid
11	0,528	0,361	valid
12	0,594	0,361	valid
13	0,373	0,361	valid
14	0,462	0,361	valid
15	0,421	0,361	valid
16	0,426	0,361	valid
17	0,375	0,361	valid
18	0,520	0,361	valid
19	0,421	0,361	valid
20	0,415	0,361	valid
21	0,373	0,361	valid
22	0,499	0,361	valid
23	0,493	0,361	valid
24	0,461	0,361	valid

Question Number	Calculated r	Tabulated r	Description
25	0,467	0,361	valid
26	0,366	0,361	valid
27	0,408	0,361	valid
28	0,373	0,361	valid
29	0,501	0,361	valid
30	0,413	0,361	valid
31	0,453	0,361	valid
32	0,461	0,361	valid
33	0,426	0,361	valid
34	0,501	0,361	valid
35	0,492	0,361	valid
36	0,455	0,361	valid
37	0,513	0,361	valid
38	0,425	0,361	valid
39	0,430	0,361	valid

Question Number	Calculated r	Tabulated r	Description
40	0,509	0,361	valid

Based on the provided table, validity testing for each item indicates that the computed R-value exceeds the tabled r-value. This signifies that all the tested items are considered valid.

Reliability testing was conducted by administering the instrument once, followed by an analysis using specific techniques. The analysis results can be employed to predict the instrument's reliability. The decision-making criteria for this assessment involve examining the Cronbach's alpha value, with a threshold set at above 0.6, categorizing the instrument as reliable.[1]

The results of the instrument's reliability test, calculated using SPSS 21, are as shown in the following table:

Table 4.2
Instrument Reliability Testing

Reliability Statistics

Cronbach's Alpha	N of Items
.903	40

Based on the reliability test results above, it can be concluded that all items provided to the participants are reliable.

B. Data Analysis

1. Results of Student Grade Statistical Analysis

a. Pretest Results

The researcher presents the data obtained from the assessment of fifth-grade students before the vocabulary learning session using flashcards. Here is the data obtained:

[1]Ajat Rukajat, *Pendekatan Penelitian Kuantitatif*, (Yogyakarta: Budi Utama, 2018), 9.

Table 4.3
Pretest Evaluation Results

Pretest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	45	2	6.7	6.7	6.7
	50	5	16.7	16.7	23.3
	55	6	20.0	20.0	43.3
	60	5	16.7	16.7	60.0
	65	4	13.3	13.3	73.3
	70	5	16.7	16.7	90.0
	75	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

The data above indicates that there are 2 students who scored 45, 5 students who scored 50, 6 students who scored 55, 5 students who scored 60, 4 students who scored 65, 5 students who scored 70, and 3 students who scored 75. The average score for the students is 60.17, with the majority of students scoring 55. The highest score achieved by a student is 75, and the lowest is 45.

b. Posttest Results

The researcher presents the data obtained from the assessment of fifth-grade students after the vocabulary learning session using flashcards. Here is the data obtained:

Table 4.4
Posttest Evaluation Results

Posttest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	1	3.3	3.3	3.3
	65	3	10.0	10.0	13.3
	70	4	13.3	13.3	26.7
	75	7	23.3	23.3	50.0
	80	5	16.7	16.7	66.7
	85	6	20.0	20.0	86.7
	90	3	10.0	10.0	96.7
	95	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

The data above indicates that there is 1 student who scored 60, 3 students who scored 65, 4 students who scored 70, 7 students who scored 75, 5 students who scored 80, 6 students who scored 85, 3 students who scored 90, and 1 student who scored 95. The average score for the students is 77.83, with the majority of students scoring 75. The highest score achieved by a student is 95, and the lowest is 60.

2. Classical Assumption Tests

a. Normality Test Results

The normality test is conducted to assess the distribution of residuals from the regression analysis. Data is considered satisfactory if the residuals from the regression analysis follow a normal distribution. Data follows a normal distribution when the Sig. value from the normality test is greater than or equal to 0.05. There are two types of normality tests that can be chosen: Kolmogorov-Smirnov and Shapiro-Wilk.[2] The

[2] Joko Subando, *Teknik Analisis Data Kuantitatif Teori dan Aplikasi dengan SPSS*, (Klaten: Lakeisha, 2021), 28.

normality test was conducted using SPSS 21 for Windows, and the output is as follows:

Table 4.5
Normality Tests Results

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Faktor	Statistic	df	Sig.	Statistic	df	Sig.
Nilai	Pretest	.149	30	.086	.939	30	.086
	Posttest	.129	30	.200*	.966	30	.435

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

a. Lilliefors Significance Correction

Based on the results of the normality test, the Kolmogorov-Smirnov significance value for the pretest scores is 0.086, which is greater than 0.05, indicating that the pretest scores follow a normal distribution. Similarly, the Kolmogorov-Smirnov significance value for the posttest scores is 0.200, also greater than 0.05, indicating that the posttest scores follow a normal distribution. Therefore, it can be concluded that both the pretest and posttest data have passed the normality test.

b. Homogeneity Test Results

Homogeneity test is conducted to analyze whether two variables have the same variance. If they have the same variance, then comparison can be performed; however, if they have different variances, comparison cannot be conducted.[3] Homogeneity testing was conducted using SPSS 21 for Windows, resulting in the following output:

[3]Joko Subando, *Teknik Analisis Data Kuantitatif Teori dan Aplikasi dengan SPSS*, 36.

Table 4.6
Homogeneity Test Results

Test of Homogeneity of Variances

Nilai

Levene Statistic	df1	df2	Sig.
.089	1	58	.767

Based on the homogeneity test results using SPSS 21, the homogeneity significance value is 0.89. This value is greater than 0.05, indicating that there is no significant difference between the pretest and posttest scores. This suggests that both groups are homogeneous or have the same variance.

3. Hypothesis Testing Results

After conducting preliminary tests for normality and homogeneity, hypothesis testing can be initiated. The hypothesis test employed in this study is a parametric statistical analysis known as the Independent T-test, utilized to ascertain the significance of the disparity between pretest and posttest scores. The independent sample t-test is employed to determine whether there exists a distinction in the means of two independent and unpaired samples. Below are the findings of the examination:

Table 4.7
Statistical of Pretest-Posttest Comparison

Group Statistics

	Faktor	N	Mean	Std. Deviation	Std. Error Mean
Nilai	Pretest	30	60.17	9.048	1.652
	Posttest	30	77.83	8.678	1.584

Table 4.8
Independent Sample T-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
Nilai	Equal variances assumed	.089	.767	-7.718	58	.000	-17.867	2.269	-22.249	-13.085
	Equal variances not assumed			-7.718	57.999	.000	-17.867	2.269	-22.249	-13.085

Based on the data above, it is evident that the mean pretest score is 60.17, while the mean posttest score is 77.87. This indicates a mean difference of -17.66. This signifies that the average score for fifth-grade students at MI Al-Manar Sedan increased by 17.66 points after implementing vocabulary learning using flashcards. To ascertain the significance of this change, we examine the significance level (sig) in the table above, which is found to be 0.000. This value suggests that vocabulary learning with flashcards has been proven to significantly improve students' vocabulary.

C. Discuccion

Teaching vocabulary, using the innovative method of flashcards, was meticulously carried out with fifth-grade students at MI Al-Manar Sedan. Situated in the serene Menoro area, within the Sedan District of Rembang Regency, Central Java, MI Al-Manar is a well-established elementary Islamic school that serves as the backdrop for this educational endeavor.

The teaching venture spanned a duration of one month, encompassing a total of five comprehensive sessions. The inaugural meeting, the first of these five, was dedicated to a critical initial task. During this session, a pretest was thoughtfully administered to the students. This pretest served as a diagnostic tool, meticulously designed to gauge the students' baseline vocabulary proficiency before any teaching intervention took place.

Upon the collection and analysis of the pretest data, the subsequent session, the second in our series, marked the commencement of our innovative vocabulary teaching

approach. This was when the introduction and use of vocabulary learning using flashcards began in earnest. These flashcards, creatively designed, served as valuable pedagogical tools, providing visual and contextual aids to facilitate the students' vocabulary acquisition.

In sessions three and four, the vocabulary teaching, complete with flashcards, was revisited and reinforced. The aim was to delve deeper into the understanding of the vocabulary words prominently displayed on these flashcards. Repetition and reinforcement are key elements in ensuring the students grasp and retain the new vocabulary they encountered.

Finally, the fifth session, our concluding meeting, was significant for two reasons. Firstly, it marked the culmination of our vocabulary teaching journey. Secondly, it was the occasion for the administration of a posttest. This posttest was carefully designed to evaluate the effectiveness of the vocabulary teaching that had been delivered during the preceding sessions.

The response from the students throughout this instructional journey was overwhelmingly positive. They exhibited enthusiasm, a sense of engagement, and an eagerness to actively participate in the learning process. The classroom atmosphere was vibrant, with students readily embracing the instructional methodology and eagerly following instructions, creating an encouraging and conducive learning environment. This encouraging response from the students underscores the promise and potential of the flashcard-based vocabulary teaching approach in enhancing vocabulary acquisition among fifth-grade students at MI Al-Manar Sedan.

The lesson begins with a greeting, followed by the creation of a relaxed atmosphere through an ice-breaking activity. The teacher then proceeds with the introduction of the lesson content. The teacher instructs the students to find a learning partner. Once the students have paired up, the teacher begins explaining sentences categorized as nouns, adjectives, and verbs.

During this phase, students are required to attentively listen to the teacher's explanations. Following this, the teacher provides worksheets for the students. The teacher plays dialogues and paragraphs for the students to listen to attentively. The teacher guides the students to fill in vocabulary gaps while simultaneously categorizing words into nouns, adjectives, and verbs. The teacher concludes the material that has been taught, and the lesson concludes with an expression of gratitude, typically "hamdalah".

Before administering the pretest and posttest questions to the students, these questions were subject to testing based on the assessment of the instrument, which includes validity and reliability testing. Validity testing aims to ensure that the data used in the assessment yields valid results in alignment with the measurement objectives. Reliability testing aims to determine the consistency of research subjects' responses. Based on the outcomes of both of these tests, it was established that the questions utilized in both the pretest and posttest met the criteria for both assessments. Consequently, the instrument used was deemed suitable for the research purposes.

Prior to the implementation of the vocabulary learning intervention using flashcards, the initial assessment of students' performance revealed a less than desirable scenario. The highest recorded score among the students was a modest 75, while the lowest score dipped to 45, resulting in an overall average of 60.17. These pre-intervention scores indicated a need for improvement in vocabulary proficiency.

However, following the carefully structured vocabulary learning sessions with the integration of flashcards, a significant transformation was observed in the students' performance. Notably, the highest individual score surged to an impressive 95, showcasing substantial progress. The lowest score recorded post-intervention was 60, representing a notable increase from the initial assessment. The average score among students post-intervention rose to 77.83.

This remarkable shift in scores strongly suggests that the vocabulary learning intervention, which harnessed the

educational potential of flashcards, played a pivotal role in enhancing the students' command of vocabulary. It underscores the effectiveness of this pedagogical approach in facilitating vocabulary acquisition and the overall improvement in linguistic competence among the students.

To substantiate the effectiveness of using flashcards as a vocabulary learning tool, hypothesis testing was conducted. However, before hypothesis testing, a data suitability assessment was conducted. The data suitability assessment is vital to ensure that the data used does not introduce bias into the t-test results. Two essential assessments for data suitability are normality and homogeneity testing. The normality test is conducted to evaluate the distribution of residuals from the regression analysis. The Kolmogorov-Smirnov test results revealed that the data used exhibit a normal distribution. The homogeneity test, on the other hand, aims to analyze whether the two variables under examination share the same variance. The homogeneity test results indicated that the data used originate from homogenous variance. These findings collectively affirm the appropriateness of the data for hypothesis testing, assuring that the data's distribution is suitable for conducting a t-test without introducing bias into the results.

The comparison of students' scores before and after the intervention reveals a striking and statistically significant difference. Prior to the implementation of the flashcard-based vocabulary learning intervention, the average pretest score stood at 60.17. This figure reflected the students' baseline level of vocabulary proficiency. However, following the completion of the intervention, the average posttest score notably increased to 77.83.

This marked improvement signifies a substantial boost in the students' vocabulary skills, amounting to an impressive 17.66-point increment. This positive change is not merely anecdotal but is underpinned by robust statistical evidence. The significance level (sig.), calculated to be an exceedingly

low 0.000, underscores the statistical significance of this improvement.

In practical terms, this means that the flashcard-based learning intervention had a tangible and meaningful impact on enhancing the students' vocabulary acquisition. The students, as a result of this targeted pedagogical approach, exhibited substantial growth in their linguistic competence.

Therefore, based on this compelling data and the rigorous statistical analysis, the hypothesis posited, 'the use of flashcards in teaching vocabulary can improve students' vocabulary,' is confidently accepted. The findings provide empirical support for the efficacy of flashcards as an instructional tool for enhancing vocabulary skills among students, reinforcing the value of innovative pedagogical approaches in educational contexts.

The findings of the aforementioned study align with research conducted by Nisakhairani and Elise in a study titled 'The Influence of Flashcard Media in Introducing English Vocabulary to Children at Pertiwi Simpang Empat West Pasaman Kindergarten.' In their research, they aimed to assess the impact of E-flashcard media on the introduction of English vocabulary to kindergarten children at Pertiwi Simpang Empat West Pasaman Kindergarten. Their results indicated that the utilization of E-flashcard media led to an improvement in English vocabulary among the children. Upon close examination, it was observed that the experimental group, which utilized E-flashcard media as an instructional tool, achieved higher scores compared to the control group, which relied on traditional pictures displayed on the blackboard. This outcome substantiates the notion that innovative teaching methods, such as the incorporation of flashcards, can yield positive outcomes in enhancing vocabulary acquisition among young learners. These parallel findings reinforce the credibility and applicability of flashcard-based approaches in diverse educational settings and underscore their potential to foster effective vocabulary development among students.

The findings indicating the effectiveness of using flashcards in teaching vocabulary for fifth-grade elementary school students can have profound implications in the field of education. Firstly, it suggests that innovative teaching methods, such as incorporating flashcards, can significantly enhance students' language proficiency and vocabulary acquisition. This improvement in linguistic competence is not only beneficial for English language skills but also for overall academic success.

Additionally, the research outcomes can serve as a catalyst for further studies and investigations into optimizing vocabulary instruction techniques. It may inspire educators to explore other creative and interactive methods that cater to diverse learning styles, ensuring that students across various backgrounds and abilities can benefit from such innovations.