CHAPTER IV

RESULT OF THE STUDY

This chapter covered description of the data, test of normality and homogeneity, result of the data analysis and discussion.

A. Description of The Data

In this section, it would be described the obtained data of the students' vocabulary score after and before taught by using CTL. The presented data consisted of Mean, Standard Deviation, Standar Error, and the figure.

1. The Description of Pre-Test Score

The students' score could be distributed by the following table in order to analyze the students' mastery before conducting the treatment.

Table 4.1 The Description Data of Students' Pre-Test Score

Code	Score
C-01	78
C-02	78
C-03	76
C-04	71
C-05	80
C-06	96
C-07	82
C-08	76
C-09	64
C-10	80
C-11	84
C-12	80

C-13	82
C-14	80
C-15	78
C-16	71
C-17	82
C-18	89
C-19	91

Based on the data above, it was known the highest score was 96 and the lowest score was 64. In order to analyzed the students' knowledge before conducting the treatment. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 18 as follows:

Table 4.2 The frequency of score, percent of score, valid percent andcumulative percent calculated using SPSS 18

Pre-Test

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	64	1	5,3	5,3	5,3
	71	2	10,5	10,5	15,8
	76	2	10,5	10,5	26,3
	78	3	15,8	15,8	42,1
	80	4	21,1	21,1	63,2
	82	3	15,8	15,8	78,9
	84	1	5,3	5,3	84,2
	89	1	5,3	5,3	89,5
	91	1	5,3	5,3	94,7
	96	1	5,3	5,3	100,0
	Total	19	100,0	100,0	

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

1) Calculating Mean

$$Mx = \frac{\sum fxi}{n} = \frac{1518}{19} = 79{,}89$$

2) Standard Deviation

$$S = \sqrt{\frac{\sum fx^2}{N}}$$

$$S = \sqrt{\frac{947{,}789}{19}}$$

$$S = \sqrt{49{,}88} = 7{,}063$$

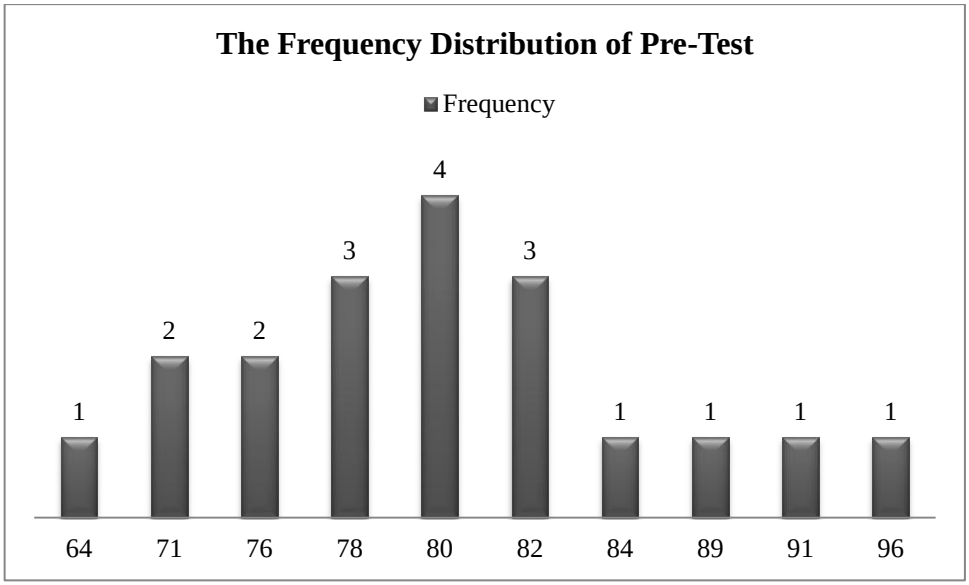
3) Standard Error

$$SE_{md} = \frac{s}{\sqrt{N-1}} = \frac{7{,}063}{\sqrt{19-1}} = \frac{7{,}063}{\sqrt{18}} = \frac{7{,}063}{4{,}24} = 1{,}666$$

Based on the data above from the result of manual calculation, it was found that the mean score of pre-test was 79,89, the standard deviation was 7,063 and for the standard error was 1,666.

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

Figure 4.1 The Distribution of Pre-Test Score



It can be seen from the figure above the students' pre-test score. Therewas one student who got score 64. There were two students who got score 71. There were two students who got score 76. There were three students who got score 78. There were four students who got score 80. There were three students who got score 82. There was one students who got score 84. There was one students who got score 89. There was one students who got score 91. And there was one students who got score 96.

The next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 18 program as follows:

Table 4.3 the Calculation of Mean, SD and SE using SPSS 18

Statistics

N	Valid	19
	Missing	0
Mean		79,89
Std. Error of Mean		1,665
Std. Deviation		7,256
Minimum		64
Maximum		96

Based on the table above, the result calculation using SPSS 18, it was found that the mean of score pre-test was 79,89, the standard deviation 7,256 and the standard error of mean of the pre-test score was 1,665.

2. The Description of Post-Test Score

The students' score could be distributed by the following table in order to analyze the students' mastery after conducting the treatment.

Table 4.4 The Description Data of Students' Post-Test Score

Code	Score
E-01	87
E-02	100
E-03	91
E-04	76
E-05	82
E-06	89
E-07	82
E-08	84
E-09	96
E-10	82
E-11	82

E-12	82
E-13	87
E-14	80
E-15	89
E-16	67
E-17	69
E-18	84
E-19	91

Based on the data above, it was known the highest score was 100 and the lowest score was 67. In order to analyzed the students' knowledge before conducting the treatment. To determine the frequency of score, percent of score, valid percent and cumulative percent calculated using SPSS 18 as follows:

Table 4.5 The frequency of score, percent of score, valid percent andcumulative percent calculated using SPSS 18

Post-Test

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	67	1	5,3	5,3	5,3
	69	1	5,3	5,3	10,5
	76	1	5,3	5,3	15,8
	80	1	5,3	5,3	21,1
	82	5	26,3	26,3	47,4
	84	2	10,5	10,5	57,9
	87	2	10,5	10,5	68,4
	89	2	10,5	10,5	78,9
	91	2	10,5	10,5	89,5
	96	1	5,3	5,3	94,7
	100	1	5,3	5,3	100,0
	Total	19	100,0	100,0	

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

1) Calculating Mean

$$Mx = \frac{\sum fxi}{n} = \frac{1600}{19} = 84,21$$

2) Standard Deviation

$$S = \sqrt{\frac{\sum fx^2}{N}}$$

$$S = \sqrt{\frac{1179,158}{19}}$$

$$S = \sqrt{62,06} = 7,878$$

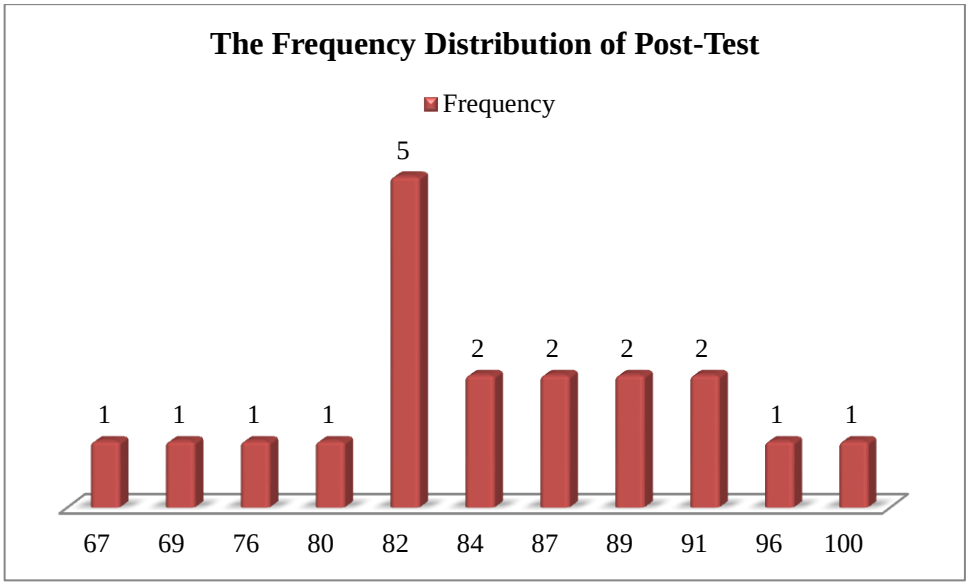
3) Standard Error

$$SE_{md} = \frac{s}{\sqrt{N-1}} = \frac{7,878}{\sqrt{19-1}} = \frac{7,878}{\sqrt{18}} = \frac{7,878}{4,24} = 1,858$$

Based on the data above from the result of manual calculation, it was found that the mean score of post-test was 84,21, the standard deviation was 7,878 and for the standard error was 1,858.

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

Figure 4.2 The Distribution of Post-Test Score



It can be seen from the figure above the students' post-test score. There was one student who got score 67. There was one students who got score 69. There was one students who got score 76. There was one students who got score 80. There were five students who got score 82. There were two students who got score 84. There were two students who got score 87. There were two students who got score 89. There were two students who got score 91. There was one students who got score 96. And there was one students who got score 100.

The next step, the result calculated the scores of mean, standard deviation, and standard error using SPSS 18 program as follows:

Table 4.6 the Calculation of Mean, SD and SE using SPSS 18

Statistics

N	Valid	19
	Missing	0
Mean		84,21
Std. Error of Mean		1,857
Std. Deviation		8,094
Minimum		67
Maximum		100

Based on the table above, the result calculation using SPSS 18, it was found that the mean of score post-test was 84,21, the standard deviation 8,094 and the standard error of mean of the post-test score was 1,857.

B. Testing of Normality and Homogeneity

1. Normality Test

Itused 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 Testing Normality of Post-Test Using SPSS 18

Tests of Normality

Kelompok		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Score	Pre-test	,175	19	,127	,955	19	,484
	Post-test	,182	19	,098	,956	19	,495

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 18 above, the value of (probably value/critical value) from post-test of class in Saphiro-Wilkv table was higher than level of significance alpha used or r = 0,495> 0,05. So, the distribution was normal. It meantthe students' score of post-test had normal distribution.

2. Testing of Data Homogeneity

Table 4.8 Homogeneity Test

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
3,789	4	9	,045

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 meantthe distribution was homogeneity. Based on the calculation using SPSS 18 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 0,045 or 0,05. The data in this study fulfilled homogeneity since the p-value was 0,05> 0,05.

C. The Result of Data Analysis

1. Testing hypothesis using 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 mean and the standard deviationpost-test. It was found the standard deviation and thestandard error of post-test at the previous data presentation. It could be seen in this following table:

Table 4.9 Mean and the Standard Deviation of Pos-Test

Group	Mean	Standard Deviation
Post-Test	84,21	7,878

The table showed the result of the mean calculation of post-test group was 84,21 and the result of standard deviation was 7,878. To examine the hypothesis, the writer used the formula as follow:

$$T_o = \frac{x - \mu}{SD/\sqrt{n}}$$

$$= \frac{84,21-75}{7,878/\sqrt{19}}$$

$$= \frac{9,21}{7,878/4,36}$$

$$= \frac{9,21}{1,81} = 5,088$$

Which the criteria:

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

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

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

Df = (N – 1)

= 19 – 1

= 18

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

Group	$T_{observed}$	T_{table}		Df/db
		5%	1%	
Post-test	5,088	2,10	2,88	18

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 $t_{observed}$>t_{table}(5,088> 2,10). It meant H_a was accepted and H_0 was rejected.

2. Interpretation

The result of t-test was interpreted on the result of degree of freedom to get the t_{table}. The result of degree freedom (df) was 18. The

result of the degree of freedom (df) was 18, it found from total number of the students in group minus 1. The following table was the result of $t_{observed}$ and t_{table} from 18 df at 5% significance level.

Table 4.11The Result of T-Test Using Manual Calculation

$t_{observe}$	T_{table}	Df
	5% (0,05)	
5,088	2,10	18

The interpretation of the result of t-test using manual calculation , it was found the t-observed was higher than t-table at 5% level or 5,088 > 2,10. It could be interpreted based on the result of calculation that H_a stating that there wasany significant effect of contextual teaching and learning on vocabulary mastery at tenth graders of SMA Muhammadiyah Palangka Raya was accepted and H_0 stating that there wasno effect of contextual teaching and learning on vocabulary mastery at tenth graders of SMA Muhammadiyah Palangka Raya was rejected. It meant that teaching vocabulary by using contextual teaching and learningthere was effect toward students' vocabulary mastery.

D. Discussion

The result of analysis showed that there was significant effect of using contextual teaching and learning toward the students' vocabulary score of the tenth grade students at SMA Muhammadiyah 1 of Palangka Raya. The students who taught using Contextual Teaching and Learning reached higher score than those who were taught without using Contextual Teaching and Learning.

Meanwhile, after the data was calculated using t_{test}, it was found that the value of t_{test} was higher than t_{table} at 5% level of significancet_{test} = 5,088 t_{table}= 2,10. This finding indicated that the alternative hypothesis stating that there was significant effect of using contextual teaching and learning of the tenth grade students at SMA Muhammadiyah 1 Palangka Raya was accepted. On the contrary, the null hypothesis stating that there was no any significant effect of using contextual teaching and learning of the tenth grade students at SMA Muhammadiyah 1 Palangka Raya was rejected.

Contextual Teaching and Learning was one of method used to teach English vocabulary by the teacher for teaching the students in the class. Contextual Teaching and Learning made a good interaction between teacher and students. Contextual Teaching and Learning used by teacher increased students' enthusiasm in learning process. The result of study is in line with the opinion Carr,M in chapter II page 27 As explain above, that CTL help us relate us subject matter content to real world situations and motivates to make connections between knowledge and its application to their personal, social, and cultural circumstances in their lives. Therefore, the strategies in using CTL techniques are:[62] It mean could be occurred because Contextual Teaching and Learning connected between material and the fact in real situation. From the result of analysis, it could be seen from the score of students how the use of method giving positive effects for students vocabulary mastery. It meant the method has important role in teaching learning process.

[62]Contextual Teaching Learning.Htm. Presented By Carr,M,1999

The findings of the study verified the statement that teaching Vocabulary using Contextual Teaching and Leaning as a good method in teaching English vocabulary that provided the concrete thing for the students that can be seen.The result of study is in line with the opinionClemente Charles Hudsonin chapter II page 21. Contextual Teaching and Learning was a conception of teaching and learning that help teacher relate subject matter content to real word situations and motivates students' to make connections between knowledge, to their lives as family members, citizens, and workers, and engage in the hard work that learning requires.[63] It proved by the calculation result of the acceptance of alternative hypotheses stating that teaching vocabulary using Contextual Teaching and Learning gave effect toward the vocabulary mastery at the tenth grade students at SMA Muhammadiyah 1 Palangka Raya.

[63] Clemente Charles Hudson, &Vesta R. Whisler, 'Contextual Teaching and Learning, Adult and Caroor Education, Valdosia State University, Vol. 6 No. 4, p/54