CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter explores the effectiveness of google lenson students' vocabulary mastery at SMPN 2 ASEMBAGUS. This chapter explains both the research findings and the discussion itself. Validity Instrument Test, reability Test, The result of pretest, the result of posstest, normality test, homogeneity test, and the result of ANCOVA test in this research finding.

A. Research Finding

1. Reability test

A good test must be reliable. In this study, the researcher used Cronbach Alpha to examine the reliability of the pre-test and post-test scores.

Table 4. 1 Reability of Pretest

Reliability Statistics

Cronbach's Alpha	N of Items
.966	50

The table's reliability test results reveal a high Cronbach's Alpha score of 0.996, which indicates that all valid questions are reliable.

Table 4. 2 Reability of Posttest

Reliability Statistics

Cronbach's Alpha	N of Items
.945	50

The table above shows a Cronbach's Alpha score of 0.945, which suggests a high level of reliability. This means that each question in the test is reliable and consistently measures what it is meant to measure.

2. The Result of Pretest

Before giving the treatment the researcher conducted a pre-test. The researcher utilized a pre-test to assess the experimental and control classes' reading comprehension. This research was carried out by the investigator in the 7A and 7B classes of the seventh grade at SMPN 2 ASEMBAGUS. The table below displays the pre-test result for 25 students from both the experimental and control groups.

Table 4. 3 the pre-test results in the experimental class and control class.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest_Experiment_Class	25	33	48	40.52	4.436
Pretest_Control_Class	25	33	48	40.52	4.436
Valid N (listwise)	25				

Table 4.3 shows that both the experimental and control groups each had 25 students. The table also shows the average pre-test scores. The highest score in the experimental group was 80, while the highest in the control group was 70. The lowest score in the experimental group was 20, and in the control group, it was 10. The mean score for the experimental group was 48.00, and for the control group, it was 33.00. This shows that the students' scores on the test before the experiment were low in both the experimental and control groups. The standard deviation for both groups was 4.436. Based on these results, it can be concluded that students' vocabulary mastery in the pre-test was still low.

3. The Result of Posttest

After the students received the treatment, the researcher gave them a post-test. The objective of the post-test was to assess how well the students had mastered the vocabulary after using the Google Lens App and Dictionary as part of the treatment. Using SPSS, the researcher offers an overview of the post-test outcomes, as shown in Table 4.4.

Table 4. 4 the post-test results in the experimental class and control class.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Posttest_Experiment_Class	25	80	95	87.20	3.786
Posttest_Control_Class	25	63	80	71.00	4.743
Valid N (listwise)	25				

Table 4. 4 displays the post-test average scores. The experimental group's highest score was 95, whereas the control group's highest score was 80. The lowest score in the experimental group was 80, whereas in the control group it was 63. The experimental group had an average score of 87.20, compared to 71.00 for the control group. The experimental group's standard deviation was 3.786, while the control group's was 4.743.

The average scores in the experimental and control classes are different. It can be seen that the average score of experimental class increased after given the treatment using Google Lens.

4. Testing Asumstion

a. Normality test

The first assumption is that the data is normally distributed. The researcher utilized SPSS 25 to do a normality test and evaluate whether the data was normally distributed. If the significance level above 0.05, it indicates that the data is regularly distributed. If the significance level is less than 0.05, the data does not follow a normal distribution. The table below displays the results of normality test.

Table 4. 5 The Result of Normality Test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Class	Statistic	Df	Sig.	Statistic	df	Sig.
Result	Pretest of Experiment Class	.152	25	.140	.933	25	.103
	Posttest of Experiment Class	.159	25	.101	.955	25	.316
	Pretest of Control Class	.152	25	.140	.933	25	.103
	Posttest of Control Class	.176	25	.043	.946	25	.204

a. Lilliefors Significance Correction

The above table shows the pre- and post-test Shapiro Wilk significant values for the experimental and control classes. The pre-test's Shapiro Wilk significant value for experimental class was ,933 ($p > 0.05$), and the result was ,103 ($p > 0.05$) for the control class. The post-test's Shapiro Wilk significant value for the experimental class was 933 ($p > 0.05$), and the result was ,204 ($p > 0.05$) for the control class.

According to these results, due to some data have a significance level of $p>0.05$. The experimental and control class scores followed a normal distribution. This study used a parametric test because the data is normally distributed so used ANCOVA.

b. Homogeneity test

The next assumption is that the variance across groups is the same. The main purpose is to check if the variance is consistent between groups. To find this out, Levene's test is applied to assess the variation

between the experimental group and the control group. When the outcome from the homogeneity of variance test exceeds 0.05, it suggests that the variation is alike in both groups. Conversely, if the outcome is less than 0.05, it signifies that the variation between the groups differs. The results of the Levene test are displayed in Table 4.6 below:

Table 4. 6 The Results of The Levene Test

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Posttest

F	df1	df2	Sig.
1.101	1	48	.299

Based on the table above, The Levene's test using SPSS 25 showed a significant value is .299, which was more than 0.05. It showed that there was homogeneity in the data.

5. The Result of ANCOVA Test

Following the result of normality test, a parametric test will be used, namely ANCOVA. The ANCOVA test was performed to explore the theory and discover if there is a significant difference between the groups of students who used Google Lens and those who used a dictionary. The results are shown in the table below.

Table 4. 7 The Result of ANCOVA Test

Tests of Between-Subjects Effects

Dependent Variable: Posttest

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3762.051[a]	2	1881.026	219.676	.000	.903
Intercept	1431.269	1	1431.269	167.151	.000	.781
Pretest	481.551	1	481.551	56.238	.000	.545
Class	3280.500	1	3280.500	383.113	.000	.891
Error	402.449	47	.8.563			
Total	317005.000	50				
Corrected Total	4164.500	49				

a. R Squared = .903 (Adjusted R Squared = .899)

H□ is rejected, while H_a is approved due to a class significance value of 0.000, which is less than 0.05. This suggests there is significant distinction between students who learnt using Google Lens and those who were taught using a dictionary. Therefore, it can be concluded that Google Lens is effective as a tool for mastering vocabulary.

B. Discussion

This study looked into effectiveness of Google Lens works for helping students improve their vocabulary skills at SMPN 2 Asembagus. The research used a quasi-experimental design with two sets of 7th-grade students: one group learned with Google Lens and the other group used a regular dictionary. The results from the pre-test indicated that both groups had similar vocabulary skills, but after the treatment, a notable difference appeared in the post-test. The

experimental group, which used Google Lens, obtained a much higher average score of 87.20 than the control group's average of 71.00. The statistical analysis confirmed that this difference was statistically significant. The study concluded that using Google Lens is an effective and more practical way to improve students' vocabulary mastery compared to using a dictionary.

The pre-test's Shapiro Wilk significant value for experimental class was ,933 ($p > 0.05$), and the result was ,103 ($p > 0.05$) for the control class. The post-test's Shapiro Wilk significant value for the experimental class was 933 ($p > 0.05$), and the result was ,204 ($p > 0.05$) for the control class.

According to these results, due to some data have a significance level of $p>0.05$. It may be determined that the findings from the experimental and control groups were regularly distributed. This research employed a parametric test, as the information follows a normal distribution, thus ANCOVA was utilized.

The ANCOVA results show a class significance value of 0.000, which is less than 0.05. This means the null hypothesis is reject and accept the alternative hypothesis. In other words, there is a significant difference between students who used Google Lens and those who did not. It can be concluded that Google Lens is an effective tool for language acquisition. In addition, this study validates the conclusions of the researchers' earlier research.

The first previous research is the study "Expanding English vocabulary using Google Lens: Insights from a real-time translation" by (Rahmawati et al., 2024). This study investigated how well Google Lens real-time translation features could improve students' learning of English vocabulary. When compared

to conventional learning approaches, Google Lens was found to dramatically increase vocabulary retention and comprehension.

The second is the study "The impact of the application of probing prompting assisted by Google lens on student critical thinking on the concept of" is the fourth prior study by (Yusfiana, 2024). The purpose of this study is to ascertain how students' critical thinking abilities regarding biodiversity content are affected when probing prompting-based learning is implemented with the aid of Google Lens media. The findings demonstrated that students' critical thinking abilities had improved, with an average pretest score of 47 increasing to 81 on the posttest following instruction.