**CHAPTER IV**

**RESULT AND DISCUSSION**

1. **The Description of the Research**

In this chapter, the writer will attempt to submit the data as outcomes of research that hold SMAN 19 Balaraja Kabupaten Tangerang. The research is only directed to the students for first grades. The writer divided them into two groups. 38 students as an experimental class from first grades of class IIS 2 and 38 students as a control class from first grades of class IIS 4.

The research compares the achievement of pre-test and post-test, to know whether scrabble game is effective in teaching vocabulary. The writer did an analysis of quantitative data. The data is obtained by giving pre-test and post-test to the experimental class and control class. The pre-test given before given treatment and post-test after given a different treatment both of classes. On the test, the students should answer some questions that given by the writer. In pre-test, the writer has given 25 lists of vocabularies and also post-test.

The students are lack vocabulary before taught by using scrabble game has better achievement it can see from the result if pre-test and post-test.

The writer describes the result of pre-test in experimental class by the table below:

Table 4.1

The Students’ Score of Pre-test at the Experimental Class

|  |  |  |
| --- | --- | --- |
| **No** | **Name** | **Pre-test** |
| 1 | RahayuFajriani | 84 |
| 2 | Bella Risky Utami | 88 |
| 3 | YuliIndriani | 88 |
| 4 | PutriApriliyanti F. | 88 |
| 5 | AnnisNurhidayah | 80 |
| 6 | FitriAlinda S. | 84 |
| 7 | Dendi Faisal R. | 88 |
| 8 | Aufa Ali Zaim | 84 |
| 9 | Sifuana Mega F. | 88 |
| 10 | SeptiAldini | 76 |
| 11 | Nurfadila | 84 |
| 12 | IhzaAlkautsar | 72 |
| 13 | PutriAyu | 44 |
| 14 | M. Ari Alifyan | 88 |
| 15 | Ahmad Irpan S. | 84 |
| 16 | DeviatuSoliha | 64 |
| 17 | IqbalArdiya | 64 |
| 18 | YuyuPadhillah | 72 |
| 19 | Ani | 56 |
| 20 | SitiNurmila | 72 |
| 21 | Ahmad Rezaldi | 76 |
| 22 | M. Akbar Firdaus | 80 |
| 23 | KahfiArif Putra P. | 84 |
| 24 | Adam Hidayat | 56 |
| 25  | Ahmad Rifai | 68 |
| 26 | Sevira Claudia M. | 80 |
| 27 | Hartono Setiawan | 68 |
| 28 | TrisnaPermana A. | 92 |
| 29 | KrisnaMukti | 80 |
| 30 | IkhsalMulyadi | 68 |
| 31 | AmrullahRizky F. | 80 |
| 32 | PutriLidya A. | 88 |
| 33 | M. AndiSetiawan | 84 |
| 34 | M. AllifHilmawan | 84 |
| 35 | RakhisMasyiriqi S.  | 56 |
| 36 | NendiMaulana | 60 |
| 37 | KhaeratunNisa | 76 |
| 38 | Muhammad Adin | 68 |
| N = 38 | Total Score | 2896 |
|  | Average | 76.2 |

The table above shows about the students’ pre-test at the experimental class. The data the highest score of pre-test at the experimental class is 92, it is gotten by one student and the lowest score of pre-test at experimental class is 44, it is gotten by one student and the average score of pre-test is 76.2.

Table 4.2

The Students’ Score of Pre-test at the Control Class

|  |  |  |
| --- | --- | --- |
| **No** | **Name** | **Pre-test** |
| 1 | DeaPuspitasari | 76 |
| 2 | Mega PutriAulia | 80 |
| 3 | MigelYanuar R.  | 84 |
| 4 | Rika Febriayanti | 68 |
| 5 | SitiNurhopipah | 72 |
| 6 | SiskaRini Y. | 72 |
| 7 | PutriRukinah | 76 |
| 8 | FitriAngraeni | 76 |
| 9 | Annisa Dian M. | 76 |
| 10 | Inna Priningsih | 68 |
| 11 | Vania Stephanie | 65 |
| 12 | NurUhrowiyah | 48 |
| 13 | Sri Nengsih | 48 |
| 14 | BayuAdjie N. | 80 |
| 15 | SitiMeliana | 60 |
| 16 | Raja Martahan | 68 |
| 17 | Milawati | 48 |
| 18 | NadilaMaeriska | 52 |
| 19 | Diva Dhea A. | 72 |
| 20 | Juliya Amanda Sari  | 68 |
| 21 | OchaPrianiPutri | 80 |
| 22 | RizkaniFazry | 60 |
| 23 | Putriana Lestari  | 72 |
| 24 | RasmaIta S.  | 64 |
| 25 | YuyunYunita | 56 |
| 26 | ArnetaIndriani | 68 |
| 27 | SitiNurhalizah P.  | 60 |
| 28 | RomiDwi S. | 64 |
| 29 | FarhandikaYusmana P.  | 84 |
| 30 | Ega Putra Vivaldi  | 56 |
| 31 | Wendy Prasetyo | 84 |
| 32 | RahmatHadi | 60 |
| 33 | AriyandoPermana | 64 |
| 34 | Carlos Ricardo  | 68 |
| 35 | FadhilLuthfi P.  | 84 |
| 36 | M. Lufki | 64 |
| 37 | Mila Septiani | 72 |
| 38 | Parhan F.  | 44 |
| N = 38 | Total Score | 2561 |
|  | Average | 67.3 |

The table above shows about the students’ pre-test at the control class. The data the highest score of pre-test at the control class is 84, it is gotten by four students and the lowest score of pre-test at the control class is 44, it is gotten by one student and the average score of pre-test is 67.3.

Table 4.3

The Students’ Score of Post-test at the Experimental Class

|  |  |  |
| --- | --- | --- |
| **No** | **Name** | **Post-test** |
| 1 | RahayuFajriani | 88 |
| 2 | Bella Risky Utami | 92 |
| 3 | YuliIndriani | 92 |
| 4 | PutriApriliyanti F. | 92 |
| 5 | AnnisNurhidayah | 92 |
| 6 | FitriAlinda S. | 88 |
| 7 | Dendi Faisal R. | 92 |
| 8 | Aufa Ali Zaim | 88 |
| 9 | Sifuana Mega F. | 92 |
| 10 | SeptiAldini | 88 |
| 11 | Nurfadila | 88 |
| 12 | IhzaAlkautsar | 84 |
| 13 | PutriAyu | 88 |
| 14 | M. Ari Alifyan | 92 |
| 15 | Ahmad Irpan S. | 88 |
| 16 | DeviatuSoliha | 92 |
| 17 | IqbalArdiya | 68 |
| 18 | YuyuPadhillah | 96 |
| 19 | Ani | 84 |
| 20 | SitiNurmila | 88 |
| 21 | Ahmad Rezaldi | 84 |
| 22 | M. Akbar Firdaus | 92 |
| 23 | KahfiArif Putra P. | 92 |
| 24 | Adam Hidayat | 64 |
| 25  | Ahmad Rifai | 92  |
| 26 | Sevira Claudia M. | 84 |
| 27 | Hartono Setiawan | 80 |
| 28 | TrisnaPermana A. | 96 |
| 29 | KrisnaMukti | 92 |
| 30 | IkhsalMulyadi | 84 |
| 31 | AmrullahRizky F. | 88 |
| 32 | PutriLidya A. | 92 |
| 33 | M. AndiSetiawan | 88 |
| 34 | M. AllifHilmawan | 88 |
| 35 | RakhisMasyiriqi S.  | 60 |
| 36 | NendiMaulana | 76 |
| 37 | KhaeratunNisa | 80 |
| 38.  | Muhammad Adin | 80 |
| N = 38 | Total Score | 3.284 |
|  | Average | 86.4 |

The table above shows about the students’ post-test at the experiment class. The data the highest score of post-test at the experiment class is 96, it is gotten by two students and the lowest score of post-test at the experiment class is 60, it is gotten by one student and the average score of post-test is 86.4.

Table 4.4

The Students’ Score of Post-test at the Control Class

|  |  |  |
| --- | --- | --- |
| **No** | **Name** | **Post-test**  |
| 1 | DeaPuspitasari | 84 |
| 2 | Mega PutriAulia | 92 |
| 3 | MigelYanuar R.  | 88 |
| 4 | Rika Febriayanti | 72 |
| 5 | SitiNurhopipah | 84 |
| 6 | SiskaRini Y. | 76 |
| 7 | PutriRukinah | 80 |
| 8 | FitriAngraeni | 80 |
| 9 | Annisa Dian M. | 80 |
| 10 | Inna Priningsih | 72 |
| 11 | Vania Stephanie | 80 |
| 12 | NurUhrowiyah | 68 |
| 13 | Sri Nengsih | 60 |
| 14 | BayuAdjie N. | 84 |
| 15 | SitiMeliana | 80 |
| 16 | Raja Martahan | 80 |
| 17 | Milawati | 60 |
| 18 | NadilaMaeriska | 56 |
| 19 | Diva Dhea A. | 76 |
| 20 | Juliya Amanda Sari  | 72 |
| 21 | OchaPrianiPutri | 84 |
| 22 | RizkaniFazry | 64 |
| 23 | Putriana Lestari  | 84 |
| 24 | RasmaIta S.  | 76 |
| 25 | YuyunYunita | 68 |
| 26 | ArnetaIndriani | 72 |
| 27 | SitiNurhalizah P.  | 72 |
| 28 | RomiDwi S. | 68 |
| 29 | FarhandikaYusmana P.  | 88 |
| 30 | Ega Putra Vivaldi  | 60 |
| 31 | Wendy Prasetyo | 88 |
| 32 | RahmatHadi | 68 |
| 33 | AriyandoPermana | 72 |
| 34 | Carlos Ricardo  | 72 |
| 35 | FadhilLuthfi P.  | 92 |
| 36 | M. Lufki | 84 |
| 37 | Mila Septiani | 76 |
| 38 | Parhan F.  | 48 |
| N = 38 | Total Score | 2.860 |
|  | Average | 75.2 |

The table above shows about the students’ post-test at the control class. The data the highest score of post-test at the control class is 92, it is gotten by two students and the lowest score of post-test at the control class is 48, it is gotten by one student and the average score of post-test is 75.2.

1. **Data Analysis**

Table 4.5

The difference Score between Pre-Test and Post-Test of Experimental Class

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No**  | **Name**  | **Pre-Test****(x1)**  | **Post-Test****(x2)**  | **Deviation** **(X = x2-x1)**  | **Squared****Deviation (x2)**  |
| 1 | RahayuFajriani | 84 | 88 | 4 | 16 |
| 2 | Bella Risky Utami | 88 | 92 | 4 | 16 |
| 3 | YuliIndriani | 88 | 92 | 4 | 16 |
| 4 | PutriApriliyanti F. | 88 | 92 | 4 | 16 |
| 5 | AnnisNurhidayah | 80 | 92 | 12 | 144 |
| 6 | FitriAlinda S. | 84 | 88 | 4 | 16 |
| 7 | Dendi Faisal R. | 88 | 92 | 4 | 16 |
| 8 | Aufa Ali Zaim | 84 | 88 | 4 | 16 |
| 9 | Sifuana Mega F. | 88 | 92 | 4 | 16 |
| 10 | SeptiAldini | 76 | 88 | 12 | 144 |
| 11 | Nurfadila | 84 | 88 | 4 | 16 |
| 12 | IhzaAlkautsar | 72 | 84 | 12 | 144 |
| 13 | PutriAyu | 44 | 88 | 44 | 1936 |
| 14 | M. Ari Alifyan | 88 | 92 | 4 | 16 |
| 15 | Ahmad Irpan S. | 84 | 88 | 4 | 16 |
| 16 | DeviatuSoliha | 64 | 92 | 28 | 784 |
| 17 | IqbalArdiya | 64 | 68 | 4 | 16 |
| 18 | YuyuPadhillah | 72 | 96 | 24 | 576 |
| 19 | Ani | 56 | 84 | 28 | 784 |
| 20 | SitiNurmila | 72 | 88 | 16 | 256 |
| 21 | Ahmad Rezaldi | 76 | 84 | 12 | 144 |
| 22 | M. Akbar Firdaus | 80 | 92 | 12 | 144 |
| 23 | KahfiArif Putra P. | 84 | 92 | 12 | 144 |
| 24 | Adam Hidayat | 56 | 64 | 8 | 64 |
| 25  | Ahmad Rifai | 68 | 92 | 24 | 576 |
| 26 | Sevira Claudia M. | 80 | 84 | 4 | 16 |
| 27 | Hartono Setiawan | 68 | 80 | 12 | 144 |
| 28 | TrisnaPermana A. | 92 | 96 | 4 | 16 |
| 29 | KrisnaMukti | 80 | 92 | 12 | 144 |
| 30 | IkhsalMulyadi | 68 | 84 | 16 | 256 |
| 31 | AmrullahRizky F. | 80 | 88 | 8 | 64 |
| 32 | PutriLidya A. | 88 | 92 | 4 | 16 |
| 33 | M. AndiSetiawan | 84 | 88 | 4 | 16 |
| 34 | M. AllifHilmawan | 84 | 88 | 4 | 16 |
| 35 | RakhisMasyiriqi S.  | 56 | 60 | 4 | 16 |
| 36 | NendiMaulana | 60 | 76 | 16 | 256 |
| 37 | KhaeratunNisa | 76 | 80 | 4 | 16 |
| 38 | Muhammad Adin | 68 | 80 | 12 | 144 |
|  |  |  |  | 396 | 7152 |

Table 4.6

The difference Score between Pre-Test and Post-Test of Control Class

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No**  | **Name**  | **Pre-Test****(x1)**  | **Post-Test****(x2)**  | **Deviation** **(X = x2-x1)**  | **Squared****Deviation (x2)**  |
| 1 | DeaPuspitasari | 76 | 84 | 8 | 64 |
| 2 | Mega PutriAulia | 80 | 92 | 12 | 144 |
| 3 | MigelYanuar R. | 84 | 88 | 4 | 16 |
| 4 | Rika Febriayanti | 68 | 72 | 4 | 16 |
| 5 | SitiNurhopipah | 72 | 84 | 12 | 144 |
| 6 | SiskaRini Y. | 72 | 76 | 4 | 16 |
| 7 | PutriRukinah | 76 | 80 | 4 | 16 |
| 8 | FitriAngraeni | 76 | 80 | 4 | 16 |
| 9 | Annisa Dian M. | 76 | 80 | 4 | 16 |
| 10 | Inna Priningsih | 68 | 72 | 4 | 16 |
| 11 | Vania Stephanie | 65 | 80 | 15 | 225 |
| 12 | NurUhrowiyah | 48 | 68 | 20 | 400 |
| 13 | Sri Nengsih | 48 | 60 | 12 | 144 |
| 14 | BayuAdjie N. | 80 | 84 | 4 | 16 |
| 15 | SitiMeliana | 60 | 80 | 20 | 400 |
| 16 | Raja Martahan | 68 | 80 | 12 | 144 |
| 17 | Milawati | 48 | 60 | 12 | 144 |
| 18 | NadilaMaeriska | 52 | 56 | 2 | 4 |
| 19 | Diva Dhea A. | 72 | 76 | 2 | 4 |
| 20 | Juliya Amanda Sari | 68 | 72 | 4 | 16 |
| 21 | OchaPrianiPutri | 80 | 84 | 4 | 16 |
| 22 | RizkaniFazry | 60 | 64 | 4 | 16 |
| 23 | Putriana Lestari | 72 | 84 | 12 | 144 |
| 24 | RasmaIta S. | 64 | 76 | 12 | 144 |
| 25  | YuyunYunita | 56 | 68 | 12 | 144 |
| 26 | ArnetaIndriani | 68 | 72 | 4 | 16 |
| 27 | SitiNurhalizah P. | 60 | 72 | 12 | 144 |
| 28 | RomiDwi S. | 64 | 68 | 4 | 16 |
| 29 | FarhandikaYusmana | 84 | 88 | 4 | 16 |
| 30 | Ega Putra Vivaldi | 56 | 60 | 4 | 16 |
| 31 | Wendy Prasetyo | 84 | 88 | 4 | 16 |
| 32 | RahmatHadi | 60 | 68 | 8 | 64 |
| 33 | AriyandoPermana | 64 | 72 | 8 | 64 |
| 34 | Carlos Ricardo | 68 | 72 | 4 | 16 |
| 35 | FadhilLuthfi P. | 84 | 92 | 8 | 64 |
| 36 | M. Lufki | 64 | 84 | 20 | 400 |
| 37 | Mila Septiani | 72 | 76 | 4 | 16 |
| 38 | Parhan F. | 44 | 48 | 4 | 16 |
|  |  |  |  | 295 | 3289 |

From the data gotten above, the writer calculated t-test using some steps, there are:

1. Determining Mean of Score Experimental Class (MX), through formula:

=

= 10.4

1. Determining Mean of Score Control Class (My), through formula:

=

= 7.7

1. Determining the Total Square of Error of Experimental Class (X), through formula:

=

=

=

= 3026

The result above shows about the average score (mean) at experimental class. The writer got the data from. After words the writer calculated the data based on the formula above.

1. Determine the total square of error control class (Y) with formula:

=

=

=

=999

The result above shows about the average score (mean) at control class. The writer got the data from. After words the writer calculated the data based on the formula above.

1. Calculates T-test

Notes:

t =

T = test

M = means of each group from the deviation

X = the deviation of every and

Y = the deviation of every and

N = number of students

t =

t =

t =

t =

t =

t =

t= 2.59

The result above shows about the average score (mean) at experimental class. The writer got the data from. After words the writer calculated the data based on the formula above.

Determine the Degree of Freedom, with formula:

Df = NX + NY – 2

Df = 38 + 38 – 2

Df = 74

The result above shows about the score of samples both experimental and control class. The writer used 76 for research 38 students from X IIS 2 as experimental class and 38 students from X IIS 4 as a control class.

Comparing “t” has tested in calculating (to = 2.59) and df = 74. There is no df (degree of freedom for 74, so the writer used the closer “df” from 76, which has been tested on t-table (tt 5% = 1.68 and tt1% = 2.42). it can be known that to >tt 5% and to > 1%, it means 1.68 < 2.59 > 2.42.

1. **Interpretation of Data**

The data showed that the mean of pre-test scores obtained by students of X IIS 2 as an experimental class = 76.2 and pre-test scores obtained by students of X IIS 4 as a control class = 67.3. The highest score in two classes was different that was class X IIS 2 as an experimental class got 92 and as a control class got 84. The lowest score of pre-test in both classes was 44 for experimental class and 44 also for control class.

 The mean of post-test, score of X IIS 2 as an experimental class = 86.4 was greater that X IIS 4 as a control class = 75.2. The highest score of post-test of X IIS 2 as an experimental class got 96, and X IIS 4 as a control class got 92. The lowest post-test of experimental class 60 and the lowest post-test of control class 48.

 From the interpretation data above t-count > t-table means there is significance effect of using scrabble game.

Testing hypothesis is to know the significant of both variables, and tested as follow:

Ha = to>tt

Ho = to <tt

Ha : Alternative Hypothesis

Ho : Null Hypothesis

To : The value of t- count

Tt : The value of t- table

 To prove the data hypothesis, the data obtained from an experimental class and control class are calculated by using t-test formula with assumption as follows:

 If to > tt: The alternative hypothesis is accepted. It means there is significant effect by using scrabble game on students’ vocabulary.

 If to < tt: The alternative hypothesis is rejected. It means there is no significant by using scrabble game on students’ vocabulary.

From the result calculation above, the of to= 2.59 the degree of freedom (df) = 76. The writer used the degree of significant 5% = 1.68 and 1% = 2.42. It means that Ha (Alternative Hypothesis) of the writer is accepted and Ho (Null Hypothesis) is rejected.

After getting the data, the writer compared it tt both degree of significant 5% and 1% to > tt 5% and to > tt 1%, it means 2.42 < 2.59 > 1.68. It means (Alternative Hypothesis) of the research is accepted.

Based on the criteria above, the writer inferred that her alternative hypothesis (Ha) teaching vocabulary using scrabble game on students’ vocabulary is accepted. On the other hand, null hypothesis (Ho) teaching vocabulary without scrabble game doesn’t effective students’ vocabulary is rejected.

The writer has already known that the average score of pre-test in experimental class is 76.2 and the average score of post-test in experimental class is 86.4 but the average score of pre-test in control class is 67.3 and the average score of post-test in control class is 75.2.

All of the students gave positive response toward the application of the technique. They like to learn English vocabulary through the use of scrabble game technique, no one of them did not like the activity. Besides, all of the students also said that this technique could motivate them in learning and made them easier to learn English vocabulary.

Moreover, from the result of the writer’s view it showed that the students’ motivation was good after given a treatment. It could be seen from the students’ participation during the teaching-learning process and doing the tasks. All of the students looked enjoying the activities in the class. Their attention to the teaching learning activities became more serious and they did the instructions enthusiastically. It also happened when the students were working in the groups. It was observed their activeness in working group and in the following the tournament in every teaching learning activity. As the result, the teaching and learning process ran well in which all of the students got involved in the activity. Besides, during class was conducted, all of them were present that made the teaching learning process could be followed by all students.