

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

4.1 Data

This study aimed to find out the effect of applying contextual teaching and learning (CTL) approach on students' vocabulary mastery. Data were obtained from test results of eight grade students in SMP Swasta Pelita, Medan. Data were obtained from the results of pre-test and post-test in the control and experimental classes. This section describes the obtained data about the improvement of students' vocabulary mastery scores before and after taught by using contextual teaching and learning approach.

The presented data consisted of mean, average, validity, reliability, homogeneity and hypothesis testing. The results of the test were used to obtain accurate evidence of the effect of applying contextual teaching and learning approach on students' vocabulary mastery of the eighth-grade students of SMP Swasta Pelita Medan. The results of data analysis based on vocabulary test about noun and adjective. The VIII-B class was taught by using the conventional way with regular teaching using textbook and exercises and the VIII-A class was taught by using the contextual teaching and learning approach on students' vocabulary mastery. Each class consisted of 35 students.

4.1.1 Data of Control Class

The control class was VIII-B class of SMP Swasta Pelita Medan which consisted of 35 students who were taught by using conventional method. The students were taught with regular teaching using textbook and exercises. Data were collected from the results of students' pre-test and post-test scores. The data is shown in table 4.1 below.

Table 4.1.**Students' Pre-Test, Post Test and Gained Scores in Control Class**

NO	Students	Pre-test	Post-test	Gained
1.	ATG	20	60	40
2.	MUB	50	60	10
3.	MRA	50	60	20
4.	MRS	20	50	30
5.	NA	50	60	10
6.	NS	40	60	20
7.	NPD	40	50	10
8.	RA	40	60	20
9.	RS	20	50	40
10.	RIA	50	60	10
11.	RAH	50	60	10
12.	RAY	40	50	10
13.	RAF	40	50	10
14.	RAD	50	60	10
15.	RPS	40	50	30
16.	RF	50	60	10
17.	SA	30	50	20
18.	SS	50	60	10
19.	ST	40	60	20
20.	SN	50	60	10
21.	SNH	40	50	10
22.	SAR	30	60	30
23.	SAH	50	70	20
24.	SMW	50	60	10
25.	SAU	40	60	20
26.	SYA	40	60	20
27.	SYM	40	60	20
28.	SH	50	60	10
29.	T	20	60	40
30.	UKL	30	60	30
31.	WF	40	60	20
32.	WEA	20	50	40
33.	YS	30	70	40
34.	ZP	40	60	20
35.	ZOI	50	60	10
	MEAN	1390	2100	690
	AVERAGE SCORE	39,71	60,00	19,71

The data showed that the scores of 35 students in the VIII-B class. The average score in the pre-test was 39,71 where the lowest score in the pre-test was 20 and the highest score was 50. Meanwhile, the average score in the post-test was 60 where the lowest score was 50 and the highest score was 70. The average score on gained scores was 19,71 with the lowest gained scores was 10 and the highest was 40. It means that the pre-test and post-test scores in the control class were quite significant. In other words, most students still did not master about vocabulary: noun and adjective.

4.1.2 Data of Experimental Class

The experimental class was the VIII-A class of SMP Swasta Pelita Medan. The class consisted of 35 students who were taught by using contextual teaching and learning approach on students' vocabulary mastery. The data of the pre-test scores were collected from which class without contextual teaching and learning approach on students' vocabulary mastery.

The data were collected from the post-test scores with which the class used the contextual teaching and learning approach on students' vocabulary mastery. The data is shown in table 4.2 below:

Table 4.2.

Students' Pre-test, Post-test and Gained Scores in Experimental Class

No	Students	Pre-test	Post-test	Gained
1.	LF	20	90	60
2.	LH	60	90	40
3.	MZ	30	80	50
4.	MAS	30	90	50
5.	MIZ	30	80	50
6.	MNR	60	90	30
7.	MY	50	90	40

8.	MZ	30	80	50
9.	NA	30	80	50
10.	NS	20	90	70
11.	NP	40	80	40
12.	NRL	40	90	50
13.	NZA	60	90	40
14.	NSY	50	80	30
15.	NAK	40	90	50
16.	NUF	40	90	50
17.	NHI	30	80	50
18.	NSA	50	90	50
19.	NAR	20	80	60
20.	NAL	30	80	50
21.	KH	30	90	60
22.	RPK	30	80	50
23.	RR	20	90	60
24.	RF	40	90	50
25.	RY	30	80	50
26.	SB	50	90	50
27.	SR	30	80	50
28.	SP	30	90	60
29.	SKS	30	80	50
30.	PA	40	90	50
31.	WA	40	90	50
32.	WDL	30	80	50
33.	WTC	30	90	50
34.	YA	30	80	50
35.	ZA	40	90	50
	MEAN	1260	3010	1740
	AVERAGE SCORE	36	86	49,7

The table above showed that the scores of 35 students in VIII-A class. The average score in the pre-test was 36, where the lowest score was 20 and the highest was 60. While the average score in the post-test was 86 with the lowest score was 80 and the highest was 100. In the gained score, the average score was 49,7 with the lowest score was 30 and the highest score was 70. It means that the pre-test and post-test scores in the experimental class were highly significant. In other words, most students had mastered vocabulary about content words: nouns and adjectives.

4.2 The Fulfillment of Statistical Assumption

4.2.1 Result of Validity and Reliability

Validity and reliability test can be calculated by using bivariate person product moment correlation formula and the Cronbach alfa value. In the validity, if the value of $r_{count} > r_{table}$ then the data is sufficient, or can be said to be valid. But if $r_{count} < r_{table}$ then the data is not sufficient or not yet valid. If the results show $\alpha > 0.05$ it means that the validity value is sufficient or can be said to be valid but if $\alpha < 0.05$, it means that the validity value is not sufficient or it can be said that it is not valid. The researcher checked the empirical validity using SPSS 26 in pre-test and post-test. In this research, researcher used SPSS 26 to determine the validity and reliability of the tests.

4.2.1.1 Validity

In this study, the researcher used content validity. The type of the vocabulary test used in this research was the gap fill or fill in the blank of vocabulary test to measure students' vocabulary mastery. This content validity was related to content words (Nouns and Adjectives) used in the passage of English textbook. The result of content validity in this study can be showed in the following table:

Table 4.3

The Result of Validity in Pre-Test

No	r_{count}	r_{table}	Interpretation
1.	.415	$\geq 0,334$	Valid
2.	.380	$\geq 0,334$	Valid
3.	.018	$\leq 0,334$	Invalid
4.	.232	$\leq 0,334$	Invalid
5.	.513	$\geq 0,334$	Valid

6.	.422	$\geq 0,334$	Valid
7.	.347	$\geq 0,334$	Valid
8.	.402	$\geq 0,334$	Valid
9.	.497	$\geq 0,334$	Valid
10.	.487	$\geq 0,334$	Valid

Validity test is used to determine a valid test from the results of the data collected. The validity of the test was carried out by using the bivariate person product moment correlation formula with the SPSS. There were 10 gap fill test or fill in the blank question items to test the validity for pre-test. It is said to be valid if $r_{\text{count}} > r_{\text{table}}$ and invalid if $r_{\text{count}} < r_{\text{table}}$. The value of r_{table} was on 5% significance table with 2 tailed test $n = 10$, and r_{table} becomes 0.334. This value was then compared with the value of r_{table} on 5 % significance table with 2 tailed test $n = 10$ and r_{table} can be 0.334. The result of r_{test} showed that $r_{\text{count}} > r_{\text{table}}$, which means it was valid. It means that there were eight valid questions. The result of r_{test} showed that $r_{\text{count}} < r_{\text{table}}$, which means it was invalid. It means there were two invalid questions. In other words, it can be stated that there were eight valid questions and two invalid questions in this research.

Table 4.4

The Result of Validity in Post-Test

No	r_{count}	r_{table}	Interpretation
1.	.423	≥ 0.334	Valid
2.	.420	≥ 0.334	Valid
3.	.423	≥ 0.334	Valid
4.	.359	≥ 0.334	Valid
5.	.677	≥ 0.334	Valid
6.	.459	≥ 0.334	Valid
7.	.460	≥ 0.334	Valid
8.	.320	≥ 0.334	Invalid

9.	.498	≥ 0.334	Valid
10.	.560	≥ 0.334	Valid

The validity of the test was carried out by using bivariate person product moment correlation formula. There were 10 gap fill test or fill in the blank question items to test the validity for post-test. It is said to be valid if $r_{\text{count}} > r_{\text{table}}$ and invalid if $r_{\text{count}} < r_{\text{table}}$. The value of r_{table} was on 5% significance table with 2 tailed test $n = 10$, and r_{table} becomes 0.334. This value was then compared with the value of r_{table} on 5 % significance table with 2 tailed test $n = 10$ and r_{table} can be 0.334. The result of $r_{\text{-test}}$ showed that $r_{\text{count}} > r_{\text{table}}$, which means it was valid. It means that there were nine valid questions. The result of $r_{\text{-test}}$ showed that $r_{\text{-count}} < r_{\text{-table}}$, which means it was invalid. It means there was one invalid question. T-table shows that significant level to the validity of study was $t_{\text{-count}} \geq 0.334$. It can be concluded that the instrument used in the study was valid. The concept to state the data was valid if $r_{\text{-count}} \geq r_{\text{-table}}$ was calculated, then the test instrument in this study was valid.

4.2.1.2 Reliability

In this research, the researcher also used SPSS 26 to determine the reliability of test instruments. The results of the reliability test by using SPSS 26. The data is reliable if the data is higher than cronbach alfa value 0.60. The result of reliability can be seen in the table below:

Table 4.5 Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.647	10

From the data analysis, it can be seen that there was significant result from Cronbach's alpha that must be > 0.60 . The result of reliability data showed that $0.647 > 0.60$. It means that the data was reliable.

4.2.2 Result of Normality and Homogeneity Test

4.2.2.1 The Normality Test

Normality test was done before calculating T-test. This normality was conducted to find out where the data from two classes are normally distributed or not. The researcher used Kolmogorov-Smirnov and Shapiro-Wilk to test for normality. The results of normality by using SPSS 26 can be seen in the table below.

Table 4.6 Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Experimental Class Pre-test	.276	35	.023	.867	35	.014
Experimental Class Post-test	.320	35	.200 [*]	.750	35	.135

Control Class Pre-test	.254	35	.014	.814	35	.097
Control Class Post-test	.390	35	.200*	.702	35	.545

*. This is a lower bound of the true significance

a. Lilliefors Significance Correction

Based on table 4.6 above, the test showed a significant result from Kolmogorov-Smirnova. The pretest in the experimental class was $0.023 > 0.05$ and the post-test in the experimental class was $0.200 > 0.05$. The pre-test for the control class was $0.014 > 0.05$ and the post-test for the control class was $0.014 > 0.05$. In Shapiro-Wilk, the pretest value of the experimental class was $0.867 > 0.05$ the post-test value of the experimental class was $0.750 > 0.05$. The pre-test in the control class was 0.814 and the post-test in the control class was 0.702 . It can be concluded that both experimental and control classes are normally distributed because both classes have a significance value than 0.05 .

4.2.2.2 The Homogeneity Test

After doing the normality test, the researcher conducted a homogeneity test to find out the results of the two classes. The researcher used the Levena statistic test to calculate the homogeneity test. The results of homogeneity by using SPSS 26 could be seen in the table below:

Table 4.7
The Result of Homogeneity Variances Test

Homogeneity Test of Variances					
		Levene Statistic	df1	df2	Sig.
	Based on Mean	7.466	1	68	.08
	Based on Median	4.057	1	68	.048
	Based on Median and with adjusted df	4.057	1	59.815	.048
	Based on trimmed mean	6.791	1	68	.011

The results of the homogeneity in table 4.6 showed the significant value based on the mean of pre-test in the experimental class with a significance of $0.08 > 0.05$. Based on the median of post-test in the experimental class $0.048 > 0.05$, and based on the mean of pre-test in the control class $0.048 > 0.05$ and based on the median of post-test in the control class was $0.011 > 0.05$. It means that the data of pre-test and post-test in the control and experimental classes could be said homogeneous because they were greater than 0.05.

4.3 Hypothesis Testing

After calculating the normality and homogeneity of the test, the researcher conducted a hypothesis test to check whether there was a significant difference between the results of the pre-test and the post-test after treatment. SPSS 26 software used in this test. Data calculation was come from the experimental class and control class. Then it was seen from the significant results or alpha of 5% or 0.05. The results of the T-test can be seen in the table below:

Table 4.8
T- Test Result of Pre-Test and Post-Test

Group Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Post-Test	Experimental Class	86.00	35	6.945	1.174
	Control class	58.00	35	5.314	.898
Pre-Test	Experimental Class	39.71	35	10.428	1.763
	Control class	36.00	35	11.167	1.888

Table 4.9
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' Score	Equal variances assumed	7.466	.008	18.943	68	.000	28.000	1.54485	25.050	30.950
	Equal variances not assumed			18.943	63.646	.000	28.000	1.54485	25.047	30.953

From the table 4.8 showed that the average value of the experimental class was 86.00 and, in the control, class the average value was 58.00. From this data, it can be said that there was a significant difference between post-test in the experiment class and post-test in the control

class. The results of the T-test in table 4.9 Independent Samples Test showed that the t_{count} was 18,943 with a Sig (2-tailed) 0.000. Then the t_{table} was combined into the t-count to find out whether the contextual teaching and learning approach had a significant influence on students' vocabulary mastery or not. t_{table} showed (n-1) which means (35-1=34) which was 1,691. T_{table} showed 1,691 the significant level of 0.05. The hypothesis showed that $t_{\text{count}} (18,943) > t_{\text{table}} (1,691)$ and the value of sig. (2-tailed) $0.000 < 0.05$. According to the results obtained, it can be concluded that the nul hypothesis (H_0) was rejected and the alternative hypotheses (H_a) was accepted. It means that there was a significant influence of contextual teaching and learning approach on students' vocabulary mastery.

4.4 Research Findings

The findings were obtained from the result of study directed to the two classes separately. There were two parameters to determine the different findings from both classes (control and experimental). Firstly, both classes were determined from their significant differences between the scores of the students in pre-test and post-test of control and experimental class. Secondly, both classes were also determined from their meaningful differences in treatment. The mean score of pre-tests for control class was 39,71 and for post-test was 60,00. The mean score of pre-tests for experimental class was 36,00 and for post-test was 86,00. The mean score showed that the contextual teaching and learning approach had significant effected on students' vocabulary mastery.

4.5 Discussion

From the data that had been analyzed, the purpose of this research was to find out the effect of applying contextual teaching and learning approach on students' vocabulary mastery of eight grade students in SMP Swasta Pelita Medan in academic year 2023/2024. In the process of

learning is to find some unknown and known meaning of content words: noun and adjective. There are actually many approaches that can be applied by the teachers in the classroom. Teachers should be choose the right learning approach that can make students understand the material presented and taught. One of the approaches can be used to increase students' vocabulary mastery is the contextual teaching and learning approach. By using this approach in classroom, students became more easily to find out and remember unknown meaning of vocabulary: noun and adjective.

The result of statistical data showed that the post-test score of the experimental class by using the contextual teaching and learning approach showed an average value of 86,00, while the post-test score of control class with the conventional method showed an average value of 58,00. It means that there was a difference score between the students were taught by using contextual teaching and learning approach and the students were taught by using conventional method on students' vocabulary mastery. It can be concluded that the students' vocabulary mastery teacher were taught by applying contextual teaching and learning was better than those who were taught by using conventional method. The data analysis, moreover, showed that *sig. 2-tailed* (p) < α ; $0.002 < 0.05$. It means that null hypothesis (H_0) was rejected and alternative hypothesis (H_a) was accepted. Therefore, the data showed that contextual teaching and learning had the positive effect on the students' vocabulary mastery. In short, this study showed that the application of contextual teaching and learning approach could increase students' vocabulary mastery at the eighth-grade students of SMP Swasta Pelita Medan.

There are several reasons why the contextual teaching and learning approach could improve the students' vocabulary mastery of eighth-grade students of SMP Swasta Pelita,

Medan. Firstly, the contextual teaching and learning approach encouraged students to become more active and independently discover the material. In addition, students were able to make connections between material, which assisted them in practicing the material they learned during daily activities. Second, according to Burhanuddin (2011:21), the contextual teaching and learning approach can be applied in all curricula, subjects, and class levels. In this study, contextual teaching and learning approach could be implemented in at eighth-grade students at vocabulary lesson. In addition, Kasihani (2002:57) explained that contextual teaching and learning approach is a draft of teaching and learning that can help teachers connect the lesson to the real world and motivates students to connect their learning experiences to their daily activities as family and community members. The result of the study verified the statement that contextual teaching and learning was an effective approach for teaching English vocabulary because it provided students with tangible examples or concrete thing that can be seen. It was proved by the calculation result of alternative hypotheses stated that teaching vocabulary using contextual teaching and learning approach could give positive effect on vocabulary mastery at the eighth-grade students of SMP Swasta Pelita Medan

In addition, it is also supported by Beres and Ericson (2001:98) stated that contextual teaching and learning approach can help teachers relate subject matter content to real world situations; and motivates students to make connections between knowledge and its applications to their lives as family members, citizens, and workers and engage in the work that learning requires.” Based on the explanation above, it can be seen that there was a significant influence of using contextual teaching and learning approach to increase students’ vocabulary mastery: It improved students’ vocabulary mastery; it helped students to remember vocabulary; and it helped students quickly find the meaning of unknown vocabulary based on surrounding context.

