# CHAPTER IV

# RESULT AND DISCUSSION

## A. The Description of Data

In this chapter the researcher would like to present the description of data obtained. As the writer explained in the previous chapter that the population in this research were 42 students of second grade in SMP PLUS SALSABILA and the sample were 22 students of VIII A as experimental class and 20 students of VIII B as control class.

In this research, the researcher did an analyze of quantitative data. The data is obtained by giving test to the experimental class and control class. The test divided two types are pre-test and post-test. The researcher gave the pre-test before treatment and post-test was given after treatment. On the test, student should write and than practice in front of the class according the instruction on the task.

The writer identified some result to find out the effect of Cooperative-Discussion-Questioning (COOP-DIS-Q) strategy on speaking ability. They are the score of students before treatment, the score students after treatment and the differences between pre-test and post-test score of students. The writer describes the data in experimental and control class as below:

**Table 4.1**

**The Score of Pre-Test and Post Test in Experiment Class**

| No | Name | Pre-Test | Post-Test |
|----|------|----------|-----------|
| 1 | A | 64 | 70 |
| 2 | A | 57 | 68 |
| 3 | DI | 62 | 75 |
| 4 | EA | 62 | 70 |
| 5 | FY | 48 | 55 |
| 6 | H | 60 | 65 |
| 7 | H | 60 | 72 |
| 8 | IM | 65 | 71 |
| 9 | M | 60 | 67 |
| 10 | MRF | 58 | 65 |
| 11 | MR | 64 | 68 |
| 12 | NK | 49 | 51 |
| 13 | N | 60 | 65 |
| 14 | S | 70 | 75 |
| 15 | S | 68 | 74 |
| 16 | SP | 36 | 45 |
| 17 | SS | 68 | 75 |
| 18 | S | 68 | 74 |
| 19 | S | 59 | 67 |
| 20 | UK | 67 | 75 |
| 21 | WK | 36 | 45 |
| 22 | ZAS | 70 | 80 |
|  |  | **1311** | **1472** |
|  | **X** | **59.59** | **66.90** |

The table above shows the students' scores of pre-test and post-test in experiment class. The scores show the students' speaking in class VIII A as experiment class mostly is less before giving treatment. It can be seen from the scores of pre-test, the highest score of students' is 70 while is the lowest score is 36. Then the highest score of students' speaking is enough while the lowest score of students' speaking is low. Meanwhile, the students' of post-test mostly is good, the highest score is 80 while the lowest score is 45. It can be known that there is an improvement on the criteria of students' score that the highest score is good and the lowest score is low.

To find the mean score, the researcher follows the formula:

$$M_1 = \frac{\Sigma X_2}{N_2}$$

$$= \frac{1472}{22}$$

$$= 66.90$$

$$M_2 = \frac{\Sigma X_1}{N_1}$$

$$= \frac{1311}{22}$$

$$= 59.59$$

Note: $M_1$ = mean

$X_1$ = students' scores (pre-test)

$X_2$ = students' scores (post-test)

N      = number of students

According to the calculation on the table 4.1 of pre-test and post-test assessment in experiment class, it shows that the cumulative value of assessment result before applying Cooperative-Discussion-Questioning (COOP-DIS-Q) strategy is 1311, the average of pre-test is 59.59. Meanwhile, the cumulative of assessment result after applying Cooperative-Discussion-Questioning (COOP-DIS-Q) strategy is 1472, the average of the post-test is 66.90.

Determining mean by formula:

M   = M1 – M2

= 66.90. – 59.59

= 7.31

Note: M  = Mean

M1 = mean of post test

M2 = mean of pre test

From the calculation of mean determining above, it can be known that the average score of pre test and post test (in experiment class) increase in amount of 7.31.

**Table 4.2**

**The Score of Pre-Test and Post Test in Control Class**

| No | Name | Pre-Test | Post-Test |
|----|------|----------|-----------|
| 1 | A | 60 | 63 |
| 2 | A | 38 | 42 |
| 3 | A | 58 | 60 |
| 4 | BY | 60 | 75 |
| 5 | FA | 48 | 57 |
| 6 | H | 39 | 42 |
| 7 | H | 57 | 62 |
| 8 | J | 55 | 57 |
| 9 | K | 62 | 65 |
| 10 | LH | 70 | 73 |
| 11 | MW | 60 | 62 |
| 12 | NSB | 65 | 65 |
| 13 | PA | 75 | 77 |
| 14 | RT | 57 | 59 |
| 15 | S | 66 | 68 |
| 16 | S | 60 | 63 |
| 17 | SP | 38 | 47 |
| 18 | SW | 70 | 72 |
| 19 | W | 57 | 60 |
| 20 | Y | 67 | 68 |
|  |  | **1162** | **1237** |
|  | X | **58.1** | **61.85** |

The table above shows the students' scores of pre-test and post-test in control class. The scores show the students' speaking in class VIII B as control class mostly is low. It can be seen from the scores of pre-test, the highest score of students' is 70 while is the lowest score is 38. Then the highest score of students' speaking is enough while the lowest score of students' speaking is low. Meanwhile, the students' of post-test mostly is less, the highest score is 77 while the lowest score is 42. It can be known that there is an improvement on the criteria of students' score that the highest score is enough and the lowest score is low.

To find the mean score, the researcher follows the formula:

$$M_1 = \frac{\Sigma X_2}{N_2}$$

$$= \frac{1237}{20}$$

$$= \textbf{61.85}$$

$$M_2 = \frac{\Sigma X_1}{N_1}$$

$$= \frac{1162}{20}$$

$$= \textbf{58.1}$$

Note: M1 = mean

X1 = students' scores (pre-test)

X2 = students' scores (post-test)

N = number of students

According to the calculation on the table 4.2 of pre-test and post-test assessment in control class, it shows that the cumulative value of assessment result is 1162, the average of pre-test is 58.1. Meanwhile, the cumulative of assessment result is 1237, the average of the post-test is 61.85.
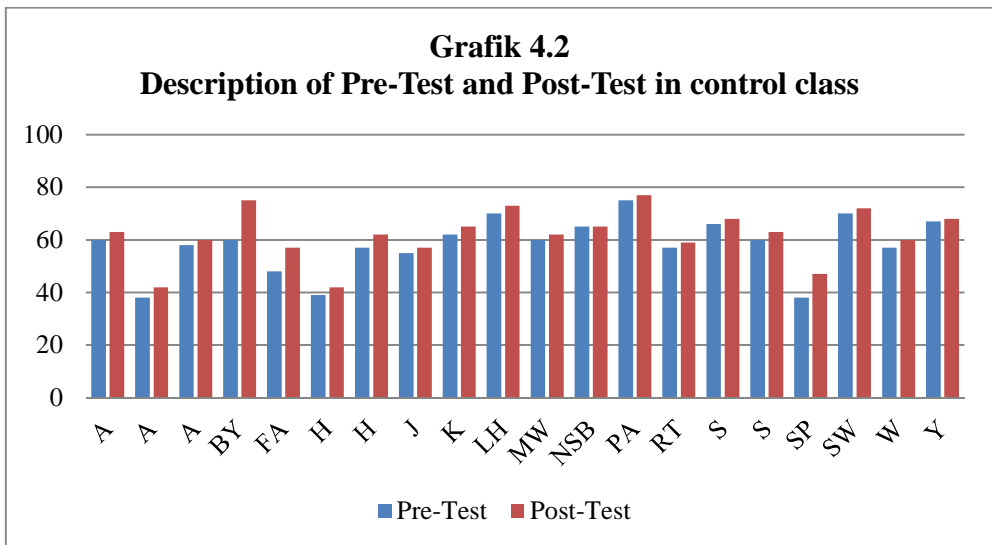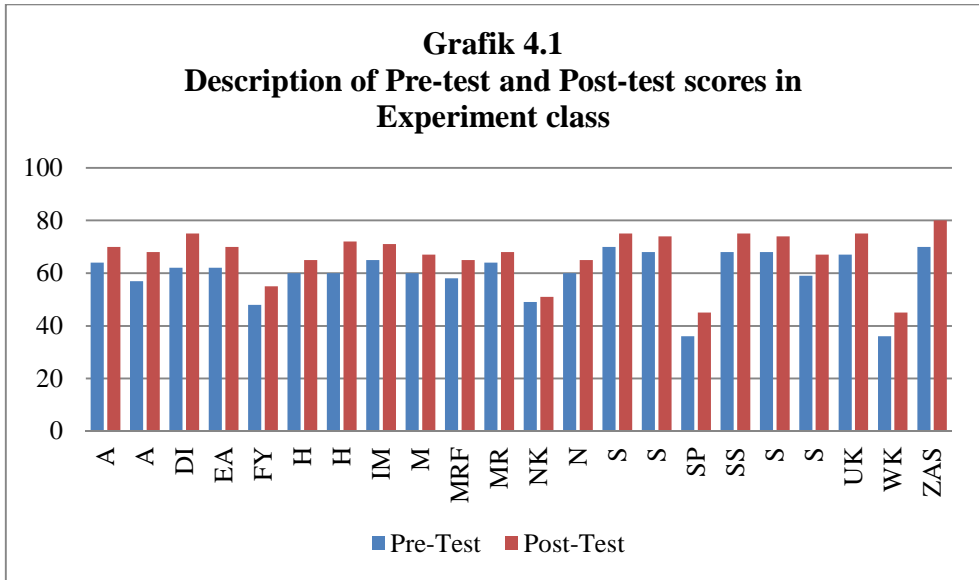
Determining mean by formula:

$M = M1 - M2$

$\quad = 61.85 - 58.1$

$\quad = 3.75$

Note: $M$ = Mean

$\quad M1$ = mean of post test

$\quad M2$ = mean of pre test

From the calculation of mean determining above, it can be known that the average score of pre test and post test (in control class) increase in amount of 3.75.

**Grafik 4.1**
**Description of Pre-test and Post-test scores in Experiment class**



**Grafik 4.2**
**Description of Pre-Test and Post-Test in control class**



## B. The Analysis of Data

After getting the data, the researcher analyzed it using statistic calculation to determine the data. The result of data determining can be seen as follow:

## Table 4.3

## The Score of Frequency Distribution

| No | x1 | x2 | X1 | X2 | $X1^2$ | $X2^2$ |
|---|---|---|---|---|---|---|
| 1. | 70 | 63 | 3.1 | 1.15 | 9.61 | 1.32 |
| 2. | 68 | 42 | 1.1 | -19.85 | 1.21 | -394.02 |
| 3. | 75 | 60 | 8.1 | -1.85 | 65.61 | 3.42 |
| 4. | 70 | 75 | 3.1 | 13.15 | 9.61 | 172.92 |
| 5. | 55 | 57 | -11.9 | -4.85 | -141.61 | -23.52 |
| 6. | 65 | 42 | -1.9 | -19.85 | -3.61 | -394.02 |
| 7. | 72 | 62 | 5.1 | 0.15 | 26.01 | 0.0025 |
| 8. | 71 | 57 | 4.1 | -4.85 | 16.81 | -23.52 |
| 9. | 67 | 65 | 0.1 | 3.15 | 0.01 | 9.92 |
| 10. | 65 | 73 | -1.9 | 11.15 | -3.61 | 124.32 |
| 11. | 68 | 62 | 1.1 | 0.15 | 1.21 | 0.0025 |
| 12. | 51 | 65 | -15.9 | 3.15 | 252.81 | 9.92 |
| 13. | 65 | 77 | -1.9 | 15.15 | -3.61 | 229.52 |
| 14. | 75 | 59 | 8.1 | -2.85 | 65.61 | -8.12 |
| 15. | 74 | 68 | 7.1 | 6.15 | 50.41 | 37.82 |
| 16. | 45 | 63 | -21.9 | 1.15 | -479.61 | 1.32 |
| 17. | 75 | 47 | 8.1 | -14.85 | 65.61 | -220.52 |
| 18. | 74 | 72 | 7.1 | 10.15 | 50.41 | 103.02 |
| 19. | 67 | 60 | 0.1 | -1.85 | 0.01 | -3.42 |
| 20. | 75 | 68 | 8.1 | 6.15 | 65.61 | 37.83 |
| 21. | 45 | - | -21.9 | - | -479.61 | - |
| 22. | 80 | - | 13.1 | - | 171.61 | - |
| | 1472 | 1237 | 5.29 | 0 | 259.5 | 335.80 |

**Note :**

**x1** = Score Post-Test (Experiment Class)     **X1 = x1-M1**

**x2** = Score Post-Test (Control Class)     **X2 = x2-M2**

**X1$^1$**= Squared value of X1     **X2$^2$** = Squared X2

The formula to determine T-table with significance 5%  and 1% as follow:

Df     = N1+N2-2

     = 22+20-2

     = 40 (consult to "t" table score)

Based on t table that there is 40. With df as number 40 is got t table as follow:

a.  At significance level 5% : $t_t = 2.08$

b.  At significance level 1% : $t_t = 2.83$

$$t = \frac{M1-M2}{\sqrt{\frac{\left(\sum X_1{}^2 + X_2{}^2\right)(N1+N_2)}{(N1+N2-2)\,N_1 \cdot N_2}}}$$

$$= \frac{66.90-61.85}{\sqrt{\frac{(259.5+335.80)(22+20)}{(22+20-2)\quad 22.20}}}$$

$$= \frac{5.05}{\sqrt{\left(\frac{595.3}{40}\right)\left(\frac{42}{440}\right)}}$$

$$= \frac{5.05}{\sqrt{\{14.88\}\{0.1\}}}$$

$$= \frac{5.05}{\sqrt{1.48}}$$

$$= \frac{5.05}{1.21}$$

$$= \mathbf{4.17}$$

In general, the scores of post-test in experiment class was better than the scores of post-test in control class. It can be seen from the total amount of the scores of post-test in experiment class was 1472 and pre-test was 1311 and the average score of post-test was 66.90 and pre-test was 59.59, while the total amount of the post-test scores in control class was 1237 and pre-test was 1156, and the average score of post-test was 61.85 and pre-test was 58.1.

According to the result of statistic calculation, it is obtained that the score of $t_o$ is $= 4.17$ degree of freedom is (5)%. The value of 40 is mentioned in the table about 2.08 (as degree of significant).

To prove the hypothesis, the data obtained from the experimental class in calculated by using t-test formula with assumption as follow:

a. If $t_{observation} > t_{table}$ the alternative hypothesis is accepted. It means there is effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability.

b. If $t_{observation} < t_{table}$ the alternative hypothesis is rejected. It means there is no effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability.

**C. Interpretation of the Data**

The analysis is aimed to know the effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability. It has been known that the mean score of experiment class is 66.90 in pre-test and 59.59 in post-test. Seeing the calculation above, the experiment class is improved on 10.31 points. It is better than the control class which is improved on 3.75 points.

Before deciding the result of hypothesis, the researcher proposes the interpretation with procedures as follows:

a.  Ha = $t_{observation}$> $t_{table}$. It means there is effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability.

b.  Ho = $t_{observation}$< $t_{table}$. It means there is no effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability. According to the data, the value of $t_{observation}$ is bigger than $t_{table}$. $t_{observation}$ = 4.17 > $t_{table}$ = 2.08 (5%) or $t_{observation}$ = 4.17 > $t_{table}$ = 2.83 (1%), so $H_o$ is rejected and $H_a$ is accepted.

From the result above, the researcher gives interpreted there is the effect of Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy on student speaking ability. It can be seen that the students get good or better speaking performance in pronunciation, grammar, vocabulary,

fluency, comprehension and also their confidence in speaking English by using Cooperative-Discussion-Questioning (Coop-Dis-Q) strategy.