

CHAPTER IV

DATA PRESENTATION AND RESEARCH FINDINGS

This chapter discussed the data which had been collected from the research in the field of study this case consisted of description of the data, normality and homogeneity test using Kolmogorov Smirnov in SPSS 20 program and discussion

A. The presentation of Data

In this, it would be describe the obtained data improvement students' vocabulary after and beefore taught by using Talking Stick Method. The present data consists of distribution of pre-test score of experiment group.

1. The result of Pre-Test Score of the control and experiment group.

The pre-test was conducted to the control group in XI.I.S on Monday, August 1st2016 at 08.00-09.30 am and pre-test was conducted to the experiment group in XI IPA 3 at 13.00 – 14.30 pm. The pre-test scores of the classes were presented in table 4.1.

Table 4.1

The describtion of pre-test score of the data achieved by the students in control and experiment group

Class				
Control Class			Experiment Group	
No.	Students Code	Pre-test	Students Code	Pre-test
1.	C01	60	E01	68
2.	C02	68	E02	66

3.	C03	58	E03	70
4.	C04	66	E04	68
5.	C05	80	E05	70
6.	C06	68	E06	60
7.	C07	62	E07	54
8.	C08	62	E08	70
9.	C09	38	E09	88
10.	C10	76	E10	38
11.	C11	64	E11	72
12.	C12	74	E12	74
13.	C13	62	E13	74
14.	C14	70	E14	62
15.	C15	66	E15	58
16.	C16	64	E16	36
17.	C17	76	E17	30
18.	C18	76	E18	70
19.	C19	46	E19	60
20.	C20	74	E20	82
21.	C21	70	E21	62
22.	C22	52	E22	60
23.	C23	26	E23	58
24.	C24	34	E24	60
25.	C25	74	E25	78
26.	C26	62	E26	72
27.	C27	78	E27	68
28.	C28	62	E28	78
29.	C29	24	E29	72
30.	C30	24	E30	54
31.	C31	46	E31	66
32.			E32	64
33.			E33	70
34.			E34	68
35.			E35	62
36.			E36	62
37.			E37	66
38.			E38	60
SUM		1862	-	2450
Highest Score		80	-	88
Lowest Score		24	-	30
Mean		60.06	-	64.73
Standard deviation		13.24	-	11.37

Standard error	2.45	-	1.87
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a. Control group

The pre-test of the control group were presented in the following figure 4.1. figure above describe the score of each student. and show the student who passed and failed the test. It shows there were 11 students who passed the test or about 35.49 % in percentage and there were 20 who failed the test or about 64.51 % in percentage.

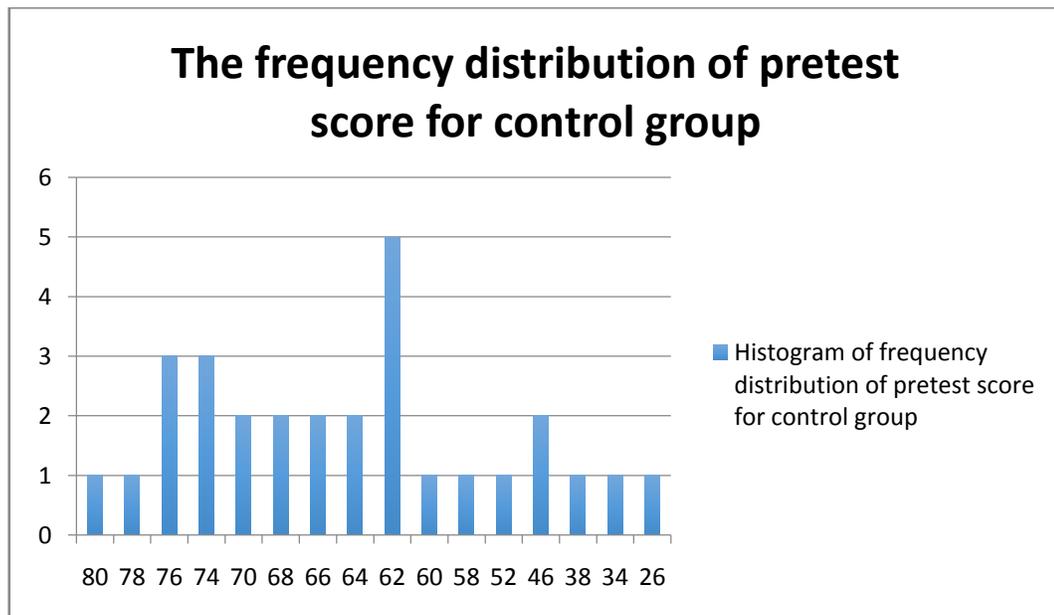


Figure 4.1

(Histogram of frequency distribution of Pre-Test score for control group)

The table and figure above show the students' pre-test score of the control group. It could be seen there was 1 student get score 26. there was 1 student get score 34. there was 1 student get score 38. there were 2 students get score 46. there was 1 student get score 52. there was 1 student get score 58. there was 1 student get score 60. There were 5 students get score 62. There were 2 students get score 64. There were 2 students get score 66. There were 2 students get score 68. There were 2 students get score 70. There were 3 students get score 74. There were 3 students get score 76. There was 1 student get score 78. There was 1 student get score 80. In this case many students get score under 70.

b. Experiment group

figure above describe the score of each students and show the student who passed and failed the test. It shows there were 13 students who passed the test or about 34.21 % in percentage and there were 25 who failed the test or about 65.79 % in percentage.

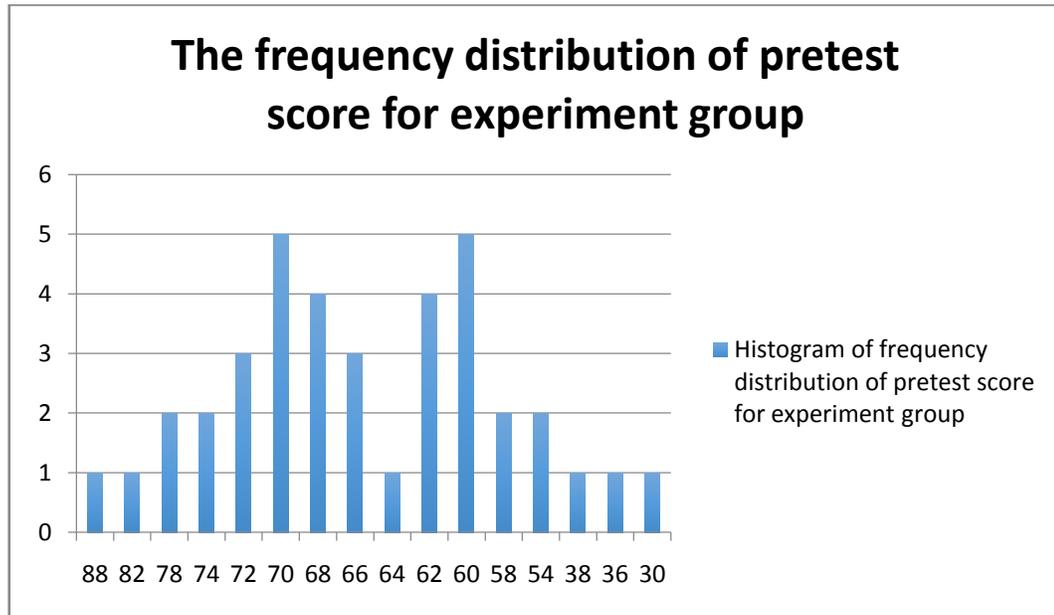


Figure 4.2

(Histogram of frequency distribution of Pre-Test score for experiment group)

The table and figure above show the students' pre-test score of the experiment group. It could be seen there was 1 student get score 30. there was 1 student get score 36. there was 1 student get score 38. there were 2 students get score 54. there were 2 students get score 58. there were 5 students get score 60. there were 4 students get score 62. There was 1 student get score 64. There were 3 students get score 66. There were 4 students get score 68. There were 5 students get score 70. There were 3 students get score 72. There were 2 students get score 74. There were 2 students get score 78. There was 1 student get score 82. There was 1 student get score 88. score In this case many students get score under 70.

2. The result of Post-test Score of the control and experiment group.

The post-test was conducted to the control group in XI.I.S on Monday. September 26th 2016 at 08.00-09.30 am and post-test was conducted to the experiment group in XI IPA 3 at 13.00 – 14.30 pm. The post-test scores of the classes were presented in table 4.1.

Table 4.2
The description of post-test score of the data achieved by the students in control and experiment group

Class				
Control Class			Experiment Group	
No.	Students Code	Post-test	Students Code	Post-test
1.	C01	72	E01	82
2.	C02	84	E02	80
3.	C03	68	E03	78
4.	C04	78	E04	82
5.	C05	78	E05	94
6.	C06	64	E06	80
7.	C07	74	E07	94
8.	C08	86	E08	84
9.	C09	62	E09	90
10.	C10	66	E10	88
11.	C11	54	E11	80
12.	C12	76	E12	88
13.	C13	86	E13	74
14.	C14	68	E14	80
15.	C15	66	E15	62
16.	C16	66	E16	84
17.	C17	86	E17	80
18.	C18	70	E18	76
19.	C19	78	E19	98
20.	C20	62	E20	86
21.	C21	60	E21	76

22.	C22	66	E22	84
23.	C23	78	E23	82
24.	C24	62	E24	86
25.	C25	68	E25	88
26.	C26	78	E26	72
27.	C27	68	E27	88
28.	C28	78	E28	86
29.	C29	68	E29	82
30.	C30	60	E30	94
31.	C31	54	E31	88
-	-	-	E32	96
-	-	-	E33	84
-	-	-	E34	82
-	-	-	E35	98
-	-	-	E36	86
-	-	-	E37	82
-	-	-	E38	86
SUM		2184	-	3200
Highest Score		86	-	98
Lowest Score		54	-	62
Mean		70.45	-	84.21
Median		68		84
Modus		78		82
Standard deviation		8.98	-	7.28
Standard error		1.61	-	1.18

a. Control Group

Figure above describe the score of each student and show the student who passed and failed the test. It shows there were 14 students who passed the test or about 45.16 % in percentage and there were 17 who failed the test or about 54.84 % in percentage.

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

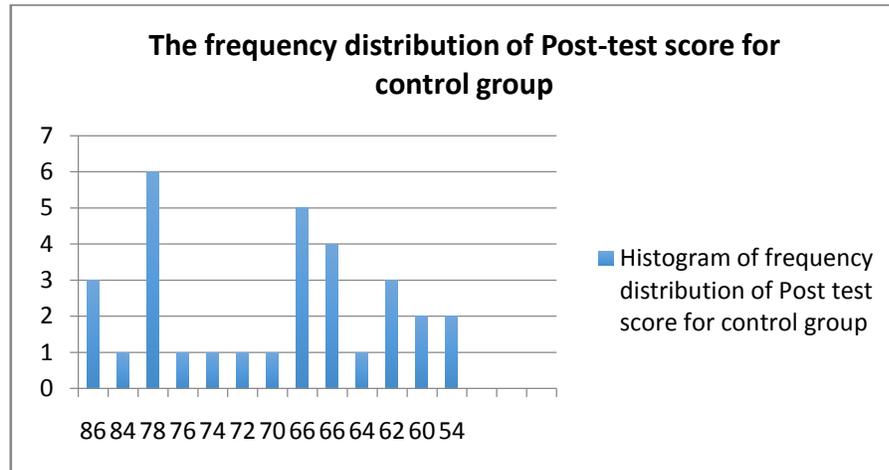


Figure 4.3

(Histogram of frequency distribution of Post-test score for control group)

The figure show the students' Post-test score of the control group. It could it could be see there were 2students get score 54. there were 2students get score 60.there were 3 students get score 62. there was1student get score64. there ware 4 students get score 66. there were 5 students get score 66. there was 1 student get score 70. there was 1 student get score 72. there was 1 student get score 74. there was 1 student get score 76. There were 6 students get score 78. There was 1 student get score 84. There were 3 students get score 86.

b. Experiment Group

Table above decribe the score of each students and show the student who passed and failed the test. It shows. there were 37 students who passed the test or about 97.36 % in percentage and there were 1 who failed the test or about 2.64% in percentage.

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

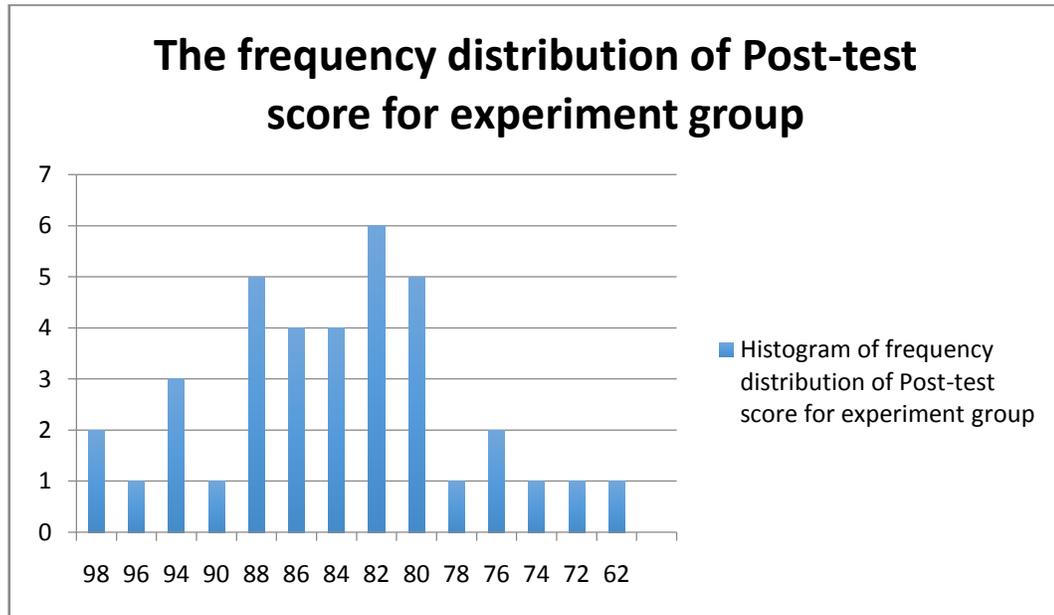


Figure 4.4

(Histogram of frequency distribution of Pre-Test score for experiment group)

The figure show the students' post-test score of the experiment group. It could it could be see there was 1 student get score 62. there was 1 student get score 72. there was 1 student get score 74. there were 2 students get score 76. there were 1 student get score 78. there were 5 students get score 80. there were 6 students get score 82. There were 4 students get score 84. There were 4 students get score 86. There ware 5 students get score 88. There was 1 student get score 90. There ware 3 students get score 94. There was 1 student get score 96. There ware 2 students get score 98. score In this case many students get score high then 70.

B. Comparison Between Control Group and ExperimentGroup at Post-Test And Improvement.

The writer tabulated the comparison score of the data between control group and experiment group at post-test into the table for the calculation improvement, as follows:

Table 4.3

The Comparison between Control group and experiment group
at the post-test

Class			
No.	Control Group	Experiment Group	improvement
1	72	82	10
2	84	80	-4
3	68	78	10
4	78	82	4
5	78	94	16
6	64	80	16
7	74	94	20
8	86	84	-2
9	62	90	28
10	66	88	22
11	54	80	26
12	76	88	12
13	86	74	-12
14	68	80	12
15	66	62	-4
16	66	84	18

17	86	80	-6
18	70	76	6
19	78	98	20
20	62	86	24
21	60	76	16
22	66	84	18
23	78	82	4
24	62	86	24
25	68	88	20
26	78	72	-6
27	68	88	20
28	78	86	8
29	68	82	14
30	60	94	34
31	54	88	34
32		96	96
33		84	84
34		82	82
35		98	98
36		86	86
37		82	82
38		86	86
SUM		2184	3200
Highest Score		86	98
Lowest Score		54	62
Mean		70.45	84.21
Median		68	84
Modus		78	82
Standard deviation		8.98	7.28
Standard error		1.61	1.18

Based on the table, it was concluded, mean of control group 70.45 were 84.21 in experiment group

C. Testing Normality and Homogeneity

Definition of homogeneity of variance is when all the variables in statistic data have the same finite or limited variance. When homogeneity of variance is equal for a statistical model. A simple computation approach to analysis the data can be used due to a low level of uncertainty in the data¹. This equality is homogeneity or homoscedasticity.² Because of that, the writer used SPSS 20.0 to measure the normality of the data

1. Testing Normality

The criteria of the normality test of post-test if the value of (probability value/critical value) was higher than or equal to the level of significance alpha defined, it means that the distribution was normal. This study used SPSS 20 to measure the normality of the data.

Table 4.5

One sample Shapiro-Wilk Test

Tests of Normality							
	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Nilai	control group	,156	31	,053	,952	31	,176
	experiment group	,124	38	,148	,958	38	,169

a. Lilliefors Significance Correction

The criteria of normality test pre-test and post test is if the value of (probability value/criteria value was higher than or equal to the level of

¹ Agus Irianto, *Statistik: Konsep Dasar dan Aplikasinya*, Jakarta : Prenada Media, 2004, p.62.

² Agus Irianto, *Statistik : Konsep dasar dan Aplikasinya*, Jakarta : Prenada Media, 2004, p.62.

significance alpha defined (α). it mean that. the distribution was normal. based on the calculation using SPSS 20 above. the value of r (probably value/critical value from post-test of the experiment group and control group in One-SampleShapiro-Wilk Test Table was higher then level of significant alpha used or $r = \text{sig} > 0.05$, control group was $0.176 > 0.05$ and experiment group was $0.169 > 0.05$ experiment group and control group of post test so that the students' distributions are normal. It meant that the students' score of in pre-test and post-test had normal distribution.

2. Testing Homogeneity

To calculate the test of homogeneity, the writer was used SPSS 20.

Table 4.6

The test of homogeneity

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
1,628	6	18	,197

The criteria of the homogeneity test pre-test and post test was if the value of (probability value/criteria value was higher than or equal to the level of significance alpha defined ($r = a$). it mean that. the distribution was homogeneity. based on the calculation using SPSS 20 above. the value of r (probably value/critical value from pre-test and post-test of the experiment group on homogeneityof variances is sig column is know that p-value was 0.197. The data in this study fulfilled homogeneity since the p value is higher than $0.197 > 0.05$.

3. Testing Hypothesis Using T_{test}

a. Using Manual calculation

The writer chose the significance level on 5%. it means the significance level of refusal of null hypothesis on 5%. The writer decided the significance level at 5% due to the hypothesis type stated on non-directional (two-tailed test). It means that the hypothesis can't direct the prediction of

alternative hypothesis. Alternative hypothesis symbolized by “1”. This symbol could direct the answer of hypothesis. “1” can be (>) or (<). The answer of hypothesis could not be predicted whether on more than or less than.

To test the hypothesis of the study, the writer used t-test statistical calculation. Firstly, the writer calculated the standart deviation and the error of X_1 and X_2 at the previous data presentation. In could be seen on this following table.

Table 4.7

The standard deviation and standard error of X_1 and X_2

Variable	The standard deviation	The standard error
Control Group	8.984	1.613
Experimental Group	7.290	1.183

it was inserted to the t_o formula to get the value of t observed as follows :

$$t_o = \frac{M1 - M2}{SEm1 - SEm2}$$

$$t_o = \frac{8.984 - 7.290}{1.613 - 1.183}$$

$$t_o = \frac{1.694}{0.43}$$

$$t_o = 3.93953488$$

Which the criteria :

If t-test (t-observed) \geq t-table. H_a is accepted and H_o is rejected

If t-test (t-observed) < t-table. Ha is rejected and Ho is accepted

Then the witer interpreted the result of the t-test; previously. the writer accounted the degree of freedom (df) with the formula:

$$\begin{aligned} \text{Df} &= (N_1+N_2)-2 \\ &= 38 + 31-2 \\ &= 67 \end{aligned}$$

$$\begin{array}{ccc} 5\% & t_o & 1\% \\ & 1.66 & < 3.939 > 2.38 \end{array}$$

The writer chose the significant levels at 5%. it means the significant level of refusal of null hypothesis at 5%. The writer decided the signifincance level at 5% due to the hyphothesis typed stated on non directional (two-tailed test) at 5%. It meant that the hypothesis can't direct the prediction of alternative hypothesis. Alternative hyphothesis symbolized by "1". This symbol could direct the answer of hypothesis could not be predicted whether on more than or less than.

The calculation above showed the result of t-test calculation as in the table follows:

Variable	T observed	T table		Df/db
		5%	1%	
X_1-X_2	3.939	1.66	2.38	67

Where :

X_1 = Experimental Group

X_2 = Control Group

T observe = 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 1% and 5% significance level or $2.38 < 3.939 > 1.66$. it means H_a was accepted and H_o was rejected.

It could be interpreted based on the result of calculation that H_a stating that the students taught vocabulary by talking stick method have better vocabulary size was accepted and H_o stating that the students taught vocabulary by talking method do not have better vocabulary size was rejected. It means that the students taught by non talking stick method at eleventh graders of Man Model Palangka Raya.

D. Testing Hypothesis Using SPSS

The writer also applied SPSS 20 program to calculate t test in testing hypothesis of the study .the result of the t test using SPSS was used to support the manual calculation of the t test. The result of the test using SPSS 20 program could be seen as follows :

Table 4.8

The Standard Deviation And The Standard Error of X_1 and X_2 using SPSS 20
Group Statistics.

Descriptive Statistics										
	N		Minimum		Maximum		Mean		Std. Deviation	
	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
experiment	38		62		98		84,21	1,183	7,290	
control	31		54		86		70,45	1,614	8,985	
Valid N (listwise)	31									

The table showed the result of the standard deviation calculation of experiment group was 7.290 and the result of the standard error mean calculation was 1.183 the result of the standard deviation calculation of control group was 8.985 and the standard error mean calculation was 1.614.

Table.4.9

The Calculation of T-test Using SPSS 20

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
Nilai	Equal variances assumed	1,604	,075	3.763	67	,000	8,759	1,959	13,668	6,850
	Equal variances not assumed			3.871	37,443	,000	8,759	2,001	13,764	6,753

The table showed the result of t – test calculation using SPSS 20.0 program. To know the variances score of data, the formula could be seen as follows:

If $\alpha = 0.05 < \text{Sig}$, Ho accepted and Ha rejected

If $\alpha = 0.05 > \text{Sig}$, Ha accepted and Ho rejected

Since the result of post test between experimental and control group had difference score of variance, it found that $\alpha = 0.05$ was higher than Sig (0.000), so that Ha was accepted and Ho was rejected . The result of t_{test} was 3.763, mean difference between experimental and control group was 8,759 and the standard error difference between experimental and control group was 1,959.

E. Interpretation

To examine the truth or the false of null hypothesis stating that the students taught vocabulary by Talking Stick method do not have better vocabulary size. the result of t-test was interpreted on the result of degree of freedom to get the t_{table} . the result of degree of freedom (df) was 67, it found from total number of the students in both of group minus 2. The following table was the result of $t_{observed}$ and t_{table} . From 69 df at 5% and 1% significance level.

Table. 4.10

The result of T-test using SPSS 20

Variable	T observed	T table		Df/db
		5%	1%	
X_1-X_2	3.763	1.66	2.38	30

The interpretation of the result of t-test using SPSS 20 program, it was found the t observe was greater than the table at 1% and 5% significance level or $1.66 < 3.273 > 2.38$. it means that H_a was accepted and H_o was rejected.

It could be interpreted based on the result of calculation that H_a stating that the use of Talking Stick Method gives effect to students' Vocabulary size at Eleventh graders of MAN Model Palangka Raya was accepted. H_o stating that The use of Talking Stick Method does not give effect to students' Vocabulary size at Eleventh

graders of MAN Model Palangka Raya was rejected. It meant that use of Talking Stick Method to students' Vocabulary size at Eleventh graders of MAN Model Palangka Raya gave significant effect at 5% and 1% significance level.

F. Discussion

The result of analysis showed that there was significant effect of Talking Stick Method to students' Vocabulary size at Eleventh graders of MAN Model Palangka Raya. It can be seen from the means score between pre-test and post test. The mean score of post-test reached higher score than the mean score of Pre-test ($X=70.12 < Y=84.21$). It indicated that the students' score increased after conducting treatment. In other words, the students taught by Talking Stick Method have better Vocabulary than those taught by non- Talking Stick Method at the Eleventh graders of MAN Model Palangka Raya.

In addition, after the data was calculated using the ttest formula using SPSS 20 program showed that the tobserved was 3.763. by comparing the tobserved with the ttable, it was found that the tobserved was higher than the value of ttable at 1% and 5% significance level or $1.66 < 3.763 > 2.38$.

In teaching learning process, taught Vocabulary by using talking stick method was a tool used by the writer to teach the students. Talking Stick Method could make a good interaction between teacher and students. From the result of analysis, It could be seen from the score of students how the used of Talking stick method gave positive effects for students vocabulary size. It meant that it has important role in

teaching learning process. It was answered the problem of the study which “does Talking Stick method give effect in Teaching vocabulary size at 11th Graders of MAN Model Palangka Raya ?

Talking Stick Method as means for language learning, effectively enhanced the Vocabulary size at Eleventh graders of MAN Model Palangka Raya. The students Vocabulary size was enhanced after the treatment when they were given opportunities to use Talking stick method in the learning process.

There were advantages of talking stick method, Talking stick method gives the advantages to attract the student's preparation, so they more serious in learning. Next, the talking stick method trains the students to comprehend and recall the materials vividly and Talking stick method to help the students construct and improve their vocabulary mastery and create fun learning activities in the class.