

CHAPTER IV

THE RESULT OF STUDY

This chapter described the obtained data of the students' vocabulary score after and before taught by using word wall technique. The presented data consisted of mean, standard deviation, standard error and analysis of hypothesis.

A. Description of the Data

1. The result of Pre-test Score

a. The result of Pre-test Score of Experiment Class

The students' pre-test score of experiment class were distributed in the following table (see appendix 5) in order to analyze the students' knowledge before conducting the treatment. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 21 (see appendix 7).

The distribution of students' pre-test score can also be seen in the following figure.

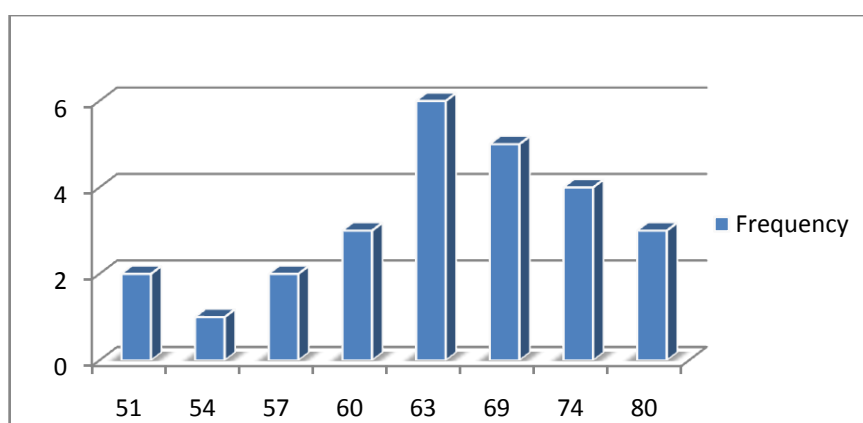


Figure 4.1

Histogram of Frequency Distribution of Experimental Pre-Test Score

It can be seen from the figure above, the students' pretest score in experimental class. There were two students who got score 51. There were one students who got score 54. There were two students who got score 57. There were three students who got score 60. There were six students who got score 63. There were five students who got score 69. There were four students who got score 74 and there were three students who got score 80.

The next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 21 program and manual calculation as follows:

Table 4.1 the Calculation of Mean, SD and SE using SPSS 21

Statistics		
Experiment		
	Valid	26
	Missing	0
Mean		65,73
Std. Error of Mean		1,656
Std. Deviation		8,444
Minimum		51
Maximum		80

Based on the data above, it was known the highest score was 80 and the lowest score was 51. For the result of manual calculation, it was found that the mean score of pre-test was 65,73, the standard deviation was 8,33 and for the standard error was 1,666 (see appendix 7).

Then, based on the table above, the result calculation using SPSS 21, it was found that the mean of score pre-test was 65,73, the

standard deviation 8,444 and the standard error of mean of the pre-test score was 1,656.

b. The result of Pre-test Score of Control Class

The students' pre-test score of control class were distributed in the following table (see appendix 5) in order to analyze the students' knowledge before post-test. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 21 (see appendix 8).

The distribution of students' pre-test score can also be seen in the following figure.

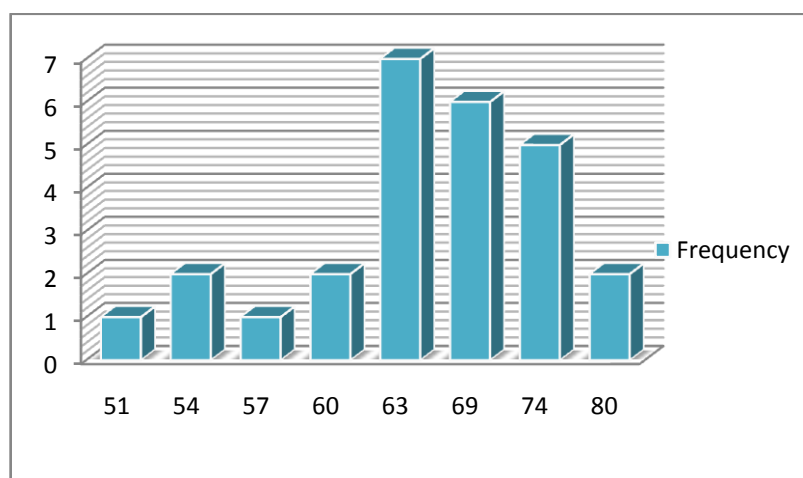


Figure 4.2

Histogram Frequency Distribution of Control Pre-Test Score

It can be seen from the figure above, the students' pre-test score in control class. There were one students who got score 51. There were two students who got score 54. There were one students who got score 57. There were two students who got score 60. There were seven students who got score 63. There were six students who got score 69. There were

five students who got score 74 and there were two students who got score 80.

The next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 21 program and manual calculation as follows:

Table 4.2 the Calculation of Mean, SD and SE using SPSS 21

Statistics		
Control		
	Valid	26
	Missing	0
Mean		66,17
Std. Error of Mean		1,510
Std. Deviation		7,698
Minimum		51
Maximum		80

Based on the data above, it was known the lowest score was 51 and the highest score was 80. For the result of manual calculation, it was found that the mean score of pre-test was 66,19, the standard deviation was 7,58 and for the standard error was 1,516 (see appendix 8).

Based on the table above, the result calculation using SPSS 21, it was found that the mean of score pre-test was 66,17, the standard deviation 7,698 and the standard error of mean of the pre-test score was 1,510.

c. Testing Normality and Homogeneity using SPSS 21

1) Testing of Data Normality

It used to know the normality of the data that was going to be analyzed whether both groups have normal distribution or not. Because of that, the normality test used SPSS 21 to measure the normality of the data.

Table 4.3 Test of Normality Distribution Test on the Pre-Test Score of the Experiment and Control Group Using SPSS 21

One-Sample Kolmogorov-Smirnov Test			
		experiment	Control
N		26	26
Normal Parameters ^{a,b}	Mean	65,73	66,17
	Std. Deviation	8,444	7,698
Most Extreme Differences	Absolute	,170	,165
	Positive	,170	,165
	Negative	-,114	-,124
Kolmogorov-Smirnov Z		,865	,840
Asymp. Sig. (2-tailed)		,443	,481

a. Test distribution is Normal.

Description:

If respondent > 50 used Kolmogorov-Sminornov

If respondent < 50 used Saphiro-Wilk

The criteria of the normality test pre-test was if the value of (probability value/critical value) was higher than or equal to the level of significance alpha defined ($r > a$), it meant that the distribution was normal. Based on the calculation using SPSS 21 above, the value of (probably value/critical value) from pre-test of the experiment and control class in Kolmogorov-Smirnov table was higher than level of significance alpha used or $r = 0,443 > 0,05$ (Experiment) and $r = 0,481 > 0,05$ (Control). So, the distributions

were normal. It meant the students' score of pre-test had normal distribution.

2) Testing of Data Homogeneity

**Table 4.4 Homogeneity Test
Test of Homogeneity of Variances**

Vocabulary Score			
Levene Statistic	df1	df2	Sig.
1,481	5	18	,245

The criteria of the homogeneity pre-test was if the value of (probability value/critical value) was higher than or equal to the level significance alpha defined ($r > a$), it meant the distribution was homogeneity. Based on the calculation using SPSS 21 program above, the value of (probably value/critical value) from pre-test of experiment and control class on homogeneity of variance in sig column was known that p-value was 0,245. The data in this study fulfilled homogeneity since the p-value was higher or $r = 0,245 > 0,05$.

2. The Result of Post-test Score

a. The Result of Post-test of Experiment Class

The students' post-test score of experiment class were distributed in the following table (see appendix 5) in order to analyze the students' knowledge after conducting the treatment. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 21 (see appendix 7).

The distribution of students' pre-test score can also be seen in the following figure.

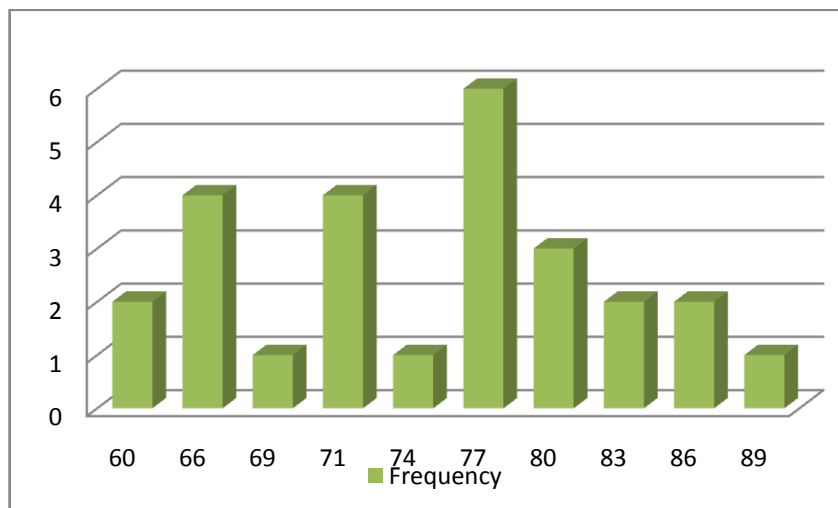


Figure 4.4

Histogram of Frequency Distribution of Experimental Post-Test Score

It can be seen from the figure above, the students' pre-test score in experimental class. There were two students who got score 60. There were four students who got score 66. There were one students who got score 69. There were four students who got score 71. There were one students who got score 74. There were six students who got score 77. There were three students who got score 80. There were two students who got score 83. There were two students who got score 86 and there were one student who got score was 89.

The next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 21 program and manual calculation as follows:

Table 4.5 the Calculation of Mean, SD and SE using SPSS 21

Statistics		
Experiment		
	Valid	26
	Missing	0
Mean		74,60
Std. Error of Mean		1,532
Std. Deviation		7,811
Minimum		60
Maximum		89

Based on the data above, it was known the lowest score was 60 and the highest score was 89. For the result of manual calculation, it was found that the mean score of post-test was 74,62, the standard deviation was 7,69 and for the standard error was 1,538 (see appendix 7).

Then, based on the table above, the result calculation using SPSS 21, it was found that the mean of score post-test of the experiment class was 74,60, the standard deviation 7,811 and the standard error of mean of the post-test score was 1,532.

b. The result of Post-test Score of Control Class

The students' post-test score of control class were distributed in the following table (see appendix 5) in order to analyze the students' knowledge after pre-test. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 21 (see appendix 8).

The distribution of students' post-test score can also be seen in the following figure.

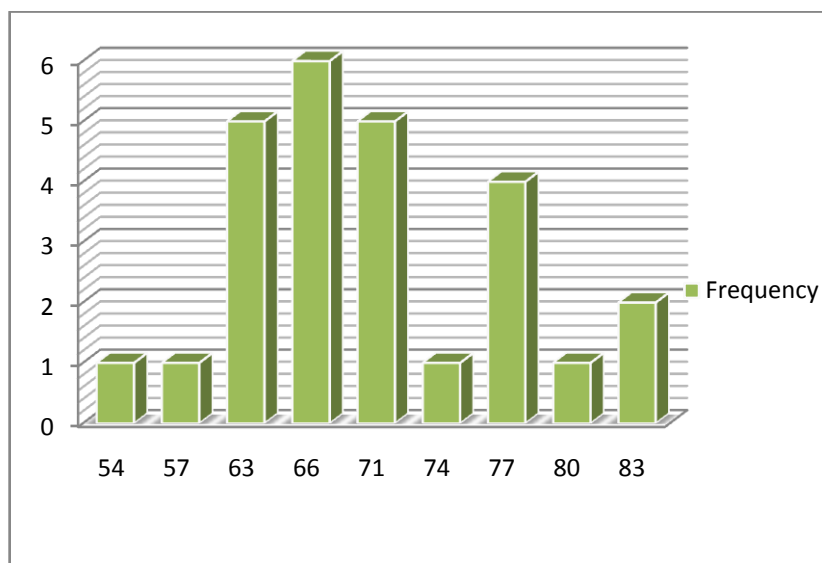


Figure 4.5

Histogram of Frequency Distribution of Control Post-Test Score

It can be seen from the figure above, the students' pos-test score in control class. There were one students who got score 54. There were one students who got score 57. There were five students who got score 63. There were six students who got score 66. There were five students who got score 71. There were one students who got score 74. There were four students who got score 77. There were one students who got score 80 and there were one students who got score 83.

Next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 21 program and manual calculation as follows:

Table 4.6 the Calculation of Mean, SD and SE using SPSS 21

Statistics		
Control		
	Valid	26
	Missing	0
Mean		69,45

Std. Error of Mean	1,484
Std. Deviation	7,565
Minimum	54
Maximum	83

Based on the data above, it was known the lowest score was 54 and the highest score was 83. For the result of manual calculation, it was found that the mean score of post-test was 69,42, the standard deviation was 7,37 and for the standard error was 1,474 (see appendix 8).

Based on the table above, the result calculation using SPSS 21, it was found that the mean of score post-test was 69,45, the standard deviation 7,565 and the standard error of mean of the post-test score was 1,484.

c. Testing Normality and Homogeneity using SPSS 21

1) Testing of Data Normality

It was used to know the normality of the data that was going to be analyzed whether both groups have normal distribution or not. Because of that, the normality test used SPSS 21 to measure the normality of the data.

Table 4.7 Test of Normality distribution test of Post-Test score of the Experiment and Control group using SPSS 21

One-Sample Kolmogorov-Smirnov Test

		experiment	control
N		26	26
Normal Parameters ^{a,b}	Mean	74,60	69,45
	Std. Deviation	7,811	7,565
Most Extreme Differences	Absolute	,164	,190
	Positive	,104	,190

	Negative	-,164	-,117
Kolmogorov-Smirnov Z		,835	,968
Asymp. Sig. (2-tailed)		,488	,306

a. Test distribution is Normal.

Description:

If respondent > 50 used Kolmogorov-Sminornov

If respondent < 50 used Saphiro-Wilk

The criteria of the normality test post-test was if the value of (probability value/critical value) was higher than or equal to the level of significance alpha defined ($r > a$), it meant that the distribution was normal. Based on the calculation using SPSS 21 above, the value of (probably value/critical value) from post-test of the experiment and control class in Kolmogorov-Smirnov table was higher than level of significance alpha used or $r = 0,488 > 0,05$ (Experiment) and $r = 0,306 > 0,05$ (Control). So, the distributions were normal. It meant that the students' score of post-test had normal distribution.

2) Testing of Data Homogeneity

Table 4.8 Homogeneity Test

Test of Homogeneity of Variances

Vocabulary Score

Levene Statistic	df1	df2	Sig.
1,427	4	17	,268

The criteria of the homogeneity post-test was if the value of (probability value/critical value) was higher than or equal to the level significance alpha defined ($r > a$), it meant that, the distribution was

homogeneity. Based on the calculation using SPSS 21 program above, the value of (probably value/critical value) from post-test of experiment and control class on homogeneity of variance in sig column was known that p-value was 0,268. The data in this study fulfilled homogeneity since the p-value was higher or $r = 0,268 > 0,05$.

B. Result of Data Analysis

1. Testing Hypothesis using t_{test} Manual Calculation

The level of significance used 5%. It meant that the level of significance of the refusal null hypothesis in 5%. The level of significance decided at 5% due to the hypothesis type stated on non-directional (two-tailed test). It meant that the hypothesis cannot directly the prediction of alternative hypothesis. To test the hypothesis of the study used t-test statistical calculation. First, it calculated the standard deviation and the standard error of X1 and X2. It was found the standard deviation and the standard error of post-test of X1 and X2 at the previous data presentation. It could be seen in this following table:

Table 4.9 the standard Deviation and Standard Error of X1 and X2

Variable	The Standard Deviation	The Standard Error
X1	7,69	1,54
X2	7,37	1,47

Where:

X1: Experiment

X2: Control

The table showed the result of the standard deviation calculation of X1 was 7,69 and the result of the standard error was 1,54. The result of the standard deviation calculation of X2 was 7,37 and the result of the standard error was 1,47.

The next step, the result calculated the standard error of the differences mean between X1 and X2 as follows:

Standard error of mean of score between Variable I and Variable

II

$$SE_{M1} - SE_{M2} = \sqrt{(SE_{M1})^2 + (SE_{M2})^2}$$

$$SE_{M1} - SE_{M2} = \sqrt{(1,54)^2 + (1,47)^2}$$

$$SE_{M1} - SE_{M2} = \sqrt{2,3716 + 2,1609}$$

$$SE_{M1} - SE_{M2} = \sqrt{4,5325}$$

$$SE_{M1} - SE_{M2} = 2,12896$$

$$SE_{M1} - SE_{M2} = 2,13$$

The calculation above showed the standard error of the difference mean between X1 and X2 was 2,129. Then, it inserted to the formula to get the value of t_{observed} as follows:

$$T_o = \frac{M1 - M2}{SE_{M1} - SE_{M2}}$$

$$T_o = \frac{74,62 - 69,42}{2,13}$$

$$T_o = \frac{5,2}{2,13}$$

$$T_o = 2,4413146$$

$$T_o = 2,441$$

Which the criteria:

If t-test (t-observed) \geq t-table, H_a was accepted and H_0 was rejected

If t-test (t-observed) \leq t-table, H_a was rejected and H_0 was accepted

Then, the degree of freedom (df) accounted with the formula:

$$Df = (N1 + N2 - 2)$$

$$= (26+26) - 2$$

$$= 50$$

The significant levels choose at 5%, it meant the significant level of refusal of null hypothesis at 5%. The significance level decided at 5% to the hypothesis stated on non-directional (two-tailed test). It meant that the hypothesis cannot direct the prediction of alternative hypothesis. The calculation above showed the result of t_{test} calculation as in the table follows:

Table 4.10 the Result of t_{test} Manual Calculation

Variable	$T_{observed}$	T_{table}		Df/db
		5%	1%	
X1-X2	2,441	2,01	2,68	50

Where:

X1 : Experiment Class

X2 : Control Class

$T_{observed}$: The calculated Value

T_{table} : The Distribution of t value

Df/db : Degree of freedom

Based on the result of hypothesis test calculation, it was found that the value of t_{observed} was greater than the value of t_{table} at the level significance in 5% or $t_{\text{observed}} > t_{\text{table}}$ ($2,441 > 2,01$). It meant H_a was accepted and H_0 was rejected.

It could be interpreted based on the result of calculation that H_a stating that there was effect of word wall technique on vocabulary mastery at eight graders of MTs Darul Amin Palangka Raya was accepted and H_0 stating that there was no effect of word wall technique on vocabulary mastery at eight graders of MTs Darul Amin Palangka Raya was rejected. It meant that teaching vocabulary by using Word Wall technique there was effect toward students' vocabulary.

2. Testing Hypothesis Using SPSS 21 Program

The result of the t-test using SPSS 21 program was used to support the manual calculation of the t-test. It could be seen as follows:

Table 4.11 the Standard Deviation and the Standard Error of X1 and X2 using SPSS 21

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	X1	26	74,60	7,811	1,532
	X2	26	69,45	7,565	1,484

The table showed the result of the standard deviation calculation of X1 was 7,811 and the result of the standard error of mean calculation was 1,532. The result of the standard deviation calculation X2 was 7,565 and the result of the standard error of mean was 1,484.

Table 4.12 the calculation of T-test using SPSS 21

		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
Score	Equal variances assumed	,007	,932	2,419	50	,019	5,158	2,133	,874	9,441
	Equal variances not assumed			2,419	49,949	,019	5,158	2,133	,874	9,441

The table showed the result of t-test calculation using SPSS 21 program. Since the result of post-test between experiment and control group had difference score levene's test for equality of variance, the value of sig was greater than 0,05. So, both of group were homogeny. It meant the t-test calculation used at the equal variance assumed. It found that the value of sig (two-tailed) was 0,019 and the result of t_{observed} was 2,419. The result of mean difference between experimental and control class was 5,158 and the standard error difference between experimental and control class was 2,133.

3. Interpretation

To examine the truth of the false of null hypothesis stating that the students taught vocabulary by word wall technique, the result of sig (two-tailed) was lower than 0,05 or $0,019 < 0,05$, so H_a was accepted and

H_0 was rejected. The result of t-test was interpreted on the result of degree freedom to get the t_{table} . The result of the degree of freedom (df) was 50, it found from total number of the students in both group minus 2. The following table was the result of $t_{observed}$ and t_{table} from df at 5% level.

Table 4.13 the Result t_{test} using SPSS 21

Variable	$T_{observed}$	T_{table}		Df/db
		5%	1%	
X1-X2	2,419	2,01	2,68	50

The result of the t_{test} used SPSS 21 program. It was found the $t_{observed}$ was greater than the t_{table} at 5% significance level or $2,419 > 2,01$. It meant that H_a was accepted and H_0 was rejected. The value of mean of the experiment class (print out group descriptive) was 74,60 higher than the value of mean of the control class 69,45. So, score of experiment was greater than score of control class.

It could be interpreted based on the result of calculation that H_a there was effect of Word Wall technique on vocabulary mastery at eight graders of MTs Darul Amin Palangka Raya and H_0 stating that there was no effect of Word Wall technique on vocabulary mastery at eight graders of MTs Darul Amin Palangka Raya score was rejected.

C. Discussion

The result of data analysis showed that there was effect of using word wall technique toward the students' vocabulary mastery at the eight graders of MTs Darul Amin Palangka Raya. It can be seen from the mean

score between pre-test (65,73) and post-test (74,60) of the experiment class. It indicated that the students' score increased after conducting the treatment.

In teaching learning process, taught vocabulary by using word wall technique used by the writer to teach the students. Word wall technique could make an interaction between teacher and students. In the treatment, the students got explanation about teaching learning activity. First, the teacher was explained word wall and showed it to the students. Second, the teacher used color in word wall to different between noun and adjective. Third, the teacher wrote some word based on the material and put the word to the word wall based on alphabet. Then, Students and teacher translated the text based vocabulary that has given. After translating the text students and teacher were reviewed the vocabulary by game. It did step by step so that the students can remind the vocabulary. The last, the teacher reviewed the vocabulary that had given in previous meeting.

Technique was ability, strategy or method did by teacher in learning activity to get the good result. Technique was implementation that happened in learning activity.⁷⁴ It meant the technique help the students accepted material easier. In the word wall technique the students not only listened but also participated in learning activity, such as play the game and discussion.

Then, word wall were absolutely essential in classroom, because teacher and students worked together.⁷⁵ It meant the word wall one of good

⁷⁴ Abdul Majid, *Strategi Pembelajaran Kooperatif*, PT. Remaja Rosdakarya: Bandung, 2013, p. 232.

⁷⁵ Janet Allen, *Words, Words, Words: Teaching Vocabulary in Grades 4-12*, Portland: Stenhouse Publishers, 2006, p. 70.

technique in learning vocabulary because it created good relationship between students to students and students to teacher. Have fun situation for learning activity made students got the material easier in the learning activity, because the students did not feel under pressure.

In learning process word wall was help the students to remember word⁷⁶. Word walls created a positive vocabulary learning to the students through a colorful and creative learning.

Another benefit of word wall was an important tool for helped students learn.⁷⁷ Word wall not only about word on the wall but also word wall a tool for helping the students remind the vocabulary and word wall provided for students that help in learning activity.

Word wall used color to codes the words. In addition, the use of color was also affected and can attract the interest and attention of the students.⁷⁸ The word wall display add color that drawn the attention of the students to the vocabulary. For example, categories of words can be in different color to ease their location on the wall.

Based on the theory above can be concluded word wall was one way to warm up students' interest and increase their motivation in remind vocabulary. Beside, word wall motivated the students. Through word wall as a technique in learning activity, the teacher can motivated the students to learn English in more enjoyable and interesting way. So, the writer helped the

⁷⁶ Trisha Callella, *Making Your Word Wall More Interactive*, Creative Teaching Press, 2001, p. 3.

⁷⁷ *Ibid.*,

⁷⁸ Jennifer Cronsberry, *Word Walls: a Support for Literacy in Secondary School Classrooms*, p. 5.

students to find a good and enjoyable the lesson which was appropriate to the way the students think and the students' age.

Vocabulary was one of language component which have to be mastered by students in learning new language.⁷⁹ When the students did not know the vocabulary, they found some difficulties in learning and understanding the foreign language. When the students did not know the way to increase their vocabulary, they lost their interest in learning foreign language, because they cannot understand the foreign language words.

The data were calculated using t_{test} formula. Manual calculation showed that the t_{observed} was 2,441. The criteria of the test was if $t_{\text{observed}} > t_{\text{table}}$ H_a was received, it meant that there was effect. Then, if $t_{\text{observed}} < t_{\text{table}}$ H_0 was rejected and it meant there was no effect. Then, to know t_{table} , it used formula $Df = N+N-2$, and $N = 26$. So, $Df = 26+26-2 = 50$.

The t_{observed} was consulted with t_{table} which $df = 50$. Significant standard $5\% = 2,01$. So, after comparing the t_{observed} with the t_{table} it was found that the t_{observed} was higher than the value of t_{table} at 5% significance level or $2,441 > 2,01$. From the calculation above, it can be seen that $t_{\text{observed}} > t_{\text{table}}$. It can be concluded that H_a accepted and H_0 was rejected.

Then, the data was calculated using t_{test} SPSS 21, it was found that the value of t_{test} was higher than t_{table} at 5% level of significance $t_{\text{test}} = 2,419 > t_{\text{table}} = 2,01$. This finding indicated that the alternative hypothesis stating that there was effect of word wall technique toward the students' vocabulary score

⁷⁹ Arnold, *Introduction to Applied Linguistics*, New York: Oxford University Press, 2002, p. 40-41.

at the eighth graders of MTs Darul Amin Palangka Raya was accepted. On the contrary, the null hypothesis stated that there was no effect of word wall technique toward the students' vocabulary at the eighth graders of MTs Darul Amin Palangka Raya was rejected.

Problem of the writer when conducting the study in implementation the technique by word wall was about the students which they have not known yet about word wall. So, the writer should introduce the word wall first to them and made students enthusiasm with the word wall.

Next problem when played the game, the writer reviewed the vocabulary with play "Word Picture" and the students interested with the games. They guessed the word based on picture. But, the problem appeared when the writer reviewed the vocabulary with play "Guess the Word", the students did not interest with the game. The students did not interest because they were guessed the word based on the meaning that had given. The game was used based on the kind of game that consisted of the word wall.