CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter presents about research findings and discussion that include data of research findings, data analysis, the result of normality and homogeneity testing, hypothesis testing and discussion.

A. Research Findings

To investigate students' writing achievement in narrative text before and after taught by using Edmodo, the researcher conducted pretest and posttest. In pretest and posttest was a bit different topic, but kind of narrative text was same that was legend story.

To know the students' achievement good or not, the researcher gave criteria as suggested by the English teacher of MTsN Tulungagung. This is as follows:

Table 4.1 : The Scores' Criteria

Score	Criteria
85-100	Excellent
70-84	Good
55-69	Average
40-54	Poor
0-39	Very Poor

Pre-test was done before the treatment process. It was administered on Monday, February 13th 2017. The test was writing achievement test that were in the form of narrative text with the topics "The Legend of Rawa Pening" and "The Legend of Joko Budeg Stone" which decided by the researcher. The students were

given 60 minutes to do the pre-test. This test was intended to know the students' achievement before getting the treatment.

The table below showed the student's score of pre-test in writing narrative text. The pre-test was administered for 35 students in VIII C class taken as sample. The students are coded in to initial name. The scores based on the five aspects in writing, there are: content, organization, vocabulary, grammar and mechanic. The data are presented in the following table:

Table 4.2 : Pre-test Score

NO	SUBJECT	COMPOSITION					TOTAL	SCORE	CATEGORY
		C	O	V	G	M			
1	A	3	2	4	2	2	15	60	AVERAGE
2	B	2	1	3	1	2	8	32	VERY POOR
3	C	2	1	2	1	2	9	36	VERY POOR
4	D	4	3	4	3	4	17	68	AVERAGE
5	E	3	2	3	3	2	13	52	AVERAGE
6	F	2	2	2	1	2	8	32	VERY POOR
7	G	4	4	4	3	3	17	68	AVERAGE
8	H	4	3	1	3	2	13	52	AVERAGE
9	I	3	3	2	2	2	12	48	POOR
10	J	3	3	3	2	2	13	52	POOR
11	K	2	2	2	3	2	11	44	POOR
12	L	3	3	2	2	2	12	48	POOR
13	M	3	3	3	2	2	13	52	POOR
14	N	2	2	1	1	1	7	28	VERY POOR
15	O	2	1	2	1	2	8	32	VERY POOR
16	P	3	2	3	2	2	12	48	POOR
17	Q	4	3	2	2	2	13	52	POOR
18	R	3	3	3	2	2	14	56	AVERAGE
19	S	3	3	2	2	2	12	48	POOR

20	T	4	4	3	3	3	17	68	AVERAGE
21	U	2	3	2	2	2	11	44	POOR
22	V	4	3	2	2	2	13	52	POOR
23	W	3	2	3	1	2	11	44	POOR
24	X	2	2	3	2	3	12	48	POOR
25	Y	3	3	3	2	2	13	52	POOR
26	Z	3	2	3	2	3	13	52	POOR
27	AA	4	3	2	2	2	14	56	AVERAGE
28	BB	3	2	3	3	3	14	56	AVERAGE
29	CC	4	4	4	3	3	18	72	GOOD
30	DD	4	3	4	3	3	17	68	AVERAGE
31	EE	3	3	3	2	2	13	52	POOR
32	FF	3	3	3	3	2	14	56	AVERAGE
33	GG	4	3	2	2	2	13	52	POOR
34	HH	3	2	1	3	2	11	44	POOR
35	II	4	4	3	2	2	15	60	AVERAGE
							∑t=446	∑s=1784	

Furthermore, the percentage of the students pre-test' score can be found by using this formula:

$$P = \frac{F}{N} x100\%$$

Where:

P : percentage

F : frequency

N : total of students

Table 4.3 : The Frequency and Percentage of Students' Achievement on Pre-, Test

INTERVAL CLASS/STUDENT'S SCORE	FREQUENCY (f)	PERCENTAGE (%)
Excellent (85-100)	0	0
Good (70-84)	1	3
Average (55-69)	10	29
Poor (40-54)	19	54
Very Poor (0-39)	5	14
	∑f=35	∑p=100%

As can be seen from the Table 4.4, no one of the students got excellent score, 1 student got good score, 10 students got average score, 19 students got poor score, and 5 students got very poor score. In other words, it is known that 0% students got excellent score, 3% students got good score, 29% students got average score, 54% students got poor score, and 14% students got very poor score.

While, the post-test was done after the treatment process. It was administered on Monday, March 13th 2017. It was administered for 35 students in VIII C class taken as sample. The students are coded in to initial name. The scores based on the five aspects in writing, there are: content, organization, vocabulary, grammar and mechanic. The data are presented in the following table:

Table 4.4 : Post-test Score

NO	SUBJECT	COMPOSITION					TOTAL	SCORE	CATEGORY
		C	O	V	G	M			
1	A	5	5	5	4	4	17	68	AVERAGE
2	B	4	3	3	3	3	13	52	AVERAGE
3	C	3	2	4	3	4	12	48	POOR
4	D	4	3	4	4	4	19	76	GOOD
5	E	4	4	5	4	4	20	80	GOOD
6	F	3	2	3	2	3	13	52	POOR
7	G	5	4	5	4	4	19	76	GOOD
8	H	4	4	4	4	3	18	72	GOOD
9	I	4	3	4	2	3	16	64	AVERAGE
10	J	5	4	4	4	4	17	68	GOOD
11	K	5	4	4	3	3	19	76	GOOD
12	L	3	3	3	2	2	13	52	POOR
13	M	5	5	4	3	4	21	84	GOOD
14	N	3	3	2	2	3	12	48	POOR
15	O	2	3	4	4	4	13	52	AVERAGE
16	P	4	3	4	2	4	12	48	POOR
17	Q	5	5	4	4	4	18	72	GOOD
18	R	3	3	4	4	4	14	56	AVERAGE
19	S	5	5	5	3	4	16	64	AVERAGE
20	T	4	4	5	4	3	20	80	GOOD
21	U	3	3	3	3	4	16	64	AVERAGE
22	V	4	3	5	4	3	19	76	GOOD
23	W	4	3	5	4	3	18	72	GOOD
24	X	3	3	4	3	4	17	68	AVERAGE
25	Y	5	4	4	3	4	20	80	GOOD
26	Z	4	3	4	2	4	17	68	AVERAGE
27	AA	4	3	3	4	4	18	72	GOOD

28	BB	5	4	5	4	4	22	88	EXCELLENT
29	CC	5	5	5	4	4	21	84	GOOD
30	DD	5	4	5	4	4	20	80	GOOD
31	EE	3	2	4	2	3	14	56	AVERAGE
32	FF	4	4	4	3	4	19	76	GOOD
33	GG	5	4	5	4	4	22	88	EXCELLENT
34	HH	4	3	4	3	4	18	72	GOOD
35	II	5	5	5	4	4	20	80	GOOD
							∑t=603	∑s=2412	

The data of students' achievement after taught by using Edmodo Educational Website above, and then are arranged in the form of frequency and percentages through score's criteria by using this formula:

$$P = \frac{F}{N} x100\%$$

Where:

P : percentage

F : frequency

N : total of students

Table 4.5: The Frequency and Percentage of Students' Achievement on Post-Test

INTERVAL CLASS/STUDENT'S SCORE	FREQUENCY (f)	PERCENTAGE (%)
Excellent (85-100)	2	6
Good (70-84)	17	48
Average (55-69)	9	26

Poor (40-54)	7	20
Very Poor (0-39)	0	0
	∑f=35	∑p=100%

Based on the data of table 4.6, there were 2 students got excellent score, 17 students got good score, 9 students got average score, 7 students got poor score and no one of student got very poor score. It also can be described as percentages view. There were 6% of students got excellent score, 48% of the students achieved good score, 26% got average score, 20% of student got poor score and no one of student got very poor score.

In order to present the percentages difference of the pre-test and post-test achievement, the percentages was presented again on the following table:

Table 4.6: The Comparison of Pre-test and Post-test Percentage

INTERVAL CLASS/STUDENT'S SCORE	Pre-test (%)	Post-test (%)
Excellent (85-100)	0	6
Good (70-84)	3	48
Average (55-69)	29	26
Poor (40-54)	54	20
Very Poor (0-39)	14	0

From table 4.6, it can be concluded that the students' pre-test and post-test score in the percentage and criteria was different. After taught by using *Edmodo Educational Website* in teaching and learning on the table 4.6 showed that criteria score of *Excellent* was increased (0% to be 6%), *Good* grade was increased (3% to be 48%), *Average* grade was decreased (29% to be 26%), *Poor* grade was

decreased (54% to be 20%), and *Very Poor* grade was equal percentage (14% to be 0%). In conclusion, it showed that after taught by using Edmodo as a media to teach writing narrative text was effective on the students' writing achievement.

The final result of students' writing after doing all of the steps in process writing in pretest and posttest then were analyzed by using writing scoring rubric. Table 4.7 shows the students' score before and after using Edmodo.

Table 4.7: The Result of The Student's writing before and after taught by using Edmodo

No.	Student	Pre-test (X)	Post-test(Y)	D (Y-X) Point Difference	D $(Y-X)^2$
1	A	60	68	8	64
2	B	32	52	20	400
3	C	36	48	12	144
4	D	68	76	8	64
5	E	52	80	28	784
6	F	32	52	20	400
7	G	68	76	8	64
8	H	52	72	20	400
9	I	48	64	16	256
10	J	52	68	16	256
11	K	44	76	32	1024
12	L	48	52	4	16
13	M	52	84	32	1024
14	N	28	48	20	400
15	O	32	52	20	400

16	P	48	48	0	0
17	Q	52	72	20	400
18	R	56	56	0	0
19	S	48	64	16	256
20	T	68	80	12	144
21	U	44	64	20	400
22	V	52	76	24	576
23	W	44	72	28	784
24	X	48	68	20	400
25	Y	52	80	28	784
26	Z	52	68	16	256
27	AA	56	72	16	256
28	BB	56	88	32	1024
29	CC	72	84	12	144
30	DD	68	80	12	144
31	EE	52	56	4	16
32	FF	56	76	20	400
33	GG	52	88	36	1296
34	HH	44	72	28	784
35	II	60	80	20	400
	N = 35	**$\sum X$= 1784**	**$\sum Y$= 2412**	**$\sum D$= 628**	**$\sum D^2$= 14160**

Table 4.7 showed the increasing students' score of pre-test and post-test. 2 students were increased 4 point (L and EE), 3 students were increased 8 points (A, D, and G), 4 students were increased 12 point (C,T,CC, and DD), 5 students were increased 16 point (I, J,S, Z, and AA), 9 students were increased 20 point (B, F,

H, N, O, Q, U, X, and FF), 1 student was increased 24 point (V), 4 students were increased 28 point (E, W, Y, and HH), 2 students were increased 32 point (K and M), and 1 student was increased 36 point (GG).

B. Data Analysis

To investigate whether Edmodo is effective on the students' achievement in writing narrative text, the researcher measured the result of pre-test and post-test by using Paired Sample Test in IBM SPSS Statistics 16. As what previously mentioned that there are two hypotheses in this study; (1) Null hypothesis stating that there is no significant difference on students' writing achievement in writing narrative text before and after taught by using Edmodo, and (2) Alternative hypothesis stating that there is significant difference on students' achievement in writing narrative text before and after taught by using Edmodo.

The result of mean score from student's score of pre-test and post-test as in the following table:

Table 4.8 : Paired Sample Statistics

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	50.97	35	10.774	1.821
	posttest	68.91	35	12.082	2.042

The data presented above was the performance scores of the one group of students taken as the sample, before and after taught by using Edmodo as the treatment. The mean score of pre-test was 50.97 while the mean score of post-test was 68.91. The number of students (N) both in pre-test and post-test were 35. The

standard deviation of pre-test was 10.774 and the error mean was 1.821. On the posttest, the standard deviation was 12.082 and the error mean was 2.042.

Based on the result of mean, it can be concluded that the mean score of pre-test was different from the mean score of post-test. Thus it can be concluded that there was increased since the mean score of post-test was higher than pre-test.

Table 4.9 : Paired Samples Correlation

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pretest & posttest	35	.680	.000

Based on the table 4.9 above, showed the correlations between two scores of pre-test and post-test where it seen that the correlation scores of pre-test and post-test= 0.680 and sig= 0.000. For interpretation of decision based on the result of probability achievement, that is:

a) If the sig >0.05, means H_o is accepted

b) If the sig <0.05, means H_o is rejected

It shows that sig= 0.000 is lower than 0.05 means that H_0 is rejected and Ha is accepted. So, it can be concluded that there was significant different score between pre – test and post – test score.

Table 4.10 Paired Sample T-test

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	pretest - posttest	-17.943	9.223	1.559	-21.111	-14.775	-11.510	34	.000

Based on the table 4.10, *output paired samples test* showed the result of compare analysis with using T test. Output showed of *mean* pre-test and post-test (17.943), standard deviation (9.223), mean standard error (1.559). The lower different (21.111), while upper different (14.775). The result test t = (11.510) with df=34 and significance (0.000).

We can see that the t_{count} was 11.510. The way to test whether null hypothesis could be rejected was by comparing the result of t_{count} and t_{table}. If the result of t_{count} was higher than t_{table} at the level of significance 0.05, the null hypothesis can be rejected. On the contrary, if the result of t_{count} is lower than t_{table}, the null hypothesis cannot be rejected. In consulting to t_{table}, the researcher needed to find out the degree of freedom. As can be seen in Table 4.10 that (Degree of freedom) is 34, the researcher consulted to the t_{table}, and at the level of significance 0.05, the value of t_{table} is 2.032. Comparing to the value of t_{table}, the value of was higher $t_{count} > t_{table}$ (11.510 > 2.032). Also, the way to test whether the null

hypothesis can be rejected was by comparing p-value with the standard level of significance, 0.05. The convention to reject the null hypothesis is when the p-value of the obtained statistics is less than 0.05 (Balnaves & Calputi, 2001).

As Table 4.10 showed, the p-value was less than 0.05 (0.000 < 0.05). Thus, there was enough evidence indicating that the null hypothesis could be rejected, and it could be concluded that using Edmodo was effective on the students' achievement in writing narrative text.

C. The Result of Normality and Homogeneity Testing

In this part the researcher discuss about the result of normality and homogeneity testing.

1. The Result of Normality Testing

Normality testing is conducted to determine whether the gotten data is normal distribution or not. The researcher used SPSS.16. *One-Sample Kolmogorov-Smirnove test* by the value of significance (α) = 0.050. The result can be seen below.

Table 4.11 : Normality Testing

One-Sample Kolmogorov-Smirnov Test

		pretest	posttest	Unstandardized Residual
N		35	35	35
Normal Parameters[a]	Mean	50.97	68.91	.0000000
	Std. Deviation	10.774	12.082	7.90134892
Most Extreme Differences	Absolute	.148	.144	.126
	Positive	.148	.119	.107
	Negative	-.138	-.144	-.126
Kolmogorov-Smirnov Z		.874	.850	.746
Asymp. Sig. (2-tailed)		.430	.466	.635

a. Test distribution is Normal.

Based on the table above was knowed that the significance value from pre-test is 0.874 and from the post test is 0.850. Both value from pre-test and post-test are higher than 0.05. The sig/p value on pre-test is 0.874 and it is higher than 0.05 (0.874 > 0.05) means that the data is in normal distribution. Then, for post-test score the value of sig/p is 0.850 and that is higher than 0.05 (0.850 > 0.05) means that the data is in normal distribution. It also means that H_0 is accepted and H_a is rejected. So, it can be interpreted that both of data (pre-test and post-test score) are in normal distribution.

2. The Result of Homogeneity Testing

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. To know the homogeneity, the

researcher used *Test of Homogeneity of Variances* with SPSS.16 by the value of significance (α) = 0.050. The result can be seen below:

Table 4.12 : Homogeneity Testing

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
2.012	9	25	.081

Based on the table above is known that the sig/p value is 0.081 higher than 0.05 means H_0 is rejected and H_a is accepted. So, it can be interpreted that the data is homogeny.

D. Hypothesis Testing

From the data analysis it could be identify that:

1. When the value of $T_{count} > T_{table}$ in *df* = 34 with the significant level 0.05. The alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. It means that there is significant different score of writing narrative text achievement to eighth grade students at MTsN Tulungagung before and after taught by using Edmodo Educational Website.
2. When the value of $T_{count} < T_{table}$ in *df* = 34 with the significant level 0.05. The null hypothesis (H_o) is accepted and the alternative hypothesis (H_a) is rejected. It means that there is no significant different score of writing

narrative text achievement to eighth grade students at MTsN Tulungagung before and after taught by using Edmodo Educational Website.

The mean of total writing narrative text achievement test score of 35 students before using Edmodo Educational Website is (50.97). After getting treatment, the means score of students' achievement is (68.91). It means that the students' score is improved.

Based on the statistical calculation using t-test, the researcher gives interpretation to t_{count}. First, she considered the *d.f.* with the *d.f.* (35-1=34). She checked to the score of "t" at the significant level of 0,05. In fact, with the *d.f.* of (34) and the critical value 0,05 significant t_{table} was (2.032).

By comparing the "t" that she got in calculation t_{count} = (11.510) and the value of "t" on the $t_{table} = t_{0.05}$ = (2.032), it is known that t_{count} is bigger than t_{table} = 11.510 > 2.032. Because the t_{count} is bigger than t_{table} the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. It means that there is significant different score of student's achievement in writing narrative text of eighth grade students of MTsN Tulungagung before and after using Edmodo Educational Website.

E. Discussion

The objective of this study there was siginficant different score's of eight grade students' achievement in writing narrative text. Then, the result of this study indicated the result of post-test after using Edmodo was significant different after and before taught by using Edmodo. This result showed that the students more

interested to write and share their idea by using Edmodo. However, the students were motivated in writing narrative text after using Edmodo as media. This finding showed that the used of digital technologies such computer and social network like Edmodo can shape students' writing myriad ways including in generating ideas, composing, revising, editing, formatting, and printing anything from a single word to a lengthy essay (Purcell et al. 2013; Langan, 2005).

From the research finding in chapter IV, the output data of *Paired Samples Statistics* shows the the mean of pre-test and post-test was increased from 50.97 to be 68.91. The standard deviation is to measure how much the variance of the sample. The standard deviation of pre-test is 10.774 < 50.97 and post-test is 12.082 < 68.91 where if the standard deviation is getting higher than the mean it means that the mean is not homogeny and if the standard deviation is getting smaller than the mean it means that the mean is homogeny. So, it can be concluded that standard deviation of pre-test and post-test was homogeny means that the sample of this research almost has the same mean.

Based on the output data of *Paired Samples Test* it was found that t_{count} = 11.510 and t_{table} = 2.032 and if compared the differences both of value is 9.478. From this comparison, t_{count} = 11.510 is bigger than t_{table} = 2.032 which means the alternative hypothesis (Ha) is accepted, while the null hypothesis (Ho) is rejected. Therefore, it can be concluded that there is significance different of the students' achievement in writing narrative text of the eighth grade students of MTsN Tulungagung in academic year 2016/2017 before and after using Edmodo Educational Website.

Regarding on the result of data analysis above, it is strongly related to some advantages served by the use of media like Edmodo website. One advantage of using Edmodo is that students more active and creative in on-line session. Using Edmodo in learning was likely to be more interesting, showed by the result of the pre-test and post-test that Edmodo had a high level of acceptance either from teachers or students side (Kongchan, 2012). In Edmodo, students would not have shame feeling because they share idea, knowledge, and opinion on Edmodo and they will keep silent in the classroom. They also can give some responses to their friends' post, share link, submitting their works, and get feedback from the teacher. Besides, another advantage of using Edmodo is facilitate students in submitting their works, sharing knowledge, knowing their progress, trying to be actively participate in teaching and learning process, interacting with each other without face-to-face meeting, etc.

Finally, it was proven that using Edmodo as media in writing could stimulate students' writing more better. Edmodo was effective on the students' achievement in writing narrative text and could increase the students' motivation, interest, idea, and score.