

CHAPTER IV

FINDINGS AND DISCUSSION

This chapter presents the data that were collected during the experimental research. First analysis focuses on the validity, reliability, index difficulty, and discriminating power of instruments. Second analysis presents the result of pre-test and post-test which were done both in experimental and control group.

A. Analysis of Data

1. Analysis of Pre-test

The experimental group (class X 2) was given a pre-test on November 5, 2010 and control group (class X 5) was given a pre-test on November 4, 2010. They were asked to make a recount text based on their own experience.

a. Test of Normality

Test of normality was used to find out whether data of control and experimental group which had been collected from the research come from normal distribution normal or not. The result computation of Chi-quadrade (X^2_{score}) then was compared with table of Chi-quadrade (X^2_{table}) by using 5% alpha of significance. If $X^2_{score} < X^2_{table}$ meant that the data spread of research result distributed normally.

Based on the research result of X 5 students in the control group before they were taught recount text without movie, they reached the maximum score 76 and minimum score 40. The stretches of score were 36. So, there were 7 classes with length of classes 6. From the computation of frequency distribution, it was found ($\sum f_i x_i$) = 2202 and ($\sum f_i x_i^2$) = 138489. So, the average score (\bar{X}) was 61.167 and the standard deviation (S) was 10, 42. After counting the average

score and standard deviation, table of observation frequency was needed to measure Chi-quadrat (X^2_{score}).

Table IV. 1 Table of the Observation Frequency of Control Group

Class	Bk	Z _i	P(Z _i)	Ld	E _i	O _i	$\frac{(O_i - E_i)^2}{E_i}$
	39,5	-2,08	-0,4812				
40 – 45				0,0476	1,7	3	0,9689
	45,5	-1,50	-0,4337				
46 – 51				0,1104	4,0	4	0,0002
	51,5	-0,93	-0,3232				
52 – 57				0,1857	6,7	6	0,0701
	57,5	-0,35	-0,1375				
58 – 63				0,2261	8,1	7	0,1599
	63,5	0,22	0,0886				
64 – 69				0,1995	7,2	9	0,4606
	69,5	0,80	0,2881				
70 – 75				0,1275	4,6	3	0,5498
	75,5	1,38	0,4155				
76 – 81				0,0590	2,1	4	1,6597
	81,5	1,95	0,4745				
					X ²	=	3,8691

Based on the Chi-quadrat table (X^2_{table}) for 5% alpha of significance with dk $7 - 3 = 4$, it was found $X^2_{table} = 9.49$. Because of $X^2_{score} < X^2_{table}$, so the initial data of control group distributed normally.

While from the result of X 2 students in experimental group, before they were taught recount text by using movie, was found that the maximum score was 76 and minimal score was 40. The stretches of score were 36. So, there were 7 classes with length of classes 6. From the computation of frequency distribution, it was found ($\sum f_i \cdot x_i$) = 2178, and ($\sum f_i \cdot x_i^2$) = 135945. So, the average score (\bar{X}) was 60,5 and the standard deviation (S) was 10,923. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrat (X^2_{score}).

Table IV. 2 Table of the Observation Frequency of Experimental Group

Class	Bk	Z_i	$P(Z_i)$	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
	39,5	-1,92	-0,4727				
40 – 45				0,0576	2,1	4	1,7926
	45,5	-1,37	-0,4152				
46 – 51				0,1201	4,3	4	0,0245
	51,5	-0,82	-0,1082				
52 – 57				0,1868	6,7	6	0,0782
	57,5	-0,27	0,1082				
58 – 63				0,2164	7,8	8	0,0056
	63,5	0,27	0,2950				
64 – 69				0,1868	6,7	6	0,0782
	69,5	0,82	0,4152				
70 – 75				0,1201	4,3	4	0,0245
	75,5	1,37	0,4727				
76 – 81				0,0576	2,1	4	1,7926
	81,5	1,92	0,4785				
					X^2	=	3,7961

Based on the Chi-quadrade table (X_{table}^2) for 5% alpha of significance with dk $7 - 3 = 4$, it was found $X_{table}^2 = 9.49$. Because of $X_{score}^2 < X_{table}^2$, so the initial data of experimental group distributed normally.

b. Test of Homogeneity

Test of homogeneity was done to know whether sample in the research come from population that had same variance or not. In this study, the homogeneity of the test was measured by comparing the obtained score (F_{score}) with F_{table} . Thus, if the obtained score (F_{score}) was lower than the F_{table} or equal, it could be said that the Ho was accepted. It meant that the variance was homogeneous. The analysis of homogeneity test could be seen in table IV. 3.

Table. IV. 3 Test of Homogeneity (Pre-test)

Variant Sources	Experimental G	Control G
Sum	2164	2208
N	36	36
\bar{X}	60,11	61,33
Variance (s^2)	122,96	101,49
Standard deviation (s)	11,09	10,07

By knowing the mean and the variance, the writer was able to test the similarity of the two variants in the pre-test between experimental and control group. The computation of the test of homogeneity as follows:

$$\begin{aligned}
 F &= \frac{\text{Biggest Variance}}{\text{Smallest Variance}} \\
 &= \frac{122,9600}{101,4900} \\
 &= 1,212
 \end{aligned}$$

On a 5% with df numerator ($nb - 1$) = $36 - 1 = 35$ and df denominator ($nk - 1$) = $36 - 1 = 35$, it was found $F_{table} = 1,76$. Because of $F_{score} \leq F_{table}$, so it could be concluded that both experimental and control group had no differences. The result showed both groups had similar variants (homogenous).

- c. Test of difference two variants in pre-test between experiment and control group

After counting standard deviation and variance, it could be concluded that both group have no differences in the test of similarity between two variances in pre-test score. So, to differentiate whether the students' results of writing a recount text in experimental and control group were significant or not, the writer used t-test to test the hypothesis that had been mentioned in the chapter two. The writer used formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

$$S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Based on table IV. 3, first the writer had to find out S by using the formula above:

$$\begin{aligned} S &= \sqrt{\frac{(36-1)122,96 + (36-1)101,49}{36+36-2}} \\ &= 10,5936 \end{aligned}$$

After S was found, the next step was to measure t-test:

$$\begin{aligned} t &= \frac{60,11 - 61,33}{10,9936 \sqrt{\frac{1}{36} + \frac{1}{36}}} \\ &= -0,489 \end{aligned}$$

After getting t-test result, then it would be consulted to the critical score of t_{table} to check whether the difference is significant or not. For $\alpha = 5\%$ with $df = 36 + 36 - 2 = 70$, it was found $t_{table(0,975)(70)} = 1,9944$. Because of $t_{score} < t_{table}$, so it could be concluded that there was no significance of difference between the experimental and control group. It meant that both experimental and control group had same condition before getting treatments.

2. Analysis of Post-test

The experimental group was given post test on November 26, 2011 and control group was given a post test on November 25, 2011. Post-test was conducted after all treatments were done. Movie was used as aid in

the teaching of recount writing to students in experimental group. Meanwhile, the students in control group were given treatment without movie. Post-test was aimed to measure students' ability after they got treatments. They were asked to make a recount text after they read the text (for students in control group) and they watched movie (for students in experimental group).

a. Test of Normality

Test of normality was used to find out whether data of control and experimental group, which had been collected after they got treatments, came from normal distribution normal or not. The formula, that was used, was Chi-quadrat. The result computation of Chi-quadrat (X^2_{score}) then was compared with table of Chi-quadrat (X^2_{table}) by using 5% alpha of significance. If $X^2_{score} < X^2_{table}$ meant that the data spread of research result distributed normally.

Based on the research result of X 5 students in the control group after they got usual treatments (using text) in the teaching of recount writing, they reached the maximum score 88 and minimum score 56. The stretches of score were 32. So, there were 7 classes with length of classes 5. From the computation of frequency distribution, it was found ($\sum f_i x_i$) = 2523, and ($\sum f_i x_i^2$) = 179789. So, the average score (\bar{X}) was 70,08 and the standard deviation (S) was 9,20985. It meant that there was an improvement of students' score after they got treatments. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrat (X^2_{score}). For the complete analysis could be seen in appendix 9.

Table IV. 4 Table of the Observation Frequency of Control Group

Class	Bk	Z_i	$P(Z_i)$	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
	55,5	-1,58	-0,4433				
56 – 60				0,0924	3,3	7	4,0592
	60,5	-1,04	-0,3510				
61 – 65				0,1603	5,8	7	0,2615
	65,5	-0,50	-0,1906				

66 – 70				0,2087	7,5	5	0,8403
	70,5	0,05	0,0180				
71 – 75				0,2037	7,3	5	0,7431
	75,5	0,59	0,2218				
76 – 80				0,1492	5,4	6	0,0736
	80,5	1,13	0,3710				
81 – 85				0,0819	3,0	5	1,4243
	85,5	1,67	0,4529				
86 – 90				0,0338	1,3839	1	0,1065
	90,5	2,22	0,4867				
					X ²	=	7,5085

Based on the Chi-quadrante table (X_{table}^2) for 5% alpha of significance with dk $7 - 3 = 4$, it was found $X_{table}^2 = 9.49$. Because of $X_{score}^2 < X_{table}^2$, so the data of control group after getting treatments distributed normally.

Meanwhile from the result of X 2 students in experimental group who were taught recount text through the use of movie, was found that the maximum score was 92 and minimal score was 60. The stretches of score were 32. So, there were 7 classes with length of classes 5. From the computation of frequency distribution, it was found $(\sum f_i x_i) = 2782$, and $(\sum f_i x_i^2) = 217984$. So, the average score (\bar{X}) was 77,27 and the standard deviation (S) was 9.25391. By seeing the average score of students in experimental group, it could be concluded that there was an improvement of students' score after they got treatments by using movie. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrante (X_{score}^2). For the complete analysis could be seen in appendix 10.

Table IV. 5 Table of the Observation Frequency of Experimental Group

Class	Bk	Z_i	$P(Z_i)$	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
	59,5	-1,92	-0,4726				
60 – 64				0,0563	2,3	4	1,2388
	64,5	-1,38	-0,4163				
65 – 69				0,1166	4,8	4	0,1280
	69,5	-0,84	-0,2997				

70 – 74				0,1817	7,4	6	0,2822
	74,5	-0,30	-0,1180				
75 – 79				0,2129	8,7	7	0,3419
	79,5	0,24	0,0949				
80 – 84				0,1875	7,7	6	0,3712
	84,5	0,78	0,2824				
85 – 89				0,1243	5,1	5	0,0018
	89,5	1,32	0,4067				
90 – 94				0,0619	2,5389	4	0,8409
	94,5	1,86	0,4686				
					X ²	=	2,3640

Based on the Chi-quadrade table (X_{table}^2) for 5% alpha of significance with $df\ 7 - 3 = 4$, it was found $X_{table}^2 = 9.49$. Because of $X_{score}^2 < X_{table}^2$, so the data of experimental group after getting treatments distributed normally.

b. Test of Homogeneity

The writer determined the mean and variance of the students' score either in experimental or control group. By knowing the mean and variance, the writer was able to test the similarity of the two variance in the post-test between experimental and control group.

Table. IV. 6 Test of Homogeneity (Post-test)

Variance Sources	Experimental G	Control G
Sum	2780	2524
N	36	36
\bar{X}	77,22	70,11
Variance (s^2)	95,8349	77,2444
Standard deviation (s)	9,79	8,79

The computation of the test of homogeneity as follows:

$$\begin{aligned}
 F &= \frac{\text{Biggest Variance}}{\text{Smallest Variance}} \\
 &= \frac{95,8349}{77,2444} \\
 &= 1,241
 \end{aligned}$$

On a 5% with df numerator $(nb - 1) = 36 - 1 = 35$ and df denominator $(nk - 1) = 36 - 1 = 35$, it was found $F_{table(0.025)(35:35)} = 1.96$.

Because of $F_{score} \leq F_{table}$, so it could be concluded that both experimental and control group had no differences. The result showed both groups had similar variance (homogenous).

- c. Test of difference two variants in post-test between experiment and control group

After counting standard deviation and variance, it could be concluded that both groups have no differences in the test of similarity between two variances in post-test score. So, to differentiate if the students' results of writing a recount paragraph in experimental and control group after getting treatments were significant or not, the writer used t-test to test the hypothesis mentioned in chapter two. To see the difference between the experimental and control group, the writer used formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

$$S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Based on table IV. 6, first the writer had to find out S by using the formula above:

$$\begin{aligned} S &= \sqrt{\frac{(36-1)95,8349 + (36-1)77,2444}{36+36-2}} \\ &= 9,30267 \end{aligned}$$

After S was found, the next step was to measure t-test:

$$\begin{aligned} t &= \frac{77,22 - 70,11}{9,30267 \sqrt{\frac{1}{36} + \frac{1}{36}}} \\ &= 3,243 \end{aligned}$$

After getting t-test result, then it would be consulted to the critical score of t_{table} to check whether the difference is significant or not. For $\alpha = 5\%$ with $df = 36 + 36 - 2 = 70$, it was found $t_{table(0.95)(70)} = 1.67$. Because of $t_{score} > t_{table}$, so it could be concluded that there was significance of difference between the experimental and control group. It meant that experimental group was better than control group after getting treatments.

Since the obtained t-score was higher than the critical score on the table, the difference was statistically significant. Therefore, based on the computation there was a significant difference between the teaching of recount writing using movie and the teaching of recount writing without movie for the tenth grade students of SMA N 6 Semarang. Teaching recount with movie seemed to be more effective than teaching recount without movie. It can be seen from the result of the test where the students taught writing by using movie got higher scores than the students taught writing without movie.

B. Discussions

The data were obtained from the students' achievement scores of the test of writing recount paragraph. They were pre-test and post-test scores from the experimental and control group. The average score for experimental group was 60,11 (pre-test) and 77,22 (post-test). The average score for control group was 61,33 (pre-test) and 70,11 (post-test). The following was the simple tables of pre and post-test students' average score and students' average score of each writing components. The complete computation can be seen in appendix 13 – 16.

Table IV. 7 The Pre-test and Post-test Students' Average Scores of the Experimental and Control Group

No	Group	The Average Percentage of Pre-test	The Average Percentage of Post-test
1	Experimental	60,11	77,22
2	Control	61,33	70,11

Table IV. 8 The Pre-test and Post-test Students' Average Scores of the Experimental and Control Group

No	Component of Writing	Group	The Average Score of Pre-test	The Average Score of Post-test
1	Grammar	Experimental	2,94	3,84
		Control	2,94	3,46
2	Vocabulary	Experimental	3,00	3,81
		Control	2,97	3,54
3	Mechanic	Experimental	2,92	3,84
		Control	3,11	3,54
4	Relevance	Experimental	3,11	3,81
		Control	3,22	3,51
5	Fluency	Experimental	3,03	3,89
		Control	3,08	3,40

1. Students' Condition in Control Group

In this study, source of data that was become as control group was class X 5. In the control group, there was not a new treatment in a teaching learning process. They were given an usual treatment. They were taught recount writing using text as they had got. By using text as an aid in the teaching learning process, teacher had used a monotonous media that could not increase students' recount writing. Students could not enjoy in

writing and explore their ideas because they had to write what they had read from the text. It was proven with the control group's average in the post-test (70,11) which was lower than the experimental group (77,22); although, the control group's average in the pre-test (61,33) was higher than the experimental group (60,11).

2. Students' Condition in Experimental Group

a. Analysis of Students' Writing Before Treatment (Pre-test)

In the pre-test, students' ability in writing recount text was low. Pre-test was conducted before the treatment. From the result of pre-test, it was known that students faced many difficulties in recount writing. Sentences which were made by students, were influenced by Indonesian language. Students' ability was in low level when they had to arrange sentences to be a good paragraph by considering main idea. It meant that the idea was not clearly stated and the sentences were not well-organized to support the main idea. Students' word choice (fluency) was also far from being perfect. Not only the sequence of sentences which were made by students was not complete but also there were many difficulties in grammar and mechanic; therefore, students' ability of recount writing could not be understood. To minimize the number of students' mistakes in their writing, the researcher collected students' writing, gave correction, and returned the paper to them. From the correction of their mistakes, students' were supposed to learn more and improve their ability in recount writing.

b. Analysis of Students' Writing After Treatment (Post-test)

In the term of the product of the students' work, students' ability were collected and analyzed on the basis of Heaton grid which had been provided. Based on the analysis of students' ability, it was found that students' ability after getting treatment improved. In the treatment, students were given movie that was in line with the function

of recount text, its linguistic features, and its generic structure. The content was complete and relevance to the topic and the ideas were easy to understand. The sentences were well organized to support the main idea and in accordance with the sequence of event in the movie; however, there were mistakes in grammar.

Based on Heaton grid as the indicator of the students' ability in recount writing, the finding showed that students' ability was in good level; although, there were still some mistakes that students had made like grammar. So, it could be concluded that the implementation of using movie as media in the teaching of recount writing was very effective. It was proven with students' average score in experimental group was higher than control group. By considering the students' final score after getting treatment, the teaching of recount writing using movie as media was better than without movie (text).

Based on t-test analysis that was done, it was found that the t-score (3,243) was higher than t-table by using 5% alpha of significance (1.67). Since $t_{score} > t_{table}$, it proved that there was a significant difference between the improvement of students achievement that was given a new treatment (using movie) and the improvement of students achievement that was given a usual treatment (using text).

C. The Advantages and Disadvantages of Using Movie in the Teaching of Recount Writing

1. The Advantages of Using Movie in the Teaching of Recount Writing

After conducting the research, there were some advantages of using movie in the teaching of recount writing:

- a. The movie gave students the real data of a chronological action. It helped students express their ideas not only based on their imagination but also reality. The use of movie was actually meant to help them catch and express their ideas easily.

- b. Students' boredom in learning recount could be minimized. The treatment gave students different nuances of teaching and learning process so they were interested in the lesson. Movie that contained motion picture could attract students' attention to interpret it and express their ideas related to the movie.

2. The Disadvantages of Using Movie in the Teaching of Recount Writing

The disadvantages were described below:

- a. It spent a lot of time to prepare the equipments like computer, LCD projector, and others.
- b. It was not easy to find the appropriate movie that is related to the function of recount text. In selecting movie, teacher has to consider movie duration and time for writing activity.

D. Limitation of Research

The writer realized that there were some hindrances and barriers in doing this research. The hindrances and barriers which occurred were not caused by inability of the researcher but caused by the limitation of the research like time, fund, and equipment of research.