**CHAPTER IV**

**THE RESULT AND DISCUSSION**

1. **Description of Data**

In this chapter the writer would like to present the description of the data obtained. As writer stated at the previous chapter that the population of the student of SMA Negeri 1 Carenang and the subject of this research is the tenth grade students. In this research, the writer divided them into two classes, 30 students as experimental class, it is from class X MIA 1, and 29 students as control class, it is from X MIA 2.

To find out the effectiveness of project-based learning, the writer identified some result, they are: the score of student before treatment, and the score of student after treatment, the differences between pre-test and post-test scores of students and from the students’ condition between the students who are learning by making a project and the students who are not learning by making a project.

To know the effectiveness of Project-based Learning in Teaching Descriptive Writing, the writer gave the test to students as the sample both at the experimental class and at control class. The test used in this research divided into two types, there are pre-test and post-test, the pre-test is the test that is given before treatment, and the post-test is given after treatment.

The maximum score of contents/ ideas was 30, the maximum score of organization was 20, the maximum score of vocabulary was 20, the maximum score of language use was 25, and the maximum score of mechanic was 5. The highest total score of all criteria as 100, and the lowest score of all criteria was 34. The writer describes the data at experimental and control class as bellow:

1. **Experimental Class**

The writer described the result of a pre-test at the experimental class by the table as follow:

***Table 4.1***

***The Students’ score of pre-test at the experimental class***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Respondents** | **CRITERIA** | | | | | **Score** |
| **Content** | **Organization** | **Vocabulary** | **Language**  **Use** | **Mechanics** |
|
|
| 1 | AP | 20 | 13 | 12 | 11 | 3 | 59 |
| 2 | ADJ | 16 | 10 | 9 | 10 | 2 | 47 |
| 3 | ARI | 13 | 7 | 7 | 5 | 2 | 34 |
| 4 | ARO | 21 | 13 | 11 | 13 | 3 | 61 |
| 5 | AD | 18 | 13 | 12 | 10 | 2 | 55 |
| 6 | AF | 23 | 14 | 15 | 13 | 3 | 68 |
| 7 | BR | 15 | 10 | 10 | 9 | 2 | 46 |
| 8 | DM | 20 | 15 | 14 | 15 | 3 | 67 |
| 9 | EN | 19 | 15 | 17 | 17 | 3 | 71 |
| 10 | ES | 23 | 15 | 14 | 13 | 3 | 68 |
| 11 | FR | 18 | 17 | 16 | 16 | 2 | 69 |
| 12 | HN | 15 | 10 | 13 | 14 | 2 | 54 |
| 13 | II | 14 | 9 | 8 | 7 | 2 | 40 |
| 14 | IR | 22 | 17 | 17 | 20 | 3 | 79 |
| 15 | KM | 20 | 15 | 17 | 15 | 3 | 70 |
| 16 | LA | 25 | 18 | 17 | 19 | 3 | 82 |
| 17 | MK | 16 | 16 | 14 | 15 | 2 | 63 |
| 18 | MF | 16 | 11 | 10 | 10 | 2 | 49 |
| 19 | NH | 13 | 7 | 7 | 5 | 2 | 34 |
| 20 | NS | 17 | 10 | 15 | 17 | 2 | 61 |
| 21 | PA | 23 | 14 | 14 | 13 | 3 | 67 |
| 22 | RM | 17 | 15 | 18 | 15 | 3 | 68 |
| 23 | SN | 20 | 13 | 14 | 12 | 2 | 61 |
| 24 | SD | 15 | 14 | 13 | 13 | 2 | 57 |
| 25 | SG | 22 | 14 | 13 | 12 | 3 | 64 |
| 26 | SDW | 20 | 14 | 12 | 13 | 3 | 62 |
| 27 | SM | 20 | 15 | 14 | 14 | 2 | 65 |
| 28 | TS | 25 | 16 | 15 | 13 | 3 | 72 |
| 29 | VQ | 17 | 15 | 15 | 16 | 3 | 66 |
| 30 | W K | 14 | 7 | 7 | 5 | 2 | 35 |
| N = 30 | | Total Score | | | | | 1794 |
| Average | | | | | 59.8 |

The *Table 4.1* above showed that the result of the students’ pre-test scores on the criteria in writing on descriptive text at the experimental class. The data showed that the maximum score was 82 and the minimum score was 34. One student who got the maximum and two students who got the minimum score. The average score of the pre-test was 59,8.

While the result of a post-test score at the experimental class got better. It can be describe as follow:

***Table 4.2***

***The Students’ score of post-test at the experimental class***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Respondents** | **CRITERIA** | | | | | **Score** |
| **Content** | **Organization** | **Vocabulary** | **Language**  **Use** | **Mechanics** |
|
|
| 1 | AP | 22 | 15 | 16 | 13 | 4 | 70 |
| 2 | ADJ | 20 | 17 | 15 | 16 | 3 | 71 |
| 3 | Ari | 19 | 16 | 17 | 15 | 3 | 70 |
| 4 | ARo | 24 | 17 | 17 | 16 | 4 | 78 |
| 5 | AD | 19 | 13 | 14 | 14 | 3 | 63 |
| 6 | AF | 25 | 20 | 20 | 17 | 4 | 86 |
| 7 | BR | 19 | 13 | 15 | 14 | 3 | 64 |
| 8 | DM | 23 | 18 | 15 | 15 | 3 | 74 |
| 9 | EN | 22 | 15 | 17 | 17 | 3 | 74 |
| 10 | ES | 25 | 18 | 17 | 17 | 4 | 81 |
| 11 | FR | 20 | 17 | 16 | 17 | 3 | 73 |
| 12 | HN | 18 | 16 | 14 | 14 | 3 | 65 |
| 13 | I I | 20 | 17 | 15 | 11 | 3 | 66 |
| 14 | I R | 24 | 18 | 18 | 20 | 4 | 84 |
| 15 | KM | 26 | 19 | 20 | 16 | 3 | 84 |
| 16 | LA | 28 | 19 | 18 | 22 | 4 | 91 |
| 17 | MK | 19 | 17 | 15 | 16 | 3 | 70 |
| 18 | M F | 22 | 18 | 17 | 17 | 4 | 78 |
| 19 | N H | 17 | 11 | 10 | 10 | 2 | 50 |
| 20 | NS | 19 | 17 | 16 | 17 | 3 | 72 |
| 21 | PA | 25 | 19 | 19 | 17 | 4 | 84 |
| 22 | RM | 19 | 16 | 18 | 17 | 3 | 73 |
| 23 | SN | 26 | 19 | 17 | 17 | 4 | 83 |
| 24 | SD | 19 | 16 | 17 | 15 | 3 | 70 |
| 25 | SG | 25 | 19 | 19 | 17 | 4 | 84 |
| 26 | SDW | 25 | 18 | 17 | 18 | 4 | 82 |
| 27 | SM | 26 | 18 | 18 | 17 | 4 | 83 |
| 28 | TS | 28 | 19 | 19 | 23 | 4 | 93 |
| 29 | VQ | 22 | 17 | 17 | 16 | 3 | 75 |
| 30 | WK | 19 | 17 | 15 | 16 | 3 | 70 |
| N = 30 | | Total Score | | | | | 2261 |
| Average | | | | | 75.36 |

The *Table 4.2* above showed that the results of the students’ post-test scores on the criteria of writing descriptive text at the experimental class. The data showed that the maximum score was 93, and the minimum score was 50.

Based on the explanation above, it is showed the result of post-test at the experimental class got the significant improvement after giving treatment, it is seen from the average of the post-test was better than the average of the pre-test, that 59,8<75.36.

1. **Control Class**

The writer describes the result of a pre-test at the control class by the table below:

***Table 4.3***

***The Students’ score of pre-test at the control class***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Respondents** | **CRITERIA** | | | | | **SCORE** |
| **Content** | **organization** | **Vocabulary** | **Language**  **use** | **mechanics** |
|
|
| 1 | AN | 23 | 12 | 13 | 18 | 3 | 69 |
| 2 | AM | 16 | 13 | 14 | 10 | 3 | 56 |
| 3 | AL | 17 | 15 | 15 | 17 | 3 | 67 |
| 4 | AA | 22 | 15 | 13 | 11 | 4 | 65 |
| 5 | AM | 16 | 13 | 10 | 11 | 3 | 53 |
| 6 | AN | 15 | 10 | 14 | 12 | 3 | 54 |
| 7 | BR | 16 | 10 | 10 | 13 | 3 | 52 |
| 8 | EA | 14 | 7 | 8 | 8 | 2 | 39 |
| 9 | EN | 13 | 7 | 7 | 5 | 2 | 34 |
| 10 | FM | 15 | 14 | 13 | 10 | 4 | 56 |
| 11 | HR | 13 | 7 | 7 | 5 | 2 | 34 |
| 12 | IAA | 24 | 16 | 15 | 18 | 3 | 76 |
| 13 | IY | 15 | 10 | 13 | 10 | 3 | 51 |
| 14 | LR | 16 | 10 | 10 | 13 | 3 | 52 |
| 15 | LS | 13 | 7 | 8 | 5 | 2 | 35 |
| 16 | MR | 14 | 8 | 7 | 5 | 2 | 36 |
| 17 | MN | 13 | 10 | 7 | 5 | 2 | 37 |
| 18 | NW | 17 | 12 | 10 | 13 | 3 | 55 |
| 19 | NAF | 18 | 13 | 14 | 15 | 3 | 63 |
| 20 | PD | 13 | 7 | 8 | 5 | 2 | 35 |
| 21 | RN | 14 | 8 | 8 | 7 | 2 | 39 |
| 22 | SA | 14 | 10 | 8 | 8 | 2 | 42 |
| 23 | SN | 15 | 13 | 14 | 15 | 3 | 60 |
| 24 | SH | 15 | 13 | 11 | 12 | 3 | 54 |
| 25 | SD | 16 | 10 | 10 | 11 | 3 | 50 |
| 26 | SM | 16 | 14 | 13 | 10 | 2 | 55 |
| 27 | TM | 20 | 15 | 13 | 13 | 3 | 64 |
| 28 | VK | 21 | 13 | 10 | 14 | 4 | 62 |
| 29 | WWS | 13 | 7 | 7 | 5 | 2 | 34 |
| N = 29 | | Total Score | | | | | 1479 |
| Average | | | | | 51 |

The *Table 4.3* showed that the results of the students’ pre-test scores on the criteria in writing descriptive text at the control class. That the data showed the maximum score was 76, and the minimum score was 34. One student who got the maximum and three students who got the minimum score. The average of score of the pre-test was 51. While the result of a post-test at the control class got better score. It can be described as follow:

***Table 4.4***

***The Students’ score of post-test at the control class***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Respondents** | **CRITERIA** | | | | | **SCORE** |
| **Content** | **organization** | **vocabulary** | **Language**  **use** | **mechanics** |
|
|
| 1 | AN | 24 | 15 | 14 | 18 | 4 | 75 |
| 2 | AM | 16 | 14 | 14 | 11 | 3 | 58 |
| 3 | AL | 20 | 16 | 15 | 16 | 3 | 70 |
| 4 | AA | 25 | 17 | 14 | 12 | 4 | 72 |
| 5 | AM | 20 | 15 | 13 | 17 | 3 | 68 |
| 6 | AN | 17 | 11 | 12 | 15 | 3 | 58 |
| 7 | BR | 22 | 17 | 15 | 13 | 4 | 71 |
| 8 | EA | 15 | 10 | 8 | 8 | 3 | 44 |
| 9 | EN | 15 | 13 | 11 | 12 | 3 | 54 |
| 10 | FM | 17 | 15 | 13 | 10 | 3 | 58 |
| 11 | HR | 15 | 7 | 7 | 6 | 2 | 37 |
| 12 | IAA | 27 | 18 | 18 | 18 | 4 | 85 |
| 13 | IY | 17 | 11 | 13 | 12 | 3 | 56 |
| 14 | LR | 20 | 16 | 15 | 15 | 3 | 69 |
| 15 | LS | 15 | 10 | 10 | 11 | 2 | 48 |
| 16 | MR | 14 | 11 | 10 | 9 | 3 | 47 |
| 17 | MN | 16 | 14 | 10 | 7 | 2 | 49 |
| 18 | NW | 20 | 13 | 11 | 15 | 3 | 62 |
| 19 | NAF | 23 | 16 | 15 | 16 | 4 | 74 |
| 20 | PD | 15 | 8 | 8 | 7 | 3 | 41 |
| 21 | RN | 15 | 13 | 12 | 13 | 3 | 56 |
| 22 | SA | 15 | 14 | 10 | 8 | 3 | 50 |
| 23 | SN | 21 | 14 | 11 | 12 | 4 | 62 |
| 24 | SH | 16 | 13 | 10 | 14 | 3 | 56 |
| 25 | SD | 17 | 12 | 11 | 10 | 4 | 54 |
| 26 | SM | 16 | 14 | 12 | 12 | 3 | 57 |
| 27 | TM | 21 | 15 | 14 | 13 | 3 | 66 |
| 28 | VK | 17 | 16 | 15 | 14 | 3 | 65 |
| 29 | WWS | 16 | 10 | 9 | 10 | 3 | 48 |
| N = 29 | | Total Score | | | | | 1710 |
| Average | | | | | 58.96 |

The *Table 4.4* showed that the results of the students’ post-test scores on the criteria in writing descriptive text at the control class. That the data showed the maximum score was 85 and the minimum score was 37. One student who got the maximum score and one student who got the maximum score. The average score of the post-test was 58,96.

Based on the explanation above, it showed that the result of post-test at the control class got the significant improvement after giving treatment without using project-based learning approach. It is seen from the average of the post-test got better than the pre-test, that 51<58,96.

1. **Data Analysis**
2. **Experimental Class**

The writer analysis the data by comparing students’ score in pre-test and post-test in experimental class. It is explained by the table as follow:

***Table 4.5***

***The different score between pre-test and post-test at experiment class***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Respondents** | TEST | | Deviation (X=X2-X1) | Squarred Deviation (X2) |
|
| Pre-test (X1) | Post-test (X2) |
|
| 1 | AP | 59 | 70 | 11 | 121 |
| 2 | ADJ | 47 | 71 | 24 | 576 |
| 3 | ARI | 34 | 70 | 36 | 1296 |
| 4 | ARO | 61 | 78 | 17 | 289 |
| 5 | AD | 55 | 63 | 8 | 64 |
| 6 | AF | 68 | 86 | 18 | 324 |
| 7 | BR | 46 | 64 | 18 | 324 |
| 8 | DM | 67 | 74 | 7 | 49 |
| 9 | EN | 71 | 74 | 3 | 9 |
| 10 | ES | 68 | 81 | 13 | 169 |
| 11 | FR | 69 | 73 | 4 | 16 |
| 12 | HN | 54 | 65 | 11 | 121 |
| 13 | II | 40 | 66 | 26 | 676 |
| 14 | IR | 79 | 84 | 5 | 25 |
| 15 | KM | 70 | 84 | 14 | 196 |
| 16 | LA | 82 | 91 | 9 | 81 |
| 17 | MK | 63 | 70 | 7 | 49 |
| 18 | MF | 49 | 78 | 29 | 841 |
| 19 | NH | 34 | 50 | 16 | 256 |
| 20 | NS | 61 | 72 | 11 | 121 |
| 21 | PA | 67 | 84 | 17 | 289 |
| 22 | RM | 68 | 73 | 5 | 25 |
| 23 | SN | 61 | 83 | 22 | 484 |
| 24 | SD | 57 | 70 | 13 | 169 |
| 25 | SG | 64 | 84 | 20 | 400 |
| 26 | SD | 62 | 82 | 20 | 400 |
| 27 | SM | 65 | 83 | 18 | 324 |
| 28 | TS | 72 | 93 | 21 | 441 |
| 29 | VQ | 66 | 75 | 9 | 81 |
| 30 | WK | 35 | 70 | 35 | 1225 |
| Total | | ƩX1= 1794 | ƩX2=  2261 | ƩX=  467 | ƩX2=  9441 |

*Table 4.5* above showed that the score difference between pre-test and post-test at the experimental class. The difference score was the results from the post-test scores subtract with pre-test score. There was significant difference score between pre-test and post-test at the experimental class, the biggest difference score was 36 and the lowest difference score was 3. It is described by the graphic below:

***Graphic 4.1***

***The difference score between pre-test and post-test of the experimental class***

*Graphic 4.1* above showed that the results of students’ pre-test and post-test scores on the criteria in writing descriptive text at the experimental class. Data showed the pre-test score, the maximum score was 82, and the minimum score was 34. One student who got the maximum and two student who got the minimum score. For the post-test score, the maximum score was 93 and the minimum score was 50. There is a student who got the maximum score and a student who got the minimum score.

1. **Control Class**

The writer analyszed the data by comparing student’ score in pre-test and post-test at the control class, explaining by the table below:

***Table 4.6***

***The different score between pre-test and post-test at control class***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Respondents | Test | | Deviation  (Y=Y2-Y1) | Squarred  Deviation (Y2) |
| Pre-test (Y1) | Post-test  (Y2) |
|
|
|
| 1 | AN | 69 | 75 | 6 | 36 |
| 2 | AM | 56 | 58 | 2 | 4 |
| 3 | AL | 67 | 70 | 3 | 9 |
| 4 | AA | 65 | 72 | 7 | 49 |
| 5 | AM | 53 | 68 | 15 | 225 |
| 6 | AN | 54 | 58 | 4 | 16 |
| 7 | BR | 52 | 71 | 19 | 361 |
| 8 | EA | 39 | 44 | 5 | 25 |
| 9 | EN | 34 | 54 | 20 | 400 |
| 10 | FM | 56 | 58 | 2 | 4 |
| 11 | HR | 34 | 37 | 3 | 9 |
| 12 | IAA | 76 | 85 | 9 | 81 |
| 13 | IY | 51 | 56 | 5 | 25 |
| 14 | LR | 52 | 69 | 17 | 289 |
| 15 | LS | 35 | 48 | 13 | 169 |
| 16 | MR | 36 | 47 | 11 | 121 |
| 17 | MN | 37 | 49 | 12 | 144 |
| 18 | NW | 55 | 62 | 7 | 49 |
| 19 | NAF | 63 | 74 | 11 | 121 |
| 20 | PD | 35 | 41 | 6 | 36 |
| 21 | RN | 39 | 56 | 17 | 289 |
| 22 | SA | 42 | 50 | 8 | 64 |
| 23 | SN | 60 | 62 | 2 | 4 |
| 24 | SH | 54 | 56 | 2 | 4 |
| 25 | SD | 50 | 54 | 4 | 16 |
| 26 | SM | 55 | 57 | 2 | 4 |
| 27 | TM | 64 | 66 | 2 | 4 |
| 28 | VK | 62 | 65 | 3 | 9 |
| 29 | WWS | 34 | 48 | 14 | 196 |
| Total | | ƩY1= 1479 | ƩY2=  1710 | ƩY=  231 | ƩY2=  2763 |

*Table 4.6* above showed that the score difference between pre-test and post-test at the control class. The difference score was the results from the post-test score subtract pre-test score. There was significant difference scores between pre-test and post-test at the control class, the biggest difference score was 20, and the lowest different was 2.

***Graphic 4.2***

***The different score between pre-test and post-test of control class***

*Graphic 4.2* above showed that the results of the students’ pre-test and post-test scores on the criteria in writing descriptive text at the control class. The Data showed in the pre-test score the maximum was 76, and the minimum was 34. There are a student who got the maximum score and three students who got the minimum score. From the post-test score, the maximum score is 85 and the minimum score is 37. A student who got the maximum score and one student who got the minimum score.

1. **Statistical Hypothesis Testing**

To test the hypothesis the data obtained from both pre-test and post-test are analyzed and calculated by using formula. From the above data is gotten, the writer t-test calculated using steps as follow:

1. Determine mean of score experimental class (MX), with formula:

The result above showed about the average score (mean) of the experimental class. The writer got the data from Ʃx1, Ʃx2, and Ʃx.. Afterwards the researcher calculated the data based on the formula above.

1. Determine mean of score control class (MY), with formula:

The result above showed about the average score (mean) of the experimental class. The writer got the data from ƩY1, ƩY2, and ƩY.. Afterwards the researcher calculated the data based on the formula above.

1. Determine the total square of error in experimental class, with formula:

The result above showed about the score quadrates at the experimental class. The writer got the data from Ʃx1, Ʃx2, Ʃx and Ʃx2. Afterwards she calculated the data based on the formula above.

1. Determine the total square of error in control class, with formula:

840,03

The result above showed about the score quadrates at the control class. The writer got the data from ƩY1, ƩY2, ƩY and ƩY2. Afterwards she calculated the data based on the formula above.

1. Calculate the T-test

**4,22**

1. Determine the with significance 5%

Df =

=

= 57

= 2.00

Based on the calculation above is known that with significant 5% = 2.00, =4,22 > =2,00. it is conclude that the writer rejected Ho:to<: it means there is no significant effect of Project-based Learning approach on students’ writing ability in descriptive text. And accepted Ha:to> tt: it means there is significant effect of Project-based Leearning on students’ writing ability in descriptive text.

From the result of the calculation is obtained the value of the test to 4,22. The writer uses degree of significance of the of 5%. it can be seen that on the df= 57 and on the degree of significance of 5% the value of the degree significance is 2,00, comparing the to with value of degree significance, the result = 4,22 > = 2,00. Since to fromscore obtained from the result of calculating, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected.

1. **Interpretation of Data**

The analysis is aimed to know the effectiveness of Project-based Learning on students' writing ability in descriptive text. We have already known that the mean score of experimental class is 59,8 in pre-test and 75,36 in post-test. But the mean score of control class is 51 in pre-test and 58,96 in post-test. Based on the calculation above, the experiment class gets better than control class.

Before deciding the result of hypothesis, the writer purposes the interpretation toward procedure as follow:

1. If tobservation> ttable : it means there is significant effectiveness between students’ writing ability in descriptive text and using graffiti technique.
2. If tobservation<ttable : it means there is no effectiveness between students’ writing ability in descriptive text using graffiti technique.

According to the data, the value of tobservation  is bigger than ttable . tobservation = 4,22 > ttable = 2,00 (5%) or tobservation 4,22 > ttable = 2,66 (1%), so Ho is rejected and Ha is accepted.

From the result above, the writer give conclusion that it means there is a significant effectiveness of project-based Learning approach on students’ writing ability. It can be seen that the student got better score by project-based learning approach. This could be seen after comparing the score of pre-test (before using project-based learning) and post-test (after using project-based learning).

Project-based learning can be effective because it emphasizes student activity for an in-depth investigation of a topic, students do inland-based research-based learning, so that in this learning the student must see the real case (authentic) of a given topic, deepen the information with analyze the data in collaboration to create various forms of learning outcomes / projects, so that solutions can be found with the creation of an interesting project, the result of the student's own creativity. From the activities that the students do, students become easier to describe something in writing, because students have been exploring and digging information actively and independently. So, the idea of writing to describe something can be easily stated.