CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

In this chapter presents the findings as the result of analysing data. It discussed data description, hypothesis testing, and discussion.

A. Data Description

In this sub chapter the researcher presents the descriptive statistics of the research. The result of the students' writing explanation text on pre-test and post-test. It was given to XI-IPA as experimental group that consist of 26 students and XI-IPS as control group that consist of 25 students. The experimental class which is given the treatment by using clustering technique and the control group which is not given the clustering technique.

The researcher administered a pre-test of writing an explanation text both in control and experimental class. Then, the researcher found the result of students' writing ability both in control and experimental class were under average in writing skill from the result of pre test score in both class. After the pre-test finished, the researcher gave a treatment to the experimental class. The researcher did not give treatment to the control class.

After the treatment finished, the researcher conducted a post-test. The researcher gave the post-test with different format. In control class the researcher asked the students to do the test by using their own technique in writing. On the other hand, in experimental class the researcher asked the students to do the test

by using clustering technique. The students score in pre-test and post-test were presented as follow:

1. **The Students' Score in Experimental Class**
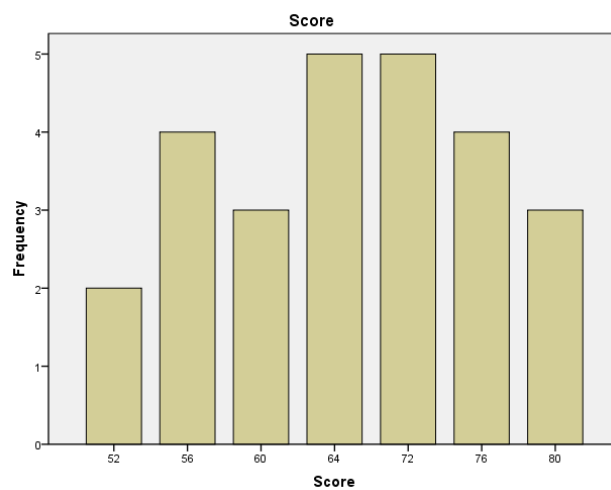
    a. Pre-test of Experimental Class

    The pre-test was done on February 20th, 2019. The subject of study consists of 26 students in XI-IPA. The highest score was 80 and the lowest score was 52. By using SPSS, it was known that the mean of students' score in pre-test was 66.62 the median was 64.00 and the mode was 64.

Table 4.1 Descriptive statistic of Experimental pre-test

Statistics

Score

N	Valid	26
	Missing	0
Mean		66.62
Median		64.00
Mode		64[a]
Minimum		52
Maximum		80

Table 4.2 Frequency of Experimental pre-test

Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 52	2	7.7	7.7	7.7
56	4	15.4	15.4	23.1
60	3	11.5	11.5	34.6
64	5	19.2	19.2	53.8
72	5	19.2	19.2	73.1
76	4	15.4	15.4	88.5
80	3	11.5	11.5	100.0
Total	26	100.0	100.0	

Figure 4.1 Histogram of Experimental pre-test score
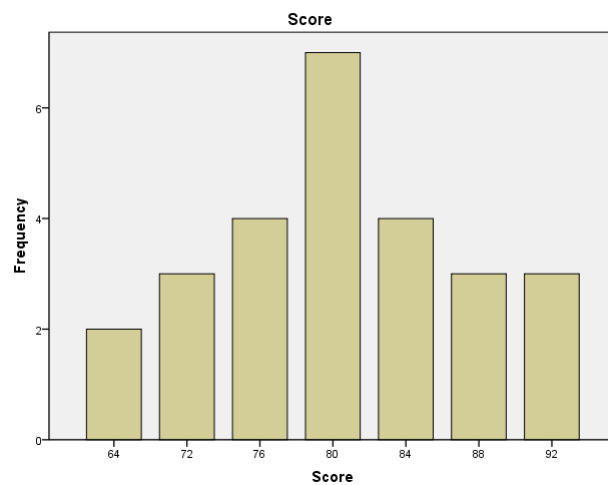
b. The students' score in Post-Test

The post-test was done in February 27th, 2019. The subject of post-test consist of 26 students in XI-IPA. The highest score was 92 and the lowest score was 64. By using SPSS, it was known that the mean of students' score in pre-test was 80.15, the median was 80.00 and the mode was 80.

Table 4.3 Descriptive statistic of Experimental Post-Test

Statistics

Score

N	Valid	26
	Missing	0
Mean		80.15
Median		80.00
Mode		80
Minimum		64
Maximum		92

Table 4.4 Frequency of Experimental Post-test

Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 64	2	7.7	7.7	7.7
72	3	11.5	11.5	19.2
76	4	15.4	15.4	34.6
80	7	26.9	26.9	61.5
84	4	15.4	15.4	76.9
88	3	11.5	11.5	88.5
92	3	11.5	11.5	100.0
Total	26	100.0	100.0	

Figure 4.2 Histogram of Experimental pre-test score

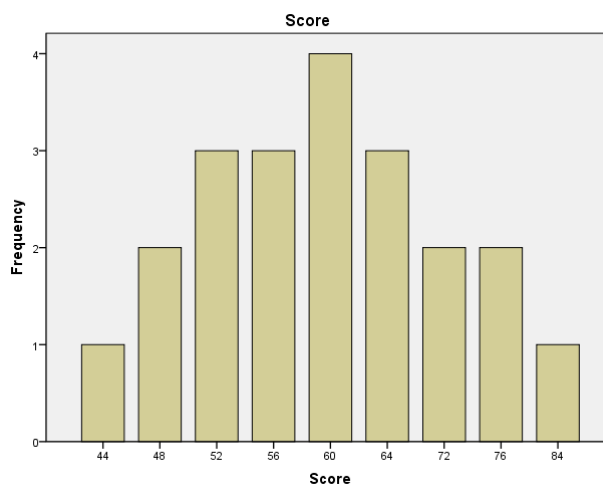**2. The students' score in Control class**

a. Pre-test of Control class

The pre-test was done on February 16th, 2019. The subject of study consists of 25 students in XI-IPS, but there was four of the student that absent since the researcher conducted a research from the first meeting until the last meeting in this class. The highest score was 84 and the lowest score was 44. By using SPSS, it was known that the mean of students' score in pre-test was 60.76 the median was 60.00 and the mode was 60.

Table 4.5 Descriptive statistic of Control Pre-Test

Statistics

Score

N	Valid	21
	Missing	8
Mean		60.76
Median		60.00
Mode		60
Minimum		44
Maximum		84

Table 4.6 Frequency of Control Pre-test

Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	44	1	3.4	4.8	4.8
	48	2	6.9	9.5	14.3
	52	3	10.3	14.3	28.6
	56	3	10.3	14.3	42.9
	60	4	13.8	19.0	61.9
	64	3	10.3	14.3	76.2
	72	2	6.9	9.5	85.7
	76	2	6.9	9.5	95.2
	84	1	3.4	4.8	100.0
	Total	21	72.4	100.0	
Missing	System	8	27.6		
Total		29	100.0		

Figure 4.3 Histogram of Control pre-test score

b. Post-test control class

The post-test was done on February 23th, 2019. The subject of study consists of 25 students in XI-IPS, but there was two of the student that absent since the researcher conducted a research from the first meeting until the last meeting in this class. The researcher conducted the post-test in control class to know the improvement of students' ability in writing explanation text. The highest score was 84 and the lowest score was 52. By using SPSS, it was known that the mean of students' score in pre-test was 68.52 the median was 64.00 and the mode was 64.

**Table 4.7** Descriptive statistic of Control Post-Test

Statistics

Score

N	Valid	23
	Missing	2
Mean		68.52
Median		64.00
Mode		64
Minimum		52
Maximum		84

Table 4.8 Frequency of Control Post-test

Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	52	1	4.0	4.3	4.3
	56	2	8.0	8.7	13.0
	60	1	4.0	4.3	17.4
	64	8	32.0	34.8	52.2
	68	1	4.0	4.3	56.5
	72	4	16.0	17.4	73.9
	76	1	4.0	4.3	78.3
	80	3	12.0	13.0	91.3
	84	2	8.0	8.7	100.0
	Total	23	92.0	100.0	
Missing	System	2	8.0		
Total		25	100.0		

Figure 4.4 Histogram of Control post-test score
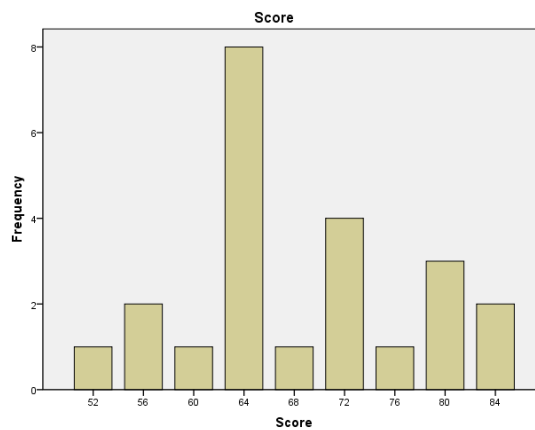
3. The Difference of Statistical Data in Post-test of Control and Experimental Class

The researcher only compared the students score in post-test, because, the students score in pre-test between control group and experimental group were normal. The result of statistical calculation will be shown below:

Table 4.9 Descriptive Statistic Post-test of experimental and control group

Statistics

		Experimental	Control
N	Valid	26	23
	Missing	4	7
Mean		80.15	68.52
Median		80.00	64.00
Mode		80	64
Minimum		64	52
Maximum		92	84

Based on the table above, the highest score of control group was 84 and the lowest was 52. The mode of control group was 64, the median was 64 and the mean was 68.52. While in experimental group the highest score was 92 and the lowest score was 64. The mean of experimental group was 80.15, then the median was 80.00 and the mode was 92.

The result above showed that the experimental group or the class who get the treatment by using clustering technique was bigger than group without get the treatment. There was significance difference of students' score in the test between experimental group who get the treatment and control group without get the

treatment. In other hand, using Clustering Technique is effective to teach writing explanation text towards writing explanation text at the eleventh grade of MA Darul Hikmah Tawangsari Tulungagung.

The researcher used SPSS to know the effectiveness of Clustering Technique to Teach Writing Explanation Text of XI-IPA and XI-IPS in MA Darul Hikmah Tawangsari Tulungagung. These subjects were referred as independent because they were independently from different subject. The result could be seen bellow:

Table 4.10 Group Statistic of Two Group

Group Statistics

Class	N	Mean	Std. Deviation	Std. Error Mean
Experiment	26	80.15	7.630	1.496
Control	23	68.52	9.050	1.887

Based on the result above showed the students' score who were taught by using Clustering Technique as Experimental group and the students' score who were taught without Clustering Technique as Control group. The result showed that the member of students (N) in the experiment class was 23 and the member of students in the control class was 26. The mean of the experimental group was 80.15 while the control group was 68.52. Standard deviation of experimental

group was 7.630 and the control group was 9.050. Then the standard deviation of experimental group was 1.496 and the control group was 1.887.

B. Hypothesis Testing

The hypothesis testing of this research are as follows:

1. If P-value < α, H_0 is rejected

It means that there is significance differences between experimental and control class or the Clustering Technique is effective to Teach Writing Explanation Text in MA Darul Hikmah Tawangsari Tulungagung.

2. If P-value ≥ α, H_0 is not rejected

It means that there is no significance differences between experimental and control class or the Clustering Technique is not effective to Teach Writing Explanation Text in MA Darul Hikmah Tawangsari Tulungagung.

Table 4.11 The Result of Analysing Independent Sample T Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
						Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	T	df				Lower	Upper
Nilai	Equal variances assumed	1.733	.194	4.881	47	.000	11.632	2.383	6.838	16.426
	Equal variances not assumed			4.830	43.300	.000	11.632	2.408	6.776	16.488

The result on the table above showed that the P-value or sig was 0,000 and smaller than 0,005. So, the null hypothesis is rejected, it can be stated that the Clustering Technique is effective to Teach Writing Explanation Text at the Eleventh Grade of MA Darul Hikmah Tawangsari Tulungagung.

C. The Result of Normality and Homogeneity Testing

1. The Result of Normality Testing

Normality testing is used to determine whether a data set is well-modeled by normal distribution or not. A data can be normal if it has a normal distribution. Normality testing in this research is done to pre-test and post-test score in both experimental and control group. The researcher analyzed by using statistical instrument (SPSS) 18 *One-Sample Kolmogorov-Smirnov Test* by the value significance (α) = 0,05. The result can be seen below :

Table 4.12 Normality Testing

One-Sample Kolmogorov-Smirnov Test

		Pretest	Posttest
N		96	102
Normal	Mean	69.46	82.48
Parameters[a,b]	Std. Deviation	11.390	1.123
Most Extreme	Absolute	.142	.175
Differences	Positive	.142	.175
	Negative	-.120	-.168
Kolmogorov-Smirnov Z		1.396	1.771
Asymp. Sig. (2-tailed)		.041	.032

a. H_0 : Data is in normal distribution

b. H_1 : Data is not normal distribution

Based on the result above is known that the significance value from pre-test was 0.41 and it is bigger than 0.05 (0.41>0.05), it means that H_0 is accepted and H_1 is rejected, so, the data is in normal distribution. While, the result of the significance value of post-test was 0.32 and it is bigger than 0.05 (0.32>0.05), it means that H_0 is accepted and H_1 is rejected, so, the data is in normal distribution. Thus, it can be concluded that both pre-test and post-test are in normal distribution

2. The Result of Homogeneity Testing

Homogeneity testing is intended to prove that sample taken from the population have the same variance and show no significant difference. The researcher analysed the data by using *Test of Homogeneity of Variance* with statistical instrument (SPSS) 18 by the value of significance (α) = 0,05. The result can be seen bellow :

Table 4.13

Homogeneity Testing

Homogeneity of variances

Levene Statistic	df1	df2	Sig.
1.733	1	47	.194

a. H_0 : Data is homogeny

b. H_1 : Data is not homogeny

Based on the table above, the test is homogeny because the significance value was 0.194 it means bigger than 0.05 and it means that H_0 is accepted and H_1 is rejected. It can be concluded that the students of XI-IPA has homogeny of variances.

D. Discussion

In this part, the researcher present the discussion of analysed data that has been presented in the previous sub chapter.

This research talked about the use of Clustering Technique to Teach Writing Explanation Text at the Eleventh Grade of MA Darul Hikmah Tawangsari Tulungagung. This research used quasi-experimental design. This part was intended to analyze the result of research finding based on the related theory. All data collected from the research instrument provided information of the research finding. The result of the students' score was calculated by using t-test.

Based on the research method in chapter III. In this research, the teaching and learning process was divided into three steps both in experimental and control class. First step, the researcher administering pre test to know the student's writing ability. The second step was given treatment by using clustering technique in writing explanation text in experimental class and without using clustering technique to the control class. After getting treatment both in experimental and control class, the writer conducted post-test to know the

achievement the students' score in writing explanation text after get the treatment.

In the previous sub chapter, stated that the null hypothesis is rejected. It means that the Clustering Technique is effective to Teach Writing Explanation Text at the Eleventh Grade of MA Darul Hikmah Tawangsari Tulungagung. In conclusion, the Clustering Technique is effective to use in teaching writing explanation text. The previous researchers also had proved that clustering technique could be effective to teach writing explanation text. It was supported by some researchers, from research journal of social sciences, conducted by Triza, et al (2016). From the research finding, it could be concluded that the clustering technique has given significant effect towards students' writing skill of narrative text. They concluded that clustering technique could improve students' writing ability in generating ideas and so that it can be a strategy for teaching writing.

As Phar and Shanti (2005:34) stated that in clustering technique, the students write the topic centre of a paper then write the ideas suggested by the topic around it connecting the topic with lines, follow the same procedure with their main topic. By that statement, the researcher believe that the clustering technique will give a big effect to the students for teaching writing explanation text.

The other recommendations that are research conducted by Adriati (2013), her research investigated the use of clustering technique in teaching writing narrative text. Clustering technique was effective in improving students' score in

writing narrative text. Also, students' response to the technique was positive as clustering had several strengths. The result stated that clustering technique was effective in improving students' score in writing narrative text. Clustering technique was very helpful as it became the savings' of words which were needed in writing the narrative text, eased the plot construction, made a new alternative to writing with or without other brainstorming technique, empowered imagination, and created fun atmosphere in learning

Finally, the conclusion of this discussion was the students' of experimental group have better score than control group. It can be concluded that the Clustering Technique is effective to Teach Writing Explanation Text at the Eleventh Grade of MA Darul Hikmah Tawangsari Tulungagung.