CHAPTER IV

FINDINGS AND DISCUSSION

This chapter presents two main sections, they are findings and discussion. The research finding consists of two main parts: the description of data which discusses the characteristics of each variable, and the hypothesis testing which explains the result of the statistic computation, and it reveals whether or not the null hypothesis is rejected. The discussion explains descriptions of the result of the entire study.

A. Findings

1. The Description of Data

The presentation of data provided some calculations including the highest score, the lowest score, the mean score and the standard deviation of experiment and control classes. The total sample of this research was 50 students, which was consisted of 23 students from experimental group and 27 students from control group. The data of this research are pre-test and post-test score of experimental and control group. The detail explanations about the research result as follows;

a. **Experimental Group**

The data of experimental class are divided into two parts they are pre-test score and post-test score. The data of pre-test score and post-test score of the experimental group are explained as follows.

1. The Data of pre-test

Before giving treatment on the experimental group, the researcher conducted pre-test. The data of pre-test were used to know the equality of the experiment and control group. Here are the result of pre-test;

Table 4.1 Students' Pre-Test Result in Experimental Group

No	Name	Score
1	**ANF**	52
2	**ANH**	56
3	**EMA**	56
4	**FNA**	60
5	**IRJ**	56
6	**ML**	56
7	**NMU**	56
8	**NK**	60
9	**NIZ**	64
10	**RFS**	64
11	**RNR**	60
12	**RY**	64
13	**SFM**	60
14	**SAM**	60
15	**SAIM**	56
16	**SCPA**	68
17	**SDA**	64
18	**SAF**	60
19	**SD**	60
20	**SAR**	64
21	**UIM**	36
22	**ZN**	64
23	**ZA**	68

The scores were gained from students texts that was calculated by using the scoring rubric (see research instrument). Based on the result of statistic calculation by using SPSS 16.0 version, the mean score was 59,30; Median score was 60; Mode was

60; and the standard deviation was 6,567. The maximum score was 68 and the minimum score was 36. Then the sum was 1364. The result from SPSS 16.0 can be seen as the table below;

Table 4.2 Descriptive analysis of pre-test in experimental group

Statistics

Experiment_pre

N	Valid	23
	Missing	0
Mean		59.30
Std. Error of Mean		1.369
Median		60.00
Mode		60
Std. Deviation		6.567
Variance		43.130
Range		32
Minimum		36
Maximum		68
Sum		1364

The frequency and percentage of the score in experimental group pre-test can be seen as the following table;

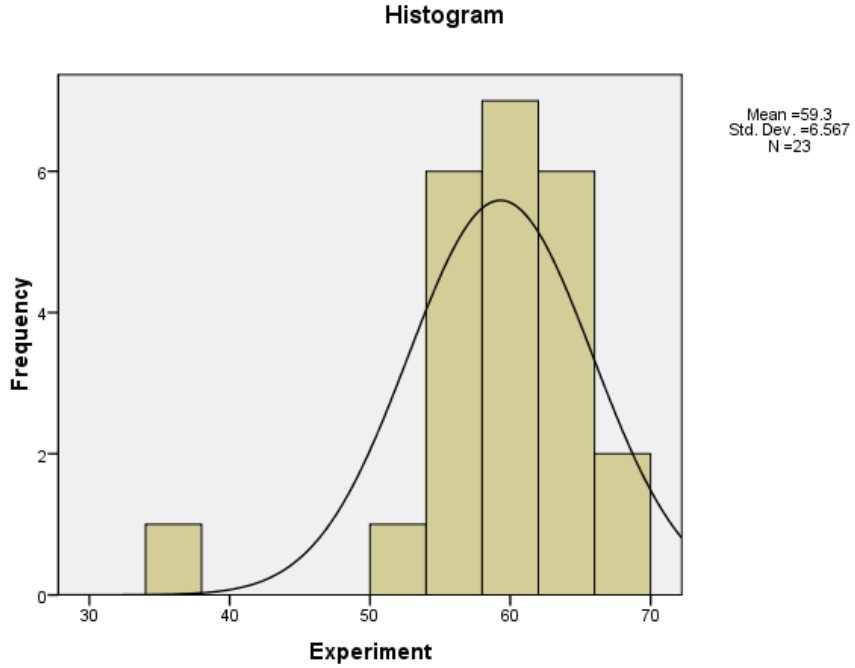
Table 4.3 Frequency and percentage of experimental group pre-test score

Experiment_pre

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	36	1	4.3	4.3	4.3
	52	1	4.3	4.3	8.7
	56	6	26.1	26.1	34.8
	60	7	30.4	30.4	65.2
	64	6	26.1	26.1	91.3
	68	2	8.7	8.7	100.0
	Total	23	100.0	100.0	

Based on the table above, the students who got score 36 was only one (4,3%). The students who got score 52 was only one (4,3%). The students who got score 56 were six (26,1%). The students who got score 60 were seven (30,4%). The students who got score 64 were six (26,1%). The students who got score 68 were two (8,7%). The histogram chart is presented as follows.

Table 4.4 Histogram chart of pre-test score in experimental group



2. The Data of post-test

After giving treatment (peer review activity) on the experimental group, the researcher conducted post-test. Here are the result of post-test;

Table 4.5 Students' post-test result in experimental group

No	Name	Score
1	**ANF**	76
2	**ANH**	74
3	**EMA**	84
4	**FNA**	84
5	**IRJ**	76
6	**ML**	86
7	**NMU**	74
8	**NK**	86
9	**NIZ**	78
10	**RFS**	76
11	**RNR**	72
12	**RY**	74
13	**SFM**	86
14	**SAM**	76
15	**SAIM**	82
16	**SCPA**	80
17	**SDA**	76
18	**SAF**	88
19	**SD**	84
20	**SAR**	88
21	**UIM**	82
22	**ZN**	76
23	**ZA**	78

The scores were also gained from students texts that was calculated by using the same scoring rubric. Based on the result of statistic calculation by using SPSS 16.0 version, the mean score was 79,83; Median score was 78; Mode was 76; and the standard deviation was 5,078. The maximum score was 88 and the minimum score was 72. Then the sum was 1836. The result from SPSS 16.0 can be seen as the following table;

Table 4.6 Descriptive analysis of post-test in experimental group

Statistics

Experiment_post

N	Valid	23
	Missing	0
Mean		79.83
Std. Error of Mean		1.059
Median		78.00
Mode		76
Std. Deviation		5.078
Variance		25.787
Range		16
Minimum		72
Maximum		88
Sum		1836

The frequency and percentage of the score in experimental group post-test can be seen as the following table below.

Table 4.7 Frequency and percentage of experimental group post-test score

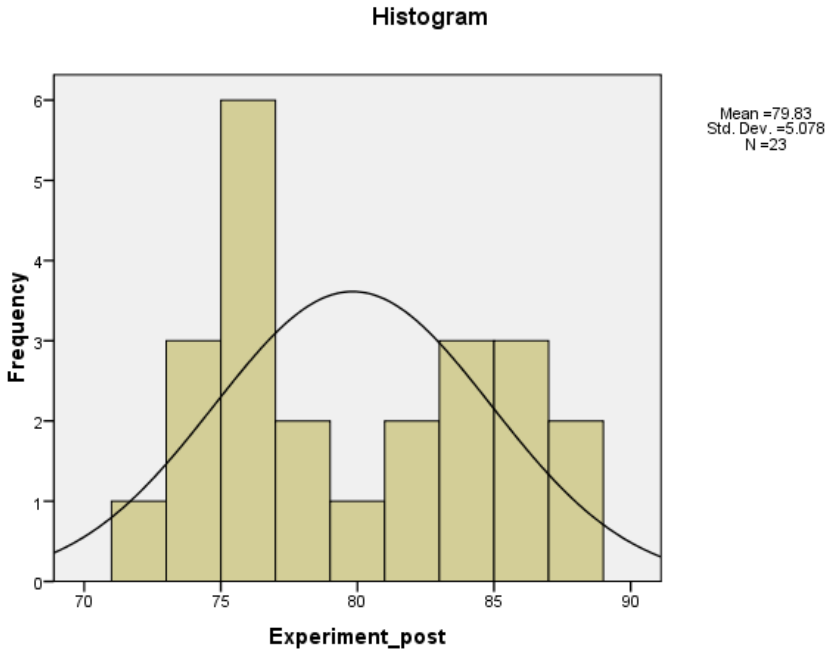
Experiment_post

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	72	1	4.3	4.3	4.3
	74	3	13.0	13.0	17.4
	76	6	26.1	26.1	43.5
	78	2	8.7	8.7	52.2
	80	1	4.3	4.3	56.5
	82	2	8.7	8.7	65.2
	84	3	13.0	13.0	78.3
	86	3	13.0	13.0	91.3
	88	2	8.7	8.7	100.0
	Total	23	100.0	100.0	

Based on the table above, the students who got score 72 was only one (4,3%). The students who got score 74 were three (13%).

The students who got score 76 were six (26,1%). The students who got score 78 was only two (8,7%). The students who got score 80 was only one (4,3%). The students who got 82 were two (8,7%). The students who got score 84 were three (13%). The students who got score 86 were three (13%). The students who got score 88 were two (8,7%). The histogram chart is presented as follows.

Table 4.8 Histogram chart of post-test score in experimental group



b. **Control Group**

The data of control class are also divided into two parts they are pre-test and post-test score. The data of pre-test score and post-test score of the control group are explained as follows.

1. The Data of pre-test

Before giving recount text material on the control group, the researcher conducted pre-test. The data from pre-test were used to know the equality of the control and experimental group. Here are the result of pre-test;

Table 4.9 Students' pre-test result in control group

No.	Name	Score
1	**AAZN**	68
2	**AK**	64
3	**AIAA**	68
4	**BSM**	64
5	**DRZ**	60
6	**DFO**	60
7	**FIS**	60
8	**FNT**	60
9	**GZSPP**	56
10	**HED**	56
11	**IHN**	68
12	**JN**	56
13	**KAF**	60
14	**MIA**	56
15	**MMIA**	52
16	**MSAZ**	68
17	**MAMI**	52
18	**MZ**	56
19	**NA**	56
20	**NMPA**	72
21	**PSM**	64
22	**RCD**	64
23	**STS**	60
24	**SPS**	52
25	**UF**	60
26	**YDA**	56
27	**YMK**	64

The scores were also gained from students texts that was calculated by using the same scoring rubric. Based on the result of statistic calculation by using SPSS 16.0 version, the mean score was 60,44; Median score was 60; Mode was 56; and the standard deviation was 5,473. The maximum score is 72 and the minimum score is 52. Then the sum was 1632. The result from SPSS 16.0 can be seen as follows.

Table 4.10 Descriptive analysis of control group pre-test

Statistics

Control pre

N	Valid	27
	Missing	0
Mean		60.44
Std. Error of Mean		1.053
Median		60.00
Mode		56[a]
Std. Deviation		5.473
Variance		29.949
Range		20
Minimum		52
Maximum		72
Sum		1632

a. Multiple modes exist. The smallest value is shown

The frequency and percentage of the score in control group pre-test can be seen as the following table.

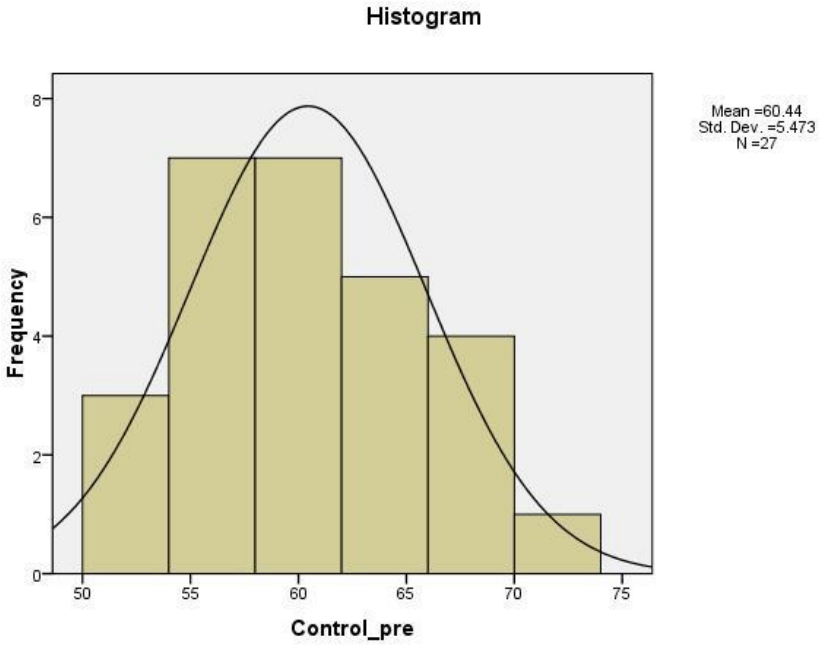
Table 4.11 Frequency and percentage of control group pre-test score

Control_pre

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	52	3	11.1	11.1	11.1
	56	7	25.9	25.9	37.0
	60	7	25.9	25.9	63.0
	64	5	18.5	18.5	81.5
	68	4	14.8	14.8	96.3
	72	1	3.7	3.7	100.0
	Total	27	100.0	100.0	

Based on the table above, the students who got score 52 were three (11,1%). The students who got score 56 were seven (25,9%). The students who got score 60 were seven (25,9%). The students who got score 64 were five (18,5%). The students who got score 68 were four (14,8%). The students who got score 72 was only one (3,7%). The histogram chart is presented as follows.

Table 4.12 Histogram chart of pre-test score in control group



2. The Data of post-test

After giving Recount Text material by using conventional method, the researcher conducted post-test. Here are the result of post-test;

Table 4.13 Students' post-test result in control group

No.	Name	Score
1	**AAZN**	74
2	**AK**	70
3	**AIAA**	76
4	**BSM**	76
5	**DRZ**	72
6	**DFO**	70
7	**FIS**	76
8	**FNT**	74
9	**GZSPP**	80
10	**HED**	76
11	**IHN**	82
12	**JN**	74
13	**KAF**	86
14	**MIA**	70
15	**MMIA**	70
16	**MSAZ**	74
17	**MAMI**	70
18	**MZ**	74
19	**NA**	76
20	**NMPA**	80
21	**PSM**	76
22	**RCD**	74
23	**STS**	80
24	**SPS**	72
25	**UF**	86
26	**YDA**	76
27	**YMK**	76

The scores were also gained from students texts that was calculated by using the same scoring rubric. Based on the result of statistic calculation by using SPSS 16.0 version, the mean score was 75,56; Median score was 76; Mode was 76; and the standard deviation was 4,449. The maximum score was 86 and the minimum score was 70. Then the sum was 2040. The result from SPSS 16.0 can be seen as follow.

Table 4.14 Descriptive analysis of control group post-test

Statistics

Control_post

N	Valid	27
	Missing	0
Mean		75.56
Std. Error of Mean		.856
Median		76.00
Mode		76
Std. Deviation		4.449
Variance		19.795
Range		16
Minimum		70
Maximum		86
Sum		2040

The frequency and percentage of the score in control group post-test can be seen as the following table.

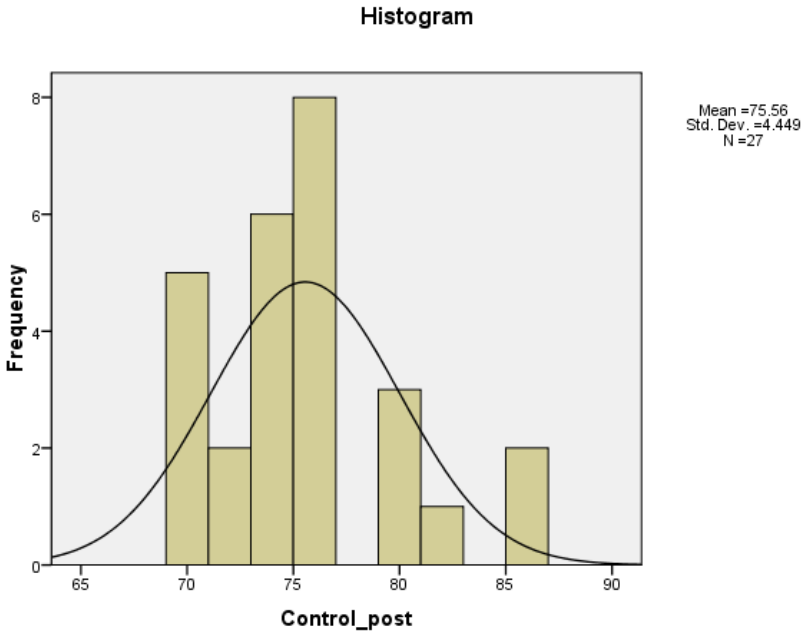
Table 4.15 Frequency and percentage of control group post-test score

Control_post

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	70	5	18.5	18.5	18.5
	72	2	7.4	7.4	25.9
	74	6	22.2	22.2	48.1
	76	8	29.6	29.6	77.8
	80	3	11.1	11.1	88.9
	82	1	3.7	3.7	92.6
	86	2	7.4	7.4	100.0
	Total	27	100.0	100.0	

Based on the table above, the students who got score 70 were five (18,5%). The students who got score 72 were two (7,4%). The students who got score 74 were six (22,2%). The students who got score 76 were eight (29,6%). The students who got score 80 were three (11,1%). The students who got score 82 was only one (3,7%). The students who got score 86 were two (7,4%). The histogram chart is presented as follows.

Table 4.16 Histogram chart of post-test score in control group



2. Hypothesis Testing

After showing all the data that have been collected through pre-test and post-test, in this part the researcher tests the hypothesis. Before going to the hypothesis testing, the researcher presents the normality and homogeneity testing result, as follows.

a. Normality Testing Result

Normality testing is used to know the data in the research are normally distributed or not. This testing is also determined the parametric or non-parametric test that would be used by the researcher later. Here are the result of normality testing;

Table 4.17 Normality testing result of pre-test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	group	Statistic	df	Sig.	Statistic	df	Sig.
Skor RT	experimental	.220	23	.005	.804	23	.000
	control	.162	27	.067	.935	27	.093

a. Lilliefors Significance Correction

Table 4.18 Normality testing result of post-test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Group	Statistic	df	Sig.	Statistic	df	Sig.
Skor RT	Experimental	.209	23	.010	.909	23	.039
	Control	.238	27	.000	.894	27	.010

a. Lilliefors Significance Correction

Because the sample were only 50 students, in this case the researcher used normality testing result of Shapiro-Wilk. The normality testing result

of pre-test showed that the data from experimental group is 0,000 and control group is 0,093. From here it can be known that the experimental group are not normally distributed because it is lower than 0,05, while the control class are normally distributed because it is higher than 0,05.

Then, from the table of normality testing result of post-test above, it could be known that the normality testing result of experimental group having *p-value* = 0,039 and it is lower than 0,05 so that the data from experimental group are not normally distributed. Whether the normality testing result of control group is, *p-value* = 0,010 and it is also lower than 0,05 so that the data from control group are also not normally distributed.

The data presents not normally distributed because there were many samples (experimental group) got the score lower than the mean (79,83) than higher than the mean, so that it is not equal. Also, the frequency in average score is not the highest. The highest frequency comes from the score that is under the mean, it is 76, even though the frequency in the lowest and highest score is almost the same. In control group showed different thing, there were many students got the score higher than the mean (75,56). The frequency in average score is high, but unfortunately, the samples who got the lowest score is higher in frequency than the samples who got the highest score.

b. Homogeneity Testing Result

This test is used to know the variables are equal in variance or not. In deciding the variable is homogenous or not, it was compared with α =

0,05, if the result shows that it is higher than α, then it is homogenous, and if the result shows that it is lower than α then it is heterogeneous. Here are the result of homogeneity testing by using SPSS 16.0 version;

Table 4.19 Homogeneity testing of pre-test

Test of Homogeneity of Variances

Skor RT

Levene Statistic	df1	df2	Sig.
.001	1	48	.982

Table 4.20 Homogeneity testing of post-test

Test of Homogeneity of Variances

Skor RT

Levene Statistic	df1	df2	Sig.
2.898	1	48	.095

Based from the table above, it can be known that in Homogeneity testing of pre-test result, Sig. is 0,982 and it is higher than 0,05; so that both of the class is homogenous. While in Homogeneity testing of post-test result is 0,095, it is also higher than 0,05. So that in here those groups/samples are having homogeneous variance.

c. Hypothesis Testing

In hypothesis testing, the researcher compared the data of post-test. Previously, the normality testing showed that both of the classes were not normally distributed. Therefore, the researcher used non-parametric test. The researcher used Mann-Whitney U Test. Mann-Whitney U Test is one of non-parametric test which is used when the normality assumption of the *t* test for two independent samples are not gained (Sheskin, 2000 : 291).

Before presenting the result of the hypothesis testing, here are the hypothesis that were used by the researcher:

1. H_0 (The null hypothesis): There is no significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method.
2. H_a (The alternative hypothesis): There is significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method.

The researcher compared the data of post-test in experimental group and control group to give a decision on reject or not rejected the null hypothesis. In that case, there were guidelines of when the null hypothesis can be rejected or not. The guidelines are;

a. If *p-value/Sig* < α, Ho is rejected.

b. If *p-value/Sig* ≥ α, Ho is not rejected.

The statistical calculation was done by using SPSS 16.0 version to get the *p-value* score. The result of the test that has been done are presented on the table below;

Table 4.21 Mann-Whitney U test result for Post-Test

Test Statistics[a]

	Skor RT
Mann-Whitney U	162.500
Wilcoxon W	540.500
Z	-2.926
Asymp. Sig. (2-tailed)	.003

a. Grouping Variable: Group

From the table above, the SPSS output results in the z-value -2,926, with the *p-value* is 0,003, but it is still for two-tailed test. Since, this research is one-tailed, so that the researcher divided it into two; $\frac{0,003}{2}$ = 0,0015. It could be concluded that *p-value* (0,0015) < α (5% = 0,05), so that H_a that states there is significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method is not rejected, whether H_o that states there is no significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method is rejected.

B. Discussion

The researcher conducted test twice, they were pre-test and post-test. Both of them having different function. From the pre-test, it could be known that the two classes were the same. Besides that, the researcher also knew that both of them were weak in creating long text, connecting each sentences, using preposition, grammar, especially for Recount Text material (like Simple Past, Past Continuous, and Present Perfect), even they were still not too careful in mechanics aspect, like using capitalization and also punctuation. It was also found many works were misspelling.

After conducted the pre-test, the researcher gave Recount Text material to the control class. When the researcher gave the material, samples from A.19 MIPA 4, they were easy to understand. It was because the teaching was still in the morning at 08.40 – 10.20, and the English teaching was after *Prakarya* class. They were also

very easy to focus on the material. The reason that could happened was because they were still on their good condition to achieve learning. It is in accordance with Pope (2016: 1) statement that students is more productive in the morning than in the afternoon. His research result shows that having English material in the morning may increase the students' score than in the afternoon.

Different from the control class, the English teaching was done on experimental class at 11.45 – 13.15. They also just finished the Chemistry class for three hours of lesson time (it is 135 minutes). The researcher found that they were tired and also around 5 until 7 students always asked permission to go out (going to the toilet or buy water) before the teaching started, it disturbed all the concentration of the students in the class when they backed to the class. The researcher had to create a fun atmosphere so that they could focus on the learning. It needed time longer to get them understand. When they were asked to make a work, they also spent longer time. The difference stamina and changes in students learning ability are proven can decrease their productivity (Pope, 2016).

Even though the experimental class needed extra time, all the treatments were done well by them. At the first treatment, they reviewed and gave advice on the outline and the coherence of each part of their friends work, but they had to spend more time than the prediction. The second/last treatment was done in online meeting, through WhatsApp group. The researcher asked them one by one to give review consists of comment, suggestions, and score on their friends' work. After they sent back to the researcher, then the researcher made a WhatsApp group. All the reviews from the experiment class were sent there, and the researcher asked

them to pay attention on the review of their own texts. After sending them, the researcher concluding all mistakes that often made by them on their texts.

The post-test between control and experiment group were done in different learning method. The control class was offline meeting whether the experimental group in *online meeting*. The time of the meeting was also different, the experimental group meeting was a week after the control class meeting, and it was affecting the post-test. When the researcher had to do a post-test, unfortunately the students of A.19 and A.18 were on holiday because the school hold an exam for the A.17 class (3rd grade) around two weeks. It was stopped on that time, because the researcher wanted to do the same thing (offline meeting) to the experiment class. When the holiday was ended, the meeting of the experiment class were delayed again because of the President policy to preventing the transmission of coronavirus. So the researcher conducted the last treatment and post-test of the experimental group a month and a half later.

The time for the treatment and post-test were made different because not all students need to spent time to give review on their friends' work. After the researcher asked them one by one to give a review, the researcher gave around one until two days. Then, when they finished that, the researcher resent all the reviews to the group and also concluding their mistakes that mostly done. The question and answer were also done on the online meeting.

The post-test was done at the right schedule of English teaching and it also spent the same time even it was online meeting. It needed around 60 minutes. Even

not all of them sending their work on time, because of the signal, they could sent it all.

The post-test result is functioned to know whether peer review is effective to improve the writing achievement or not. From the post-test result, it could be seen that the experiment group got higher score than the control group. The mean of the experimental group was 79,83 and the control group was 75,56, from that result it is known that using peer review is proven effective to improve the students' achievement in writing.

By using Mann-Whitney U Test, the researcher compared the data of post-test from both of the groups to reject or not rejected H_o. Based on the result that is showed in table 4.21 above, *p-value* is 0,003, but it is still for two-tailed test. Since, this research is one-tailed, so that the researcher divided it into two, equals 0,0015. The significance level is 0,05. From the result of the test, It could be concluded that *p-value* (0,0015) < α (5% = 0,05), so that H_a that states there is significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method is not rejected, whether H_o that states there is no significant difference in writing achievement between students who are taught by using peer review and those who are taught by using conventional method is rejected. In other words, it can be stated that peer review is considered to be effective for improving writing achievement in Recount Text.

When the researcher checked on the experimental class' tests, they could do better, especially on grammar, preposition use, mechanics (punctuation,

capitalization, and spelling), and content, even in indentation. For the students who got score over the mean, they made the text with good content on each paragraph (but the lower score also did this), good control of grammar, few mistakes in preposition (only 2-8 mistakes in the whole text), and also paying attention on the indentation.

Regarding on the result of data analysis above, it's also strongly with the previous studies as stating that peer review is considered as an effective strategy toward students' skill in writing that may improve their achievement. The first is a research by Husna (2017). Using pre-experimental research design, the result of the research showed that the students' ability is increased more after using peer review practice, moreover it could motivate students to write more and enjoy writing activity. The mean score of the post-test by previous study was 69, 07, and this experimental post-test score was 79,83. It means that the mean of this research was higher than the previous study.

Another research was conducted by Arifiana (2015) under the tittle "Improving Students' Skill in Writing Recount Text by Using Peer Review Technique (A Classroom Action Research of the Eighth Grade Students of SMPN 4 Batang Year 2014/2015). The result of the research shows that using peer review technique as a learning technique gave improvement to students' skill in writing to gain a better score in Recount Text. It was proved by the increasing score of the sample, the writing score in pre-test was 63, then it increased to 74,29 in formative test, and finally in the post-test became 79,50. The improvement of students'

writing skill were in organization, content, grammar, punctuation, and style and quality of expression.

But it should be known that in this research, about the organization aspect of the text were just the same (control and experiment). Even the experimental class were weak on stating their idea on reorientation than the control class. They missed in giving their personal opinion about the importance of the topic that was selected. In experimental class, only four students who complete the Re-orientation part of the text perfectly, but in control class eight students could give it. It could happen because the learning was around one month and a half delayed for this material, so that the students might be forget the material.

In using the vocabulary in writing the text, both of them were also the same. Sometimes, the researcher found some words that were not appropriate, and also having wrong noun phrase structure.

The different was in stating each sequence of the story, the experimental class could state that in a good order and complete than the control group. Unfortunately, there were total nine students who have the same recount text, although not all of them having the same topic. Six students having the same topic with the same texts, even the same mistakes, except one of them. Whether three students having the same topic, they had nearly the same text. Most of them collected their work in Ms. Word form, it could lead to the copy-paste assumption. Or it might be they just write all the text that they got from Google translate without checking the mistakes first. The post-test of experimental class was conducted in online situation, which could make students do dishonesty easily in a test. McGee

(2013) stated that online learning may increase a chance of dishonesty, for the example is plagiarism. Dietz-Uhler (2011) added that students may copy the text from internet and claim it as their work. Moreover, he also stated that cheating are possible to be done in online situation. Students may copy the answers from another with their permission, through the use of technology.

What should be underlined was that most of the experimental class could improve better in grammar, preposition use, content, indentation and mechanics (punctuation, capitalization, and spelling). The experimental class did better than the control class. The improvement of the class was confirmed what Pagani (2002) stated that peer review is a tool for change, and also what Lundstrom & Baker (2009) claimed that peer review has an effect on improving student writing abilities. In other words, peer review is effective to improve the writing skill in Recount Text material, especially on grammar, preposition use, mechanics (punctuation, capitalization, and spelling), indentation, and content that affect in achieving the score.