CHAPTER IV

RESULT OF THE STUDY AND DISCUSSION

A. Description of the Data

1. The students'score of vocabulary mastery test

To know the score of students' vocabulary mastery, the writer used formula as follow:

$$S = n / N \times 100$$

Where:

S   = Students' score

n   = Number of true answer

N   = Number of test item

it was know that:

n   = 22

N   = 30

$$S = n / N \times 100$$

= 22 / 30 x 100

= 73

Table 4.1

1. **The List Of Students' Score of Vocabulary Mastery Test**

STUDENTS CODE		X	X^2
1	B01	75	5625
2	B02	75	5625
3	B03	60	3600
4	B04	56	3136
5	B05	86	7396
6	B06	60	3600
7	B07	65	4225
8	B08	70	4900
9	B09	73	5329
10	B10	63	3969
11	B11	68	4624
12	B12	80	6400
13	B13	73	5329
14	B14	76	5776
15	B15	85	7225
16	B16	84	7056
17	B17	76	5776
18	B18	60	3600
19	B19	80	6400
20	B20	73	5329
21	B21	70	4900
22	B22	80	6400
23	B23	73	5329
24	B24	78	6084
TOTAL		1737	127337

Based on the calculation of variable X, it is known $\sum x = $ **1737** and $\sum x^2 = $ **127337.** So, based on the data above, it is known that the higher is **85** and the lower score is **56**. To know the classification of the students' score can be seen on the table below :

Table 4.2

Distribution of Students' achievement criteria of Vocabulary mastery test of Smp Islam Nurul Ihsan Palangka Raya

No.	Category	Frequency
1	Score 90 – 100	0
2.	Score 80 – 89	6
3.	Score 70 – 79	11
4.	Score 60 – 69	6
5.	Score 50 – 59	1
	TOTAL	24

Based on the data above, it is known that from the twenty four students' of SMP Islam Nurul Ihsan Palangka Raya, the value of the students' score is different. Based on the calculation there ther is no student got score in 90 - 100, six students got score in 80 - 89, eleven students got score in 70 – 79, six students got score in 60 – 69, and 0ne student got score in 50 – 59.

Table 4.3

Distribution of Students' Achievement Criteria of Vocabulary mastery of SMP Islam Palangka Raya

Mark Value	Letter Value	Heavy Value	Predicate
90 – 100	-	0	Excellent
80 - 89	A	6	Very Good
70 – 79	B	11	Good
60- 69	C	6	Fair
50 – 59	D	1	Very Poor

Table 4.4

Distribution Frequency and Percentation Scores of Students' achievement of Vocabulary mastery SMP Islam Nurul Ihsan Palangka Raya

No	Mark Value	Letter Value	Predicate	Frequency	Percentation
1	80 – 100	-	Excellent	0	-
2.	80 – 89	A	Very Good	6	25%
3.	70 – 79	B	Good	11	45,83 %
4.	60 – 69	C	Fair	6	25 %

5.	50 – 59	D	Very Poor	1	4,17 %
TOTAL				24	100 %

Based on the table above. It can be concluded that there were 25 % students who acquired score in 80 – 89, 45,83 % students who acquired score in 70 – 79, 25 % students who acquired score in 60 – 69, 4,17 % students who acquired score in 50 – 59.

1. **The Average Score of Students' vocabulary mastery test**

To find the average score of students' vocabulary mastery , the writer used formula as follow:

$$M = \frac{\Sigma X}{N}$$

Where:

M = Mean

X = The sum of score

N = Total number of students

It is known that:

M = mean

Σx = 1737

N = 24

It can be counted as follow;

$$M = \frac{\Sigma X}{N}$$

$$= \frac{\Sigma 1737}{24}$$

$$= \mathbf{72,37}$$

Based on the calculated above the average of students' score in vocabulary mastery is 72. Then based on the valuation scale used in Smp Islam Nurul Ihsan Palangka Raya, the average of students' vocabulary mastery were in good citeria.

Tabel 4.5

2. **Students' Score of Writing Test**

STUDENTS		Y	Y^2
1	B01	76	5776
2	B02	75	5625
3	B03	67	4489
4	B04	68	4624
5	B05	72	5184
6	B06	71	5041
7	B07	70	4900
8	B08	74	5476
9	B09	73	5329
10	B10	65	4225
11	B11	73	5329
12	B12	76	5776
13	B13	75	5625
14	B14	75	5625
15	B15	80	6400
16	B16	76	5776
17	B17	75	5625
18	B18	70	4900

19	B19	76	5776
20	B20	60	3600
21	B21	75	5625
22	B22	80	6400
23	B23	74	5476
24	B24	75	5625
	TOTAL	1754	128710

From the calculation of writing test, it is known that $\sum Y = $ **1754** and $\sum Y^2 = $ **128710.** Then , based on the data above, it is known that the higher was **80** and the lower score **60**. To know the classification of the students' score can be seen on the table below :

Table 4.6

Distribution of Students' achievement criteria of Writing test of Smp Islam Nurul Ihsan Palangka Raya

No.	Category	Frequency
1	Score 90 – 100	0
2.	Score 80 – 89	2
3.	Score 70 –79	14
4.	Score 60 – 69	7
5.	Score 50 – 59	1
	TOTAL	24

Based on the data above, it is known that from the twenty students' of Smp Islam Nurul Ihsan Palangka Raya, the value of the students' score is different. Based on the calculation three got score in 80 - 100, fourteen students got score in 70 - 80, six students got score in 60 – 70, one student got score in 50 – 60, until in 0 – 50.

Table 4.7

Distribution of Students' Achievement Criteria of Writing Test

Mark Value	Letter Value	Heavy Value	Predicate
90 – 100	-	0	-
80 – 89	A	2	Very Good
70 – 79	B	14	Good
60 – 69	C	6	Fair
50 – 59	D	1	Very Poor

Table 4.8

Distribution Frequency and Percentation Scores of Students' achievement of Writing test

No	Mark Value	Letter Value	Predicate	Frequency	Percentation
1	90 – 100	-	-	-	-
2.	80 – 89	A	Very Good	2	8,34 %
3.	70 – 79	B	Good	15	62,5 %
4.	60 – 69	C	Fair	7	29,16 %
5.	50 – 59	D	Very Poor	-	-

TOTAL	24	100 %

Based on the table above. It can be concluded that 12,5 % students who acquired score in 80 – 89, 58,33 % students students who acquired score in 70 – 79, 33,33 % students who acquired score in 60 – 69, and there is no students who acquired score in 50 – 59.

The Average Score of Students' Writing test

To find the average score of students' vocabulary mastery , the writer used formula as follow:

$$M = \frac{\sum X}{N}$$

Where:

M   = Mean

X   = The sum of score

N   = Total number of students

It is known that:

M   = mean

$\sum x$ = 1754

N   = 24

It can be counted as follow;

$$M = \frac{\sum X}{N}$$

$$= \frac{\sum 1754}{24}$$

$$= \mathbf{73{,}083}$$

Based on the calculation above the average of students' score in writing test is 73,083 Then based on the valuation scaled used in Smp Islam Nurul Ihsan Palangka Raya, the average of students' vocabulary mastery were in good citeria.

B. **The Correlation between vocabulary mastery and writing ability of the eighth grade students Smp Islam Nurul Ihsan Palangka Raya.**

To find out the correlation between vocabulary mastery and writing ability of the eigth grade students Smp Islam Nurul Ihsan Palangka Raya the writer used Product Moment Formula by Pearson, as follow:

$$r_{xy} = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{\{N \sum x^2 - (\sum x)2\}\{N\cdot y^2 - (\sum y)2\}}}$$

Where :

r_{xy} = the correlation coeficient between x variable and y variable

$\sum xy =$ multiplication result between score X dan Y

$\sum x =$ total value of score X

$\sum y =$ total value of score Y

N = the number of subject

C. Result Data Analysis

Table 4.9

Distribution Scores of Vocabulary mastery (X) and Writing ability (Y)

STUDENTS		X	Y	X^2	Y^2	**XY**
1	B01	75	76	5625	5776	5700
2	B02	73	75	3969	5625	5475
3	B03	60	67	3600	4489	4020
4	B04	56	68	3136	4624	3808
5	B05	86	72	7396	5184	6192
6	B06	60	71	3600	5041	4260
7	B07	65	70	4225	4900	4550
8	B08	70	74	4900	5476	5180
9	B09	73	73	5329	5329	5329
10	B10	63	65	5329	3969	4095
11	B11	68	73	4624	5329	4964
12	B12	80	76	6400	5776	6080
13	B13	73	75	5329	5625	5475
14	B14	76	74	5776	5625	5700
15	B15	86	80	7225	6400	6800
16	B16	84	76	7056	5776	6384
17	B17	76	75	5776	5625	5700
18	B18	60	70	3600	4900	4200
19	B19	80	75	6400	5625	6000
20	B20	73	60	5329	3600	4380
21	B21	70	75	4900	5626	5250
22	B22	80	80	6400	6400	6400
23	B23	73	74	5329	5476	5402
24	B24	78	75	6084	5625	5850
TOTAL		1737	1754	127337	128710	127540

From the calculation of Variable X and variable Y it is known that:

N   = 24

$$\sum X \qquad = 1737$$

$$\sum Y \qquad = 1754$$

$$\sum XY \qquad = 127540$$

$$\sum X^2 \qquad = 127337$$

$$\sum Y^2 \qquad = 128710$$

Based on the calculation of correlation variable X and variable Y above, it can be known the score of each variable. Then to know the correlation the writer calculated by Product Moment by Pearson as follow:

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2)][N\sum Y^2 - (\sum Y)^2)}}$$

$$= \frac{24 \times 127540 - (1737) \times 1754)}{\sqrt{[24 \times 127337 - (1737)^2 . (24 \times 128710 - (1754)^2)]}}$$

$$= \frac{3060960 - 3046698}{3056088 - 3017169) \times (3089040 - (3076516)}$$

$$= \frac{14262}{\sqrt{38919 \times 12524}}$$

$$= \frac{14262}{\sqrt{487421556}}$$

$$= \frac{14262}{22077.6257}$$

$$= 0.64599338$$

$$= 0.646$$

The calculation above has shown index correlation of variable X and Y was 0.64599338 (0.646). It means vocabulary mastery has association with writing ability. The following r_{table} the result of product moment correlation based on SPPS 16:

Table 4.10
Correlation index based on Spss 16

Correlations

		X	Y
X	Pearson Correlation	1	.646[**]
	Sig. (2-tailed)		.001
	N	24	24
Y	Pearson Correlation	.646[**]	1
	Sig. (2-tailed)	.001	
	N	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the calculation above it was found that the total score of Variable X and Variable Y was 0.646, it can be concluded that there is average correlation between two variables and the hypothesis H_a is accepted and Hypothesis H_O is rejected. It can be known that between vocabulary mastery and writing ability was positive correlation. It means that if the students' vocabulary mastery score is high so the students' writing ability score is high too. The result was looked from interpretation above.

The result of the calculation that was counted by product moment above showed that the index of correlation was 0.646. To prove the value of "r" based on the calculation degree of freedom was known that df = N − nr, N = 24, nr = 2, so:

Df = 24 − 2 = 22. Based on significant level was illustrated as follow:

Table 4.11

Critical Value of the Product Moment Correlation Coefficient

Df (degree of freedom)	The number of correlation variable	
	2	
	Value "r" on significant level	
	5%	1%
22	0,404	0,515

Even so, was known the result of "r" = 0.404 <0.646> 0.515. It can be explained that the value of "r" (0.646) was higher at significance level 5% (0.404) and it was higher as at significance level 1% (0.515). As the result, the value of "r" showed positive correlation between vocabulary mastery and writing ability in significant level 5% and 1%. The following graph informed about combination of vocabulary mastery and writing ability scores.

Grphic : 4.12

Combination of values Vocabulary and Writing
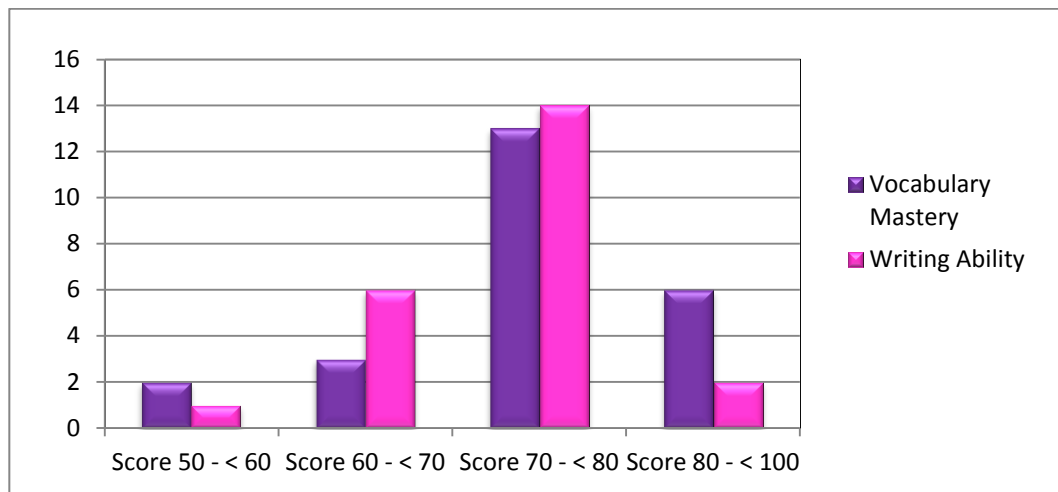
The graph above showed the score of vocabulary mastery and writing ability in four category. Category1 show the amount of students who got score 50 - > 60, Categories 2 show the amount of students who got score 60 - > 70, Category 3 show the amount of students who got score 70 - > 80, Category 4 show the amount of students who got score 80 - > 100. From the graph above, it can be seen the changing of frequency. The increasing frequency of vocabulary mastery scores was followed by increasing frequency of writing ability test scores.

The correlation between variable X (vocabulary mastery) and variable Y (writing ability) can be illustrated by following scatter plot.

Figure 4.13

The Linear of variable X and variable Y
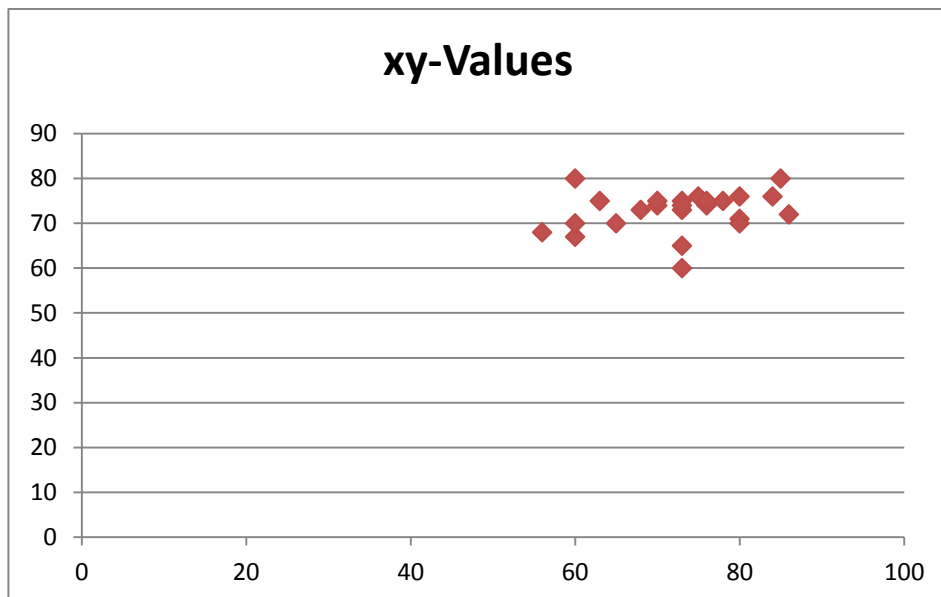
The scatter plot above illustrated the direction of the correlation between the variables. The dots going from lower left to upper right indicate positive correlation. Ary et al. stated that a scatter plot of also reveals the strength of the correlation between variables. If the dots in the scatter plot from a narrow band so that when a straight line is drawn though the band the dots will be near the line, there is a strong correlation between the variables. However, if the dots in the scatter plot scatter widely, the correlation between variables is relatively week. The scatter plot above

has shown the dots from a narrow band, made a straight line and spread closely. Its mean there is strong correlation between two variables, vocabulary mastery and writing ability.

To know the contribution of the variable X and Y, the writer used the formula as follow:

$$\mathbf{KP} = \mathbf{r^2 \times 100\%}$$

$$= (0.646)^2 \times 100\%$$

$$= 0.417316 \times 100\%$$

$$= 41.73\ \%$$

Based on data analysis, vocabulary mastery give contribution 41.73% toward writing ability is influenced by other aspects.

The reject or accept hypothesis, the writer calculated $t_{observed}$ as follow:

$$t_{observed} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$= \frac{0.646\sqrt{24-2}}{\sqrt{1-0.646^2}}$$

$$= \frac{0.646\sqrt{22}}{\sqrt{1-0.417316}}$$

$$= \frac{0.646 \cdot 4.690}{0.582684}$$

$$= \frac{3.02974}{0.76333740}$$

$$= 3.96907056$$

$$= 3.96$$

The criteria of the test: $t_{observed} \geq t_{table}$, so received H_a it means there is significant correlation. If $t_{observed} \leq t_{table}$, refused H_o it means there is no significant correlation between variables. Based on the calculation above $t_{observed} = 3.96$. Next, to look t_{table} used the formula nr − 2, N = 24. So, df = n − 2 = 24 − 2 = 22 and t_{table}, = 0.4 at significance level 5% and 0.5 and significance level 1% in other word 0.4 <3.96907056>0.5. It is mean $t_{value} > t_{table}$, as the result, H_a (there is significant correlation between vocabulary mastery and writing ability of the eigth students Smp Islam Nurul Ihsan Palangka Raya) was accepted and H_o (there is no significant correlation between vocabulary mastery and writing ability of the eigth students Smp Islam Nurul Ihsan Palangkaraya) was rejected. In this case, students' vocabulary mastery influenced the students' writing ability. The increasing of vocabulary mastery would be followed by increasing writing ability. So, vocabulary mastery is very important part in writing ability.

D. Discussion

Based on the result of linear, it shows that data points spread closely and draw a straight line from the left bottom to the right up corner. It means the data of vocabulary mastery and writing ability in the present study have good linear association. As the result, the data in the present study can be analyzed by using parametric statistic especially product moment correlation.

The result of product moment correlation has shown that the value of r_{xy} was greater than the value of t_{table} at 5% and 1% significant levels (0.404 < 0.646 > 0.515). It means that null hypothesis was rejected and the alternative hypothesis was accepted.

Next, the dots in scatterplot of variable X and variable Y going from lower left to upper right. It means there was positive correlation between vocabulary mastery and writing ability. The dots in the scatterplot also for med a narrow band. When a straight line was drawn through the band the dots would be near the line. It illustrated that there was high correlation between the variables. So this way, alternative hypothesis was accepted and null rejected. In summary, there was positive correlation between vocabulary mastery and writing ability of the eigth grade students Smp Islam Nurul Ihsan Palangkaraya.

The result of calculation showes that average score of students' vocabulary mastery is 72. and the average score of students' writing ability was 73. In completeness criteria minimum (ccm) is70 in SMP Islam Nurul Ihsan palangka Raya. In the present study, the result finding have proved that there is significant correlation between vocabulary mastery and writing ability with the correlation coefficient between two variables was 0.646. It means that the result of the present study there is average correlation between vocabulary mastery and writing ability. lets see diagram scutter in chapter 2. It was showed average correlation, the writer also includes, that most students weak not only in their achivement of vocabulary, but also in Writing Ability. The writer also finds out that the correlation between

vocabulary and writing is significant. So, both of them cannot be separed each other.

There are many that help students to comprehend the English materials. The result shows that the factors are students' background knowledge and experiences. When they do write something or describe about the picture, place and person they were found difficult memorize the vocabulary. For writing is not easy beacause the writing is not like reading or speaking, the writing need have many vocabulary, how to convey the ideas. That the students still low got score. It is needed for teacher to make students able to write well the teacher must teach writing clearly. So the students can mastery all aspect. And the other factors that students still low motivation to learn English at school Smp Islam Nurul Ihsan Palangka Raya beacause is relegion so they are considered that learning English is not important for them in this school religion in priority.