

## CHAPTER IV

### RESEARCH FINDING AND DISCUSSION

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

#### A. The Description of Data

In this section, the writer presents the descriptive statistic of the students' writing achievement before and after taught by using Schoology in teaching narrative text. To investigate students' writing achievement in narrative text before and after taught by using Schoology, the researcher conducted pretest and posttest. In pretest and posttest the researcher gave a bit different topic, but kind of narrative text which was the same that was about legend story.

To know the students' achievement good or not, the researcher gave criteria as this follow:

**Table 4.1: The Scores' Criteria**

Score	Criteria
81-100	Excellent
61-80	Good
41-60	Fair
0-40	Poor

Pre-test was done before the treatment process. It was administered on Tuesday, 7<sup>th</sup> 2018. The test was writing test that were in the form of narrative text with the topics "The Legend of Roro Kembang Sore" and "The Legend of Batur

Lake” decided by the researcher. The number of students were 32 and the time given was 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 32 students in XI IPS 3 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 table 4.2, as follow:

**Table 4.2: The Result of Students' Score in Pretest and Posttest**

NO	Students' Name	Pre-test	Post-test	Gained score	Categorization in post-test
1	S1	70	85	15	Excellent
2	S2	60	70	10	Good
3	S3	70	90	20	Excellent
4	S4	45	50	5	Fair
5	S5	45	65	20	Good
6	S6	50	60	10	Fair
7	S7	50	70	10	Good
8	S8	50	70	20	Good
9	S9	65	85	20	Excellent
10	S10	60	75	15	Good
11	S11	55	70	15	Good
12	S12	45	50	5	Fair
13	S13	65	70	5	Good
14	S14	65	80	15	Good
15	S15	70	85	15	Excellent
16	S16	45	65	20	Good
17	S17	50	60	10	Fair
18	S18	45	50	5	Fair
19	S19	50	60	10	Fair
20	S20	50	70	20	Good
21	S21	50	70	20	Good
22	S22	60	70	10	Good
23	S23	65	75	10	Good
24	S24	65	70	5	Good
25	S25	50	50	0	Fair
26	S26	60	70	10	Good
27	S27	50	60	10	Fair
28	S28	55	60	5	Fair
29	S29	80	90	10	Excellent
30	S30	50	65	15	Good
31	S31	60	80	20	Good
32	S32	40	60	20	Fair
Total		1770	2170	375	

Based on the table 4.2, shows the lowest and the highest score of second grade students. The lowest score in pretest was 40 and the highest one in pretest was 80. After the researcher gave the treatment of Schoology in teaching writing narrative text, the researcher gave posttest to measure whether there was

different score or not. Based on the table above, the lowest score in posttest was 50 and the highest one was 90.

After got the pre-test and post-test score, the writer used IBM SPSS 16.0 to organize the descriptive statistics data and frequency of score.

### **1. Computation Result of the Students' Score Before being Taught by Using Schoology (Pre-Test)**

In this part of test, the researcher ask students write a narrative test about legend story. The students were given about 60 minutes to write it down. There were 32 students as the sample of this research. The purpose of conducting pre-test was intended to measure the students' writing achievement before they were given treatment. The statistic data of pretest score (Table 4.3) and frequency distribution of pretest (Table 4.4) can be seen below:

**Table 4.3 Statistics Data of Pre-test**

<b>Statistics</b>		
Pretest		
N	Valid	32
	Missing	0
Mean		55.31
Median		50.00
Mode		50
Sum		1770

Based on the table 4.3 above, it can be seen there were 32 students followed the pretest. The mean of the students' score in pretest was 55.31. Then, the median score was 55.00, it means that the middle score of pretest was 55.00 in

32 students. The mode of pretest score was 50, it means that the most frequently appeared score was 50. The total all score of pretest was 1770.

The frequency of the students' score was presented in the following table below:

**Table 4.4: Frequency of Score in Pretest**

Pretest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40	1	3.1	3.1	3.1
	45	5	15.6	15.6	18.8
	50	11	34.4	34.4	53.1
	55	3	9.4	9.4	62.5
	60	4	12.5	12.5	75.0
	65	4	12.5	12.5	87.5
	70	3	9.4	9.4	96.9
	80	1	3.1	3.1	100.0
	Total	32	100.0	100.0	

The table 4.4 showed the frequency distribution of pretest by considering on qualification of criteria students' score:

- a. There is 1 student who got 40, it means that the students' writing achievement was poor and the student still needed much improvement.
- b. There are 23 students who got 45-60, it means that the students' writing achievement was still fair, still needed much improvement.
- c. There are 8 students who got 65-80, it means the students' writing achievement was good.

After knowing the result of pre-test, the researcher gave the treatment in order to the students' writing achievement could be increased. Then, the researcher gave post-test to measure the different scores after conducting the treatment.

## 2. Computation Result of The Students' Score After Being Taught by Schoology (Post-Test)

In Post-test, the researcher asked the students to write the narrative text with different topic than pre-test. The topic was "The legend of Rawa pening" and "The legend of Kelud mountain". the allocation time was 60 minutes. There were 32 students as the sample of this research. The purpose of conducting post-test was intended to measure the students' writing achievement after they were given the treatment.

The result of post-test based on processing in SPSS 16.0 version software. The descriptive statistic of post-test score consisted of mean (Table 4.5) and the frequency distribution of post-test (Table 4.6), can be seen below:

**Table 4.5: Statistic Data of Posttest**

Statistics		
Posttest		
N	Valid	32
	Missing	0
Mean		68.75
Median		70.00
Mode		70
Sum		2200

Based on the table 4.5 above, it can be seen there were 32 students followed the post-test. The mean of the students' score in post-test was 68.75. The median score was 70.00 it means that the middle score of post-test was 70 in 32 students. The mode of post-test score was 70 it means that the most frequently appeared score was 70. It is indicated that many students got good score. The total all scores of post-test was 2200.

Then, the frequency of the students' score was presented in the following table below.

**Table 4.6: Frequency of Score in Post-test**

Posttest		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50	4	12.5	12.5	12.5
	60	6	18.8	18.8	31.2
	65	3	9.4	9.4	40.6
	70	10	31.2	31.2	71.9
	75	2	6.2	6.2	78.1
	80	2	6.2	6.2	84.4
	85	3	9.4	9.4	93.8
	90	2	6.2	6.2	100.0
	Total	32	100.0	100.0	

The table 4.6 showed the numbers that describe about the division and percentages of frequency distribution. The frequency of post-test after being distributed showed based on the categorizing of scoring rubric:

- a. There are 10 students who got 50-60, it means that the students' writing achievement in narrative text was fair. There is no students got poor score.

- b. There are 17 students who got 65-80, it means that the students' writing achievement in narrative text was good.
- c. There are 8 students who got 85-90 it means the students' writing achievement in narrative text was excellent.

### 3. Computation the Descriptive Statistics of Pre-test and Post-test

After that, the writer organized the range, minimum, maximum, mean, standard deviation, and variances of pretest and posttest scores of the sample which calculated respectively by using IBM SPSS Statistics 16.0. Table 4.7 represents the result:

**Table 4.7: 66 Descriptive Statistics**

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Pretest	32	40	40	80	55.94	9.625	92.641
Posttest	32	40	50	90	68.75	11.288	127.419
Valid N (listwise)	32						

Table 4.7 showed that the minimum score in pre-test was 40, while in post-test was 50. Then, the maximum score in pre-test was 80, while in post-test was 90. The range of pre-test and post-test is the same, it was 40. The range of data is the distance between the highest score and the lowest score. The standard deviation of pre-test was 9.625 and post-test was 11.288. The standard deviation is to measure how much the variance of the sample. If the standard deviation is getting higher than the mean, it means the mean is not homogeny. While, if the standard deviation is getting smaller than the mean, it means that the mean is homogeny. The standard of pre-test was  $9.625 < 55.94$  and post-test was



11.288<68.75. So, the sample of this research almost homogeny or has the same mean.

Based on the result of pre-test and post-test, it has different students' score before and after taught by using Schoology. The mean of post-test was (68.75) higher than the mean of pre-test (55.94) It means, the use of Schoology Learning Management System has caused to the improvement of students' scores. So, it can be concluded that the value increased after being treatment using Schoology in writing narrative text.

## B. The Result of Normality And Homogeneity

### 1. The Result of Normality testing

Normality testing is conducted to determine whether the data distribution is normal or not. The result can be seen as below:

**Table 4.8: Normality Result**

One-Sample Kolmogorov-Smirnov Test		pretest	posttest
N		32	32
Normal Parameters <sup>a</sup>	Mean	55.94	68.75
	Std. Deviation	9.625	11.288
Most Extreme Differences	Absolute	.231	.175
	Positive	.231	.175
	Negative	-.108	-.138
Kolmogorov-Smirnov Z		1.309	.988
Asymp. Sig. (2-tailed)		.065	.283

a. Test distribution is Normal.

Based on the table above was known that the significant value of pretest is 0.65, it is bigger than 0.05 ( $0.65 > 0.05$ ), it means the distribution data of pre-test is

normal. The significance value of post-test is 0.283, it is bigger than 0.05 ( $0.283 > 0.05$ ), it means the distribution data of post-test is normal. 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 after ensuring whether the data has been normal distributed. The purpose of this testing is to know whether the data includes to homogeneous or heterogeneous data.

**Table 4.9: Homogeneity Testing**

### Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
1.945	7	24	.106

The data can be said has same variance or homogeny if the value is more than 0.05. Based on the table above the significant value is 0.106. It means that sig/p value 0.106 is higher than 0.05 ( $0.106 > 0.05$ ). Automatically, it can be said that the data has same variance or can be said homogeny.

### C. Data Analysis

To investigate whether Schoology is effective towards students' achievement in writing recount text, the researcher analysed the result of pre-test and post-test of the students by using Paired Sample Test in IBM SPSS 16.0. Table 4.9 showed the result of calculation Paired Sample Correlation as follow:

**Table 4.10: Paired Sample Correlation**

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	pretest & posttest	32	.842	.000

Based on the table 4.9 above, it showed the correlations between two scores of pre-test and post-test. The correlation scores of pre-test and post-test is 0.842 and significance value is 0.000. It shows that sig.value is smaller than 0.05 ( $0.00 < 0.05$ ), it means that  $H_0$  is rejected and  $H_a$  is accepted. So, it can be concluded that there is significant different score between pre-test and post-test score.

Table 4.11 showed the result of calculation Paired Sample Test as follow:

**Table 4.11: 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	-12.812	6.082	1.075	-15.005	-10.620	-11.916	31	.000

Based on the table 4.11, output paired samples statistic shows that the result of compare analysis with using T-test. It shows that the mean of pre-test and post-test is 12.812 which means that the difference mean between two scores was 12.812. The standard deviation is 6.082; it shows the variation of the data, the smaller value of it, the closer of data was. The standard error mean is 1.075, it describes the accuracy as an estimate of the population mean, the smaller of standard error value is better the sample was because its represent the population enough. The lower difference is 15.005, while upper difference is 10.620. The result of T test= (11.916) with  $df= 31$  and significant value=(0.000).

The way to test the null hypothesis can be rejected was by comparing sig.value with the standard level of significance (0.05). From the Table 4.10, sig.value is smaller than 0.05 ( $0.00 < 0.05$ ). Thus, it was proven that the null hypothesis could be rejected.

#### **D. Hypothesis Testing**

The last step in analysing the data was testing the hypothesis of research. From the analysis above, the criteria to test the hypothesis of this research which is use in SPSS 16.0 were:

- a. If sig.value  $< 0.05$ , the null hypothesis ( $H_0$ ) is rejected, while the alternative hypothesis ( $H_a$ ) is accepted.
- b. If sig.value  $> 0.05$ , the null hypothesis ( $H_0$ ) is accepted, while the alternative hypothesis ( $H_a$ ) is rejected.

Based on the table 4.11 above, the significance value of the research is 0.000, and significance level is 0.05. Because significance value is smaller than

significance level ( $0.000 < 0.05$ ), it means the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_o$ ) is rejected. In other word, teaching writing narrative text using Schoolog is effective. According to that evidence, it can answer the research problem that there is any significant difference on students' writing narrative text achievement before and after being taught by using Schoology at second grade of SMAN 1 Tulungagung.

### **E. Discussion**

The objective of this research is to find whether there is any significance different scores' of students' achievement in writing narrative text or not. To prove it, the writer used writing test as instruments. The writer used three steps to get the data; pre-test, treatment, and post-test. To know the results of this research whether this strategy is effective or not, the researcher computed both of the tests into SPSS 16.0 version software.

As the requirement of hypothesis, if the significance value is smaller than significance level (0.05), it means that the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_o$ ) is rejected. In fact, based on the table of *paired sample t-test*, the result shows that the number of significance value is 0.000 at significance level 0.05. It means there is a significance difference between pre-test and post-test. It can be said that there is any significance difference score on the students' writing achievement before and after being taught by using Schoology. From the finding, it can be seen that Schoology Learning Management System can increase students' achievement in writing. The mean of pre-test 55.94 becomes 68.75 in post-test. It indicates that after using Schoology, the students'

achievement in writing significantly increased proven by the progress of score from pre-test and post-test. These finding shows that the use of digital technology such as computer and social network like Schoology can shape students' writing 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) stated that Advanced Placement (AP) and National Writing Project (NWP) teachers finds that Schoology is Shaping students writing in myriad ways and have also become helpful tools for teaching writing to middle and high school students.

When conducting on-line session using Schoology, teachers can give the students quite time to understand the material, and then giving response. In giving response, students have a longer time to compose a good sentence so that their response will not lead to a misunderstanding. In this case, using on-line social network like Schoology makes students improve their critical reading and writing skill as well. Lie (2013) point out that Schoology was facilitated teaching and learning process and inspire student learning and creativity.

One advantage of using Schoology is that students who keep silent in the classroom can actively participate in on-line session like asking question to the teacher or theirs friend. In traditional classroom, the students' physical attendance and active participation through direct speaking are the main way to give assessment. In on-line session, those who keep silent in the class can actively take part in teaching and learning process even though they do not physically exist. By using their critical reading and writing skill, they can give response to someone's

post, share knowledge, compose a text, and so on. In this case, on-line session is less threatening rather than the traditional classroom (Alberth, 2013). Besides, another advantage of using Schoology is that it can 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,

After the students got the treatment, the result showed that there was improvement in content and language use. The students' writing text contents became larger and more understandable. The content of text mostly has relevant to the topic. The use of simple past tense was arrange in the right order even there are some students still having difficulty in there. Their vocabulary and mechanics were getting better.

From the result of finding above, this research also support that Schoology has positive effect on students' learning outcome. Piyada (2017) states that, 80% students agreed that Schoology is interesting, flexible, and increase students' value. By using Schoology, the Student has longer time for learning and creates their critical thinking in term of writing class. In line with Vania Wibowo (2016) point out that Schoology help students in argumentative writing. The result shows that Schoology is effective way for teaching argumentative writing. Then Schoology helps teacher in teaching business writing. Alvin S. Sicat (2015) adds that Schoology support teaching business writing. The result that by Schoology helps student easy to connect with other students from other country supported by internet connection

Overall, it can be said that using Schoology as media in teaching writing is not only suitable used in argumentative writing, and business writing. However, by this research using Schoology gives new finding in another writing type, it is Narrative text. Teaching writing Narrative text by using Schoology is effective to increase students achievement in the level of second grade students of Senior High School.