CHAPTER IV
RESULT AND DISCUSSION

This chapter discusses about the results of the research which have been conducted by the researcher in SMP Muhammadiyah 10 Surabaya in order to answer the research question that has been mentioned before. They are result, data analysis, and discussion.

4.1. Result

This research had done since 17th April 2017 to 18th May 2017. The researcher conducted a pretest to both control and experimental group to get that both of them have an equal ability in writing skill. The first step which was done by the researcher is conducting pretest to both of control and experimental group. After conducting pretest, the researcher scored the pretest of control and experimental class based on Osima's & Hogue's rubric assessment. After that, the data is calculated using Microsoft Excel and SPSS 20.0. They will be explained below.

4.2 Data Analysis
4.2.1 Normality Test

After the conducted pretest in experiment and control group, the researcher will analyze the normality of the data for both two classes. The researcher used nonparametric test to analyze the data. The sample of the data is 20 students. It can be seen from table below.

Table 4.1 Normality test of Experiment and Control class inpretest

One-Sample Kolmogorov-Smirnov Test

		Exp_class	Cont_class
N		20	20
Normal Parameters[a,b]	Mean	62.98	64.55
	Std. Deviation	8.253	8.150
Most Extreme Differences	Absolute	.248	.214
	Positive	.151	.147
	Negative	-.248	-.214
Kolmogorov-Smirnov Z		1.111	.957
Asymp. Sig. (2-tailed)		.169	.319

a. Test distribution is Normal.

b. Calculated from data.

Based on the table above show that the significance value of experimental group in pretest is $0.169 > \alpha$ (0.05) and the significance value of control group in pretest is $0.319 > \alpha$ (0.05). The significance value of both groups are higher than α (0.05). It means that H0 is accepted. So, the test distribution of both two groups is normal. Then, the posttest will be analyzed. This table below is the result of normality test of experimental and control class in posttest.

Table 4.2 Normality test of Experiment and Control class in posttest

One-Sample Kolmogorov-Smirnov Test

		Exp_class	Cont_class
N		20	20
Normal Parameters[a,b]	Mean	89,55	85,45
	Std. Deviation	6,444	5,889
Most Extreme Differences	Absolute	,134	,129
	Positive	,134	,073
	Negative	-,126	-,129
Kolmogorov-Smirnov Z		,599	,577
Asymp. Sig. (2-tailed)		,865	,893

a. Test distribution is Normal.

b. Calculated from data.

It can be seen from table above, the table shows that the significance value of experimental group in posttest is $0.865 > \alpha$ (0.05) and the significance value of control group in posttest is $0.893 > \alpha$ (0.05). The significance value of both groupsare higher than α (0.05). It means that H_0 is accepted and H_1 is refused. So, the test distribution of both two groups is normal.

4.2.2 Homogeneity test

After the calculated the normality test, the researcher would like to find the homogeneity test between experimental and control class in pretest because the pretest score of both experimental and control group are homogeneous. The purpose of homogeneous is to know the population has same characteristics or intelligences in writing skill. It can be seen below.

Table 4.3 Homogeneity test

Test of Homogeneity of Variances

Score

Levene Statistic	df1	df2	Sig.
.241	1	38	.626

The criteria of homogeneity are If *p value* is higher than α (0.05), H_0 is accepted. It means that the ability of both experimental and control group is homogeneous. But if the *p value* is lower than α (0.05). It means that student's ability of both experimental and control group is not homogeneous.

Based on table above, it can be seen that *p* value is higher than α (0.05). It can be seen *p* value 0,626>0.05 it means that H_0 is accepted and H_1 is refused. So, the student's ability of both experimental and control class is homogeneous.

4.2.3 Reliability of Pretest

According to Brown (2004; 20), he states that consistency and dependable of measurement. Dr. M. Soenardi (2008; 186) states that there are two Rater Reliability. They are Intra-rater reliability and Inter-rater reliability.

In this research, the purpose of reliability is to measure the reliable by scoring in five components based on Osima's & Hogue's rubric assessment. For measuring, the researcher is using inter-rater reliability. It means that there are two raters for scoring of pretest both experimental and control class. The first rater is the English teacher in SMP Muhammadiyah 10 Surabaya. The second rater is the researcher itself. The pretest is calculated by using SPSS 20.0 to know whether two raters are reliable or not to give some score. Then the data was analyzed by using Correlation Pearson Product Moment. It can be seen below *(see appendix 8).*

Table 4.4 Reliability of Pretest in Experimental Class

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.954**
	Sig. (2-tailed)		.000
	N	20	20
Rater_2	Pearson Correlation	.954**	1
	Sig. (2-tailed)	.000	
	N	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

Based on Table above, it means that the score of pretest in experimental class are reliable. It means that score of pretest in experimental Class is reliable. It can be seen from rater 1 and rater 2 are 0.954**. It showed that the level of correlation of the data is very strong. So, the result of reliability test of pretest in experimental class is reliable. Based on the criteria of degree of freedom (df=20 with sig. 5%). It shows that the score of rtable is 0,444 so if the sig (0.954**) large than rtable (0,444). It means that the data is valid.

Table 4.5 Reliability of Pretest in Control Class

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.963**
	Sig. (2-tailed)		.000
	N	20	20
Rater_2	Pearson Correlation	.963**	1
	Sig. (2-tailed)	.000	
	N	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

Based on Table above, it means that score of pretest in control class is reliable. It means that score of pretest in Control Class is reliable. It can be seen from rater 1 and rater 2 are 0.963**. It showed that the level of correlation of the data is very strong. So, the result of reliability test of pretest in Control group is reliable. Based on the criteria of degree of freedom (df=20 with sig. 5%). It shows that the score of rtable is 0,444 so if the sig (0.963**) large than rtable (0,444). It means that the data is valid.

4.2.4 Reliability of Posttest

The researcher also used inter-rater reliability to calculate the posttest score. It means that there are two raters for scoring of pretest both experimental and control class. From explanation before, the first rater is the English teacher in SMP Muhammadiyah 10 Surabaya. The second rater is the researcher itself. The data of posttest is calculated by using SPSS 20.0. Then the researcher analyzed by using Correlation Pearson Product Moment. It can be seen below *(see appendix 9)*.

Table 4.6 Reliability of Posttest in Experimental Class

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	**,939**[**]
	Sig. (2-tailed)		**,000**
	N	20	20
Rater_2	Pearson Correlation	**,939**[**]	1
	Sig. (2-tailed)	**,000**	
	N	20	20

Correlations

**. Correlation is significant at the 0.01 level (2-tailed).

Based on table above, it means that the instrument of pretest in experimental class is reliable. It means that score of posttest in experimental Class is reliable. It can be seen from rater 1 and rater 2 are 0.939**. It showed that the level of correlation of the data is very strong. So, the result of reliability test of posttest in experimental class is reliable. Based on the criteria of degree of freedom (df=20 with sig. 5%). It shows that the score of rtable is 0,444 so if the sig (0.939**) large than rtable (0,444). It means that the data is valid.

Table 4.7 Reliability of Posttest in Control Class

		Rater_1	Rater_2
Correlations			
Rater_1	Pearson Correlation	1	,894**
	Sig. (2-tailed)		,000
	N	20	20
Rater_2	Pearson Correlation	,894**	1
	Sig. (2-tailed)	,000	
	N	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

Based on Table above, it means that the instrument of pretest in control class is reliable. It means that score of posttest in control class is reliable. It can be seen from rater 1 and rater 2 are 0.894**. It showed that the level of correlation of the data is very strong. So, the result of reliability test of posttest in control class is reliable. Based on the criteria of degree of freedom (df=20 with sig. 5%). It shows that the score of rtable is 0,444 so if the sig (0,894**) large than rtable (0,444). It means that the data is valid.

4.2.5 The pretest score of both classes

The researcher listed the name of both experimental and control class students and the result of pretest as can be seen the table in the next page.

Table 4.8 The Pretest score of both classes

Students' Number	Passing Grade	Score of Pretest	
		Experimental	Control
1	75	49	60
2	75	51	58
3	75	71	70
4	75	54	74
5	75	61	43
6	75	59	72
7	75	47	56
8	75	69	71
9	75	69	52
10	75	69	70
11	75	60	70
12	75	72	57
13	75	71	69
14	75	58	69
15	75	70	72
16	75	61	66
17	75	72	71
18	75	60	68
19	75	72	65
20	75	69	62
Average		63	65

The table above shows that, the passing grade of this research is 75, it is based on passing grade of English lesson in SMP Muhammadiyah 10. The result score in pretest shows that the minimum score in experimental is 47 And the maximum score is 72 Meanwhile, the minimum score in control is 52 and maximum score is 74 whereas, the maximum score that must be reached is 100.

4.2.6 The posttest score of both classes

After conducting the treatment in experimental class, the researcher also gave the posttest in the students of both experimental and control class. It purpose to measure how effective this method in teaching writing. The posttest score is the table in the next page.

Table 4.9 The Posttest score of both classes

Students' Number	Passing Grade	Score of Protest	
		Experimental	Control
1	75	76	84
2	75	81	82
3	75	97	84
4	75	83	89
5	75	87	88
6	75	88	69
7	75	81	89
8	75	88	83
9	75	88	82
10	75	89	82
11	75	95	88
12	75	100	86
13	75	86	77
14	75	94	81
15	75	97	93
16	75	91	91
17	75	97	94
18	75	97	88
19	75	89	87
20	75	87	92
Average		89	85

The table below shows that the minimum score in experimental class after the students got treatment is 76 and the maximum score is 100. Meanwhile, the minimum score in control class which is not given treatment is 69 and the maximum score is 94. Whereas, the maximum score must be reached is 100.

4.2.7 T-Test Calculation

4.2.7.1 T-Test Calculation of pretest

After calculated normality and homogeneity test for both experimental and control class, it calculated the mean scores of experimental and control classes. It to know the scoring and compare means the result of pretest between experimental group and control class. The researcher compared the result score of pretest to find the difference between experimental and control group before treatment applied. Whereas, the researcher compare the result score of posttest between experimental and control class to identify whether Edmodo Application is effective or not in teaching writing Descriptive Text.

In this research took 20 students in each experimental and control class for pretest. For knowing the differences of score, the researcher is using SPSS 20.0. it can be seen below.

Table 4.10 Mean Scores of Control and Experimental class in Pretest

Report

Score

Class	N	Mean	Std. Deviation	Minimum	Maximum
Experimental class	20	62.97	8.253	47	72
Control class	20	64.55	8.150	43	74
Total	40	63.76	8.135	43	74

From table above shows that both experimental and control group consist of 20 students. the minimum of score of experimental was 47 and the maximum score was 72 whereas the minimum score of control group was 43 and the maximum score was 74. Furthermore, the table shows that the mean score of experimental group was 62.97 and control group was 64.55. So, the researcher find out that the score of experimental class lower than control class. Then, the researcher analyzes using Independent Sample T-Test. It can be seen below.

Table 4.11 Independent Sample Test Result of Pretest

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
Score	Equal variances assumed	.241	.626	-.607	38	.547	-1.575	2.594	-6.825	3.675	
	Equal variances not assumed			-.607	37.994	.547	-1.575	2.594	-6.826	3.676	

From the table above, it can be seen that the significant value of Levene's Test for Equality of Variances is $0.626 > \alpha$ (0.05). It means that the significant value is larger than 0.05. So, for knowing the result of t-test for Equality of Means, the researcher see the first line in the table sig. (2-tailed) which refers to Equal variances assumed. So, it can be seen that the sig.(2-tailed) of t-test for Equality of Means is 0.547 is larger than 0.05, so H0 is accepted and H1 is refused. It means that there is no different significant between experimental and control group. So it said that writing skill ability between two groups here (experimental and control group) were same or equal at the beginning of the research.

4.2.7.2 T-test calculation of posttest

After administering pretest in both of control and experimental group, the treatment is applied by using Edmodo Application in experimental class which is control class did not get any treatment like in experimental.

After given the treatment in experimental class, The researcher conducted the posttest in both class between control and experimental class. Posttest was given to find out the significance different of the students' writing skill in writing

descriptive text between control and experimental group before and after treatment. Then all of the data was calculated use SPSS 20.0 to analyze the score both two classes with the Independent T-test analysis. It can be seen below.

Table 4.12 Mean Scores of Control and Experimental class in Posttest

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Exp_class	20	89,55	6,444	76	100
Cont_class	20	85,45	5,889	69	94

From the table above shows that both experimental and control group consist of 20 students. the minimum of score of experimental was 76 and the maximum score was 100 whereas the minimum score of control group was 69 and the maximum score was 94. Furthermore, the table shows that the mean score of experimental group was 89.55 and control group was 85.45. So, the researcher had find out that the score of experimental class higher than control class. then, the researcher analyzes using Independent Sample T-Test. It can be seen below.

Table 4.13 Independent Sample test of Experimental class in Posttest

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper
Score	Equal variances assumed	,320	,575	2,100	38	,042	4,100	1,952	,148	8,052
	Equal variances not assumed			2,100	37,696	,042	4,100	1,952	,147	8,053

From the table above, it can be seen that the sig.(2-tailed)is 0.042 < 0.05 so H_0 is refused and H_1 is accepted. It means that the mean scores of experimental and control group in posttest have the significant different with 95% Confidence Interval of the Difference. So that, there is significant different in the mean scores between control and experimental group after having class using Edmodo Application in writing descriptive text.

4.2.7.3 Paired sample of T-test

       After calculated all of the pretest and posttest score, the pretest and posttest of experimental class was analyzed using Paired sample of T-test in SPSS 20.0. it can be seen table below.

Table 4.14 Paired sample of pretest and posttest in Experimental Class

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	posttest – pretest	26,350	6,572	1,469	23,274	29,426	17,932	19	,000

       From the table above, it shows that the mean scores of paired sample t-test between posttest and pretest in experimental group is 26.350 with standard deviation 6.572. The sig. (2-tailed) here shows $0.000 < \alpha$ (0.05). So that H_0 is rejected and H_1 is accepted. It means that there is significant difference (progress) between posttest and pretest in experimental group.

4.2.8 Eta Squared

The purpose of Eta squared is to measure the effect size of treatment was given,a calculation of eta squared was done by the reasearcher. The calculation of this research can be seen below.

$$EtaSquared = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

$$EtaSquared = \frac{2,100^2}{2,100^2 + (20 + 20 - 2)}$$

$$EtaSquared = \frac{4,41}{4,41 + 38}$$

$$EtaSquared = \frac{4,41}{42,41} = 0,10$$

From the calculation above, it shows that 0,10 is larger than 0,06 so it gives large effect. It means, the null hypothesis is rejected and the alternative hypothesis is

accepted. So, Edmodo Application is effective in teaching writing descriptive text at seventh grades in SMP Muhammadiyah 10 Surabaya.

4.2.9 Questionnaire

After the data was given, the researcher give the students in Experimental class is Questionnare. The purpose of questionnaire is to know how the response students after treatment by using Edmodo application in writing text at seventh of junior high school in SMP Muhammadiyah 10, Surabaya. The questionnaire consists of eight questions in form checklist. *(see appendix 12).* The result can be seen below.
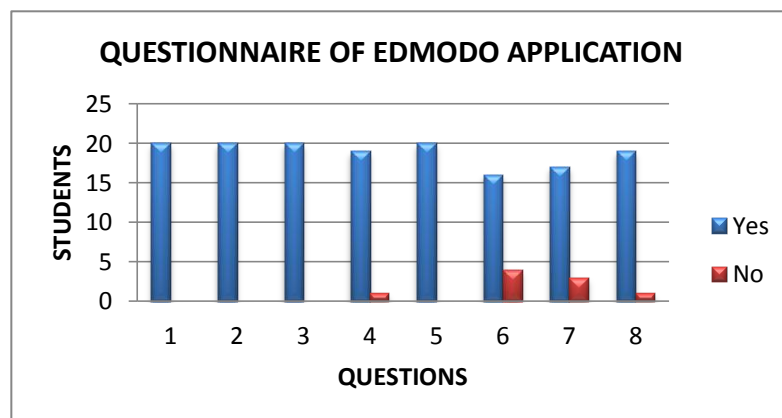

Chart 4.2.9.1 Percentages of Students' response

Based on diagram above, it shows that:

In the first question, "Do you agree that Edmodo Application is used in teaching writing descriptive text in the school?" There are 20 students answered yes and there is no students answered No. It proves that 100% students agree that Edmodo Application is used in teaching writing descriptive text in the school.

In the second question, "Do you prefer learning descriptive text by using Edmodo Application?" There are 20 students answered Yes and there is no students answered No. It proves that 100% students prefer Edmodo Application used in descriptive text.

In the third question, '"Is learning descriptive text using Edmodo Application interesting for you?". There are 20 students answered Yes and there is no students answered No. It proves that 100% students are interesting in learning descriptive text using Edmodo Application.

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In the fourth question, "Are the implementation of Edmodo Application in teaching writing descriptive text useful for you?" There are 19 students answered Yes and 1 student answered No. It means that 95% students agree that the implementations of Edmodo Application in teaching writing descriptive text are useful.

In the fifth question, "Do Edmodo Application helps you to know more about descriptive text?" There are 20 students answered Yes and there is no students answered No. It proves that 100% students agree that Edmodo Application help the students to know more about descriptive text.

In the sixth question, "Do Edmodo Application give you more creative or idea in writing descriptive text?" In this question, there are 16 students answered Yes and 4 students answered No. It proves that 80% students agree that Edmodo Application give the students more creative or idea in descriptive text.

In the seventh question, "Can Edmodo Application make your time more efficient in writing descriptive text?" There are 17 students answered Yes and only 3 student answered No. It proves that 85% students agree that Edmodo Application make the students' time more efficient in writing descriptive text.

In the eighth question, " Do you agree if Edmodo Application can be used to learn other skills such as reading, speaking and listening in English?". There are 19 students answered Yes and 1 student answered No. It means that 95% students agree that Edmodo Application can be used to learn other skills.

From the explanation above, it means that most of the students agree that Edmodo Application are interesting and useful in writing descriptive text. It proves that the students' response about teaching writing descriptive text using Edmodo Application is positive. So it can be conclude that teaching writing descriptive text using Edmodo Application at the seventh grades of junior high school in SMP Muhammadiyah 10 Surabaya is effective.

4.3 Discussion

First point is score of paired test sample. it can be concluded that the use of Edmodo Application in teaching writing descriptive text at SMP Muhammadiyah 10 Surabaya give a significant effect. It is showed that the students of experimental

group get a better score than control group in writing descriptive text in posttest. Then the experimental class also gets the significant different result after having class using Edmodo Application in writing descriptive text. So it can be said that using Edmodo Application is effective technique in teaching writing descriptive text. So there is different significant of student's ability between both two classes who taught by using Edmodo Application or not.

T-test calculation of pretest by using Independent Sample test. The result is the significant value of Levene's Test for Equality of Variances is $0.626 > \alpha$ (0.05). It means that the significant value is larger than 0.05. So, for knowing the result of t-test for Equality of Means, the researcher see the sig. (2-tailed) which refers to Equal variances assumed. So, it can be seen that the sig.(2-tailed) of t-test for Equality of Means is 0.547 is larger than 0.05, so H0 is accepted and H1 is refused. It means that there is no different significant between experimental and control group. So it can said that writing skill ability between two groups here (experimental and control group) were same or equal at the beginning of the research.

After gave the pretest in experimental and control class, the researcher gave the treatment in experimental class by using Edmodo Application in writing descriptive text. Than the researcher gave posttest to both two classes. Based on table 8, it shows the mean of experimental is higher than control class. The experimental class got 89.55 and control group got 85.45. Beside that, the independent sample test is the sig.(2-tailed)is $0.042 < 0.05$ so H_0 is refused and H_1 is accepted. It means that the mean scores of experimental and control group in posttest have the significant different with 95% Confidence Interval of the Difference. It seems that the treatment that was given to the experimental group was successful.

Next analysis is about the effect size of experimental class by using Eta Square. It can be seen from the result is 0,10 is larger than 0,06 so it gives large effect. It means, the null hypothesis is rejected and the alternative hypothesis is accepted, so Edmodo Application is effective in teaching writing descriptive text.

Second point is assessment academic from SMP Muhammadiyah 10 Surabaya which uses 75 as passing grade in English subject. The students must

exceed that passing grade. Based on the result of posttest in experimental class, there are 20 students out of. It means all students already exceed passing grade *(see appendix 17).* Furthermore, the students also already fulfillment the purposes of lesson plan. It is proved from the purposes of lesson plan, they are students understood the simple present in descriptive text, the students can explain the generic structure, the students can mention the characteristic of physical appearance and the students can write the short paragraph of Descriptive Text. From that prove, it means that the research is success because all the purposes of lesson plan already fulfillment. *(see appendix 14).*

Third point is Observation checklist. The observations were taken in the form of paper. There are two observation checklist, they are observation checklist for teacher and observation checklist for students. Observation checklist is used to observe the students and the teacher how the process based on lesson plan.

Based on the teacher's observation checklist is the teacher already taught the students based on RPP (lesson plan), the teacher also mastered the material and the media which is used in learning activity. Besides that, the teacher taught clearly so the students understand about the material. The teacher also answers the students' question very well and helps the students give the solution *(see appendix 1).* Based on the students' observation checklist in experimental class, they are the students very enthusiastic about descriptive text using Edmodo Application, but when the activity run, there were some students who did not finish the quiz and assignment yet because the time is over. So the students must finish it at home. However, the students are very interested about the material using Edmodo Application *(see appendix 2).*

Fourth point is Students' response. After all the data have done, the researcher check the questionnaire to know how the students' response by using *Edmodo Application.* The data was good because the most students also like to use *Edmodo Application* in Writing Descriptive text. From eight of questions, there are four questions that the students 100% answered yes. It means that positive response from them so Teaching Writing descriptive text using *Edmodo Application* can be called interesting and easy to learning. It is proven by the most

students agree that Edmodo Application is interesting to teaching writing descriptive text. It can be called "positive" *(see appendix 3).*

Finally, there is strength of the teaching strategy using this application is that the teacher explained the material descriptive text is very clearly and the teacher was also patient to handle and taught the students until the students understand. It is included one of principle of writing that Brown(2001; 346-356) states that the teacher makes sure that students are carefully led through appropriate stage in the process of composing. The teacher also makes sure students see that everything leading up to this final creation was worth the effort. It means that the teacher balance process and product of the students so produce the students who creative and good students.