CHAPTER IV

FINDINGS AND DISCUSSION

This chapter presents the data that was collected during the experimental research. First analysis focuses on the homogeneity of the sample and the second analysis represents the result of pre-test and post-test that was done both in experimental and control group.

A. First Analysis

The first analysis was homogeneity test of the sample. That was previous summative score of students of VII B as experimental group and students of VII A as control group. The analysis was meant to get the homogeneous class of VII B and VII A. 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 those the classes were homogeneous. The analysis of homogeneity test could be seen in table I.

Table. I. Test of Homogeneity

Variant Sources	Experimental G	Control G
Sum	1870	1895
N	36	36
$\overline{x}$	51,94	52,64
Variants (s2)	58,97	66,41
Standart deviation (s)	7,68	8,15

By knowing the mean and the variance, the researcher was able to test the similarity of the two variants with the homogeneity test from students' previous score between VII B and VII A. The computation of the test of homogeneity as follows:

$$F = \frac{Biggest\ Variance}{Smallest\ Variance}$$

$$= 66,41/58,97$$

= 1.126

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} ≤ F_{table}/1.126 ≤ 1.76, so it could be concluded that both VII B and VII A had no differences. The result showed both groups had similar variants (homogenous).

B. Second Analysis

The second analysis represents the result of pre-test and post-test that was done both in experimental and control group. This analysis will answer the research question "Is performing drama effective to improve students' pronunciation of affix "s" added to sibilant sounds in the simple present tense?" We can conclude performing drama is effective when the result of post test of the experimental class (use performing drama technique) and control class (using conventional technique) has significant differences or the assumption that those classes is equal is not fulfilled.

Before the researcher tested the hypothesis that had been mentioned in the chapter two, the researcher analyzed and tested hypothesis prerequisites which contained of normality test and homogeneity test. Second analysis dealt with normality test, homogeneity test, and t-test (test of difference two variants) in pre-test and post-test.

1. Analysis of Pre-test

The experimental group (VII B) was given a pre-test on August 20, 2010 and control group (class VII A) was given a pre-test on August 20, 2010. They were asked to read short passage in performance test.

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-quadrate (X^2_{score}) then was compared with table of Chi-quadrate (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 VII A students in the control group before they were taught pronunciation affix "s" added to sibilant sounds added in the simple present tense without performing drama, they reached the maximum score 70 and minimum score 40. The stretches of score were 30. So, there were 6 classes with length of classes 5. From the computation of frequency distribution, it was found ($\Sigma f_{i.} x_i$) = 1968.5, and ($\Sigma f_{i.} x_i^2$) = 109401. So, the average score ($\overline{X}$) was 54.681 and the standard deviation (S) was 7.0954. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrate (X^2_{score}).

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

Class	Bk	Z_i	P(Z_i)	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
	39.5	-2.14	-0.4838				
40 - 44				0.0595	1.5	3	1.5400
	44.5	-1.43	-0.4243				
45 - 49				0.1570	3.9	6	1.0975
	49.5	-0.73	-0.2673				
50 - 54				0.2572	6.4	8	0.3834
	54.5	-0.03	-0.0102				
55 - 59				0.2617	6.5	10	1.8287
	59.5	0.68	0.2515				
60 - 64				0.1653	4.1	6	0.8439
	64.5	1.38	0.4168				
65 - 70				0.0703	1.8	3	0.8783
	70.5	2.23	0.4871				
					X²	=	6.5717

Based on the Chi-quadrate table (X^2_{table}) for 5% alpha of significance with df $6 - 3 = 3$, it was found $X^2_{table} = 7.81$. Because of $X^2_{score} < X^2_{table}$, so the initial data of control group distributed normally.

While from the result of VII B students in experimental group, before they were taught pronunciation of affix "s" added to sibilant sounds by performing drama, was found that the maximum score was 70 and minimal score was 40. The stretches of score were 30. So, there were 6 classes with length of classes 5. From the computation of frequency distribution, it was found ($\Sigma f_i x_i$) = 1933, and ($\Sigma f_i x_i^2$) = 105569. So, the average score ($\overline{X}$) was 53,694 and the standard deviation (S) was 7,1257. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrate (X^2_{score}).

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

Class			Bk	Z_i	$P(Z_i)$	Luas Daerah	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
			39.5	-1.99	-0.4768				
40	–	44				0.0753	1.9	4	2.3832
			44.5	-1.29	-0.4015				
45	–	49				0.1796	4.5	7	1.4037
			49.5	-0.59	-0.2219				
50	–	54				0.2670	6.7	8	0.2635
			54.5	0.11	0.0450				
55	–	59				0.2474	6.2	9	1.2816
			59.5	0.81	0.2924				
60	–	64				0.1429	3.6	6	1.6492
			64.5	1.52	0.4353				
65	–	70				0.0555	1.4	2	0.2696
			70.5	2.36	0.4908				
							X²	=	7.2509

Based on the Chi-quadrate table (X^2_{table}) for 5% alpha of significance with df 6 – 3 = 3, it was found X^2_{table} = 7.81. Because of $X^2_{score} < X^2_{table}$, 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	1870	1895
n	36	36
$\overline{x}$	51,94	52,64
Variants (s2)	58,97	66,41
Standart deviation (s)	7,68	8,15

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:

$$F = \frac{Biggest\ Variance}{Smallest\ Variance}$$

= 66,41/58,97

= 1,126

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 speaking transactional and interpersonal 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:

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

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:

$$S = \sqrt{\frac{(36-1)58.97 + (36-1)66.41}{36+36-2}}$$

$$= 7.917$$

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

$$t = \frac{51.94 - 52.64}{7.917\sqrt{\dfrac{1}{36} + \dfrac{1}{36}}}$$

$$= -0.372$$

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 a = 5% with df 24 + 24 − 2 = 46, it was found $t_{table(0.975)(46)} =$

1.99. 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 August 31, 2010 and control group was given a post test on August 31, 2010. Post-test was conducted after all treatments were done. Performing drama was used as technique in the teaching of Pronunciation of affix "s" added to sibilant sounds in the Simple Present Tense to students in experimental group. While for students in control group, they were given treatments without Performing Drama. Post-test was aimed to measure students' ability after they got treatments. They performed the drama after they get the scripts.

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, come from normal distribution normal or not. The formula, that was used, was Chi-quadrate. The result computation of Chi-quadrate (X^2_{score}) then was compared with table of Chi-quadrate (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 VII A students in the control group after they got usual treatments in the teaching of pronunciation of affix "s" added to sibilant sounds in the simple present tense, they reached the maximum score 80 and minimum score 50. The stretches of score were 30. So, there were 6 classes with length of classes 5. From the computation of frequency distribution, it was found ($\Sigma f_i x_i$) = 2253 and ($\Sigma f_i x_i^2$) = 142819.

So, the average score ($\overline{X}$) was 62.58 and the standard deviation (S) was 7,207. 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-quadrate (X^2_{score}).

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

Class			Bk	Z_i	$P(Z_i)$	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
			49,5	-1,82	-0,4653				
50	–	54				0,0963	2,4	5	2,7924
			54,5	-1,12	-0,3690				
55		59				0,2034	5,1	3	0,8543
			59,5	-0,43	-0,1656				
60	–	64				0,2704	6,8	10	1,5515
			64,5	0,27	0,1049				
65	–	69				0,2265	5,7	7	0,3155
			69,5	0,96	0,3314				
70	–	74				0,1195	3,0	5	1,3562
			74,5	1,65	0,4509				
75	–	80				0,0427	1,1	2	0,8166
			80,5	2,49	0,4935				
							X²	=	7,6865

Based on the Chi-quadrate table (X^2_{table}) for 5% alpha of significance with dk 6 – 3 = 3, it was found X^2_{table} = 7.81. Because of X^2_{score} < X^2_{table}, so the data of control group after getting treatments distributed normally.

While from the result of VII B students in experimental group, after they were taught by Performing Drama, was found that the maximum score was 80 and minimal score was 50. The stretches of score were 30. So, there were 6 classes with length of classes 5. From the computation of frequency distribution, it was found ($\Sigma f_i x_i$) = 2364, and ($\Sigma f_i x_i^2$) = 157163. So, the average

score ($\overline{X}$) was 65.67 and the standard deviation (S) was 7.42. 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 Performing Drama. After counting the average score and standard deviation, table of observation frequency was needed to measure Chi-quadrate (X^2_{score}).

Table IV. 5 Table of the Observation Frequency of

Experimental Group

Class	Bk	Z_i	$P(Z_i)$	Ld	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
	49.5	-2.18	-0.4853				
50 - 54				0.0515	1.3	3	2.2781
	54.5	-1.50	-0.4338				
55 - 59				0.1368	3.4	5	0.7301
	59.5	-0.83	-0.2970				
60 - 64				0.2346	5.9	7	0.2200
	64.5	-0.16	-0.0625				
65 - 69				0.2598	6.5	9	0.9671
	69.5	0.52	0.1973				
70 - 74				0.1858	4.6	8	2.4242
	74.5	1.19	0.3831				
75 - 80				0.0941	2.4	4	1.1523
	80.5	2.00	0.4772				
					X²	=	7.7719

Based on the Chi-quadrate table (X^2_{table}) for 5% alpha of significance with df 6 – 3 = 3, it was found X^2_{table} = 7.81. Because of $X^2_{score} < X^2_{table}$, 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)

Varians Sources	Experimental G	Control G
Sum	2310	2190
n	36	36
$\overline{x}$	64.17	60.83
Variants (S^2)	69.29	60.71
Standart deviation (S)	8.32	7.79

The computation of the test of homogeneity as follows:

F $= \dfrac{Biggest\ Variance}{Smallest\ Variance}$

= 69,29/60.71

= 1.141

On a 5% with df numerator (nb - 1) = 36 – 1 = 35 and df denominator (nk – 1) = 36 – 1 = 35, it was found $F_{table\ (0.025)\ (25:25)} =$ 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 group have no differences in the test of similarity between two variances in post-test score. So, to differentiate if the students' results of pronunciation of affix "s" added to sibilant sounds in the simple present tense in experimental and control group after getting treatments were significant or not, the writer used t-test to test the hypothesis that had been mentioned in the chapter two. To see the difference between the experimental and control group, the writer used formula:

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

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:

$$S = \sqrt{\frac{(36 - 1)69.28 + (36 - 1)60.71}{36 + 36 - 2}}$$

$$= 8.06226$$

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

$$t = \frac{64.17 - 60.71}{8.06226 \sqrt{\frac{1}{36} + \frac{1}{36}}}$$

$$= 1.754$$

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 a = 5% with df 25 +25 – 2 = 48, it was found $t_{table(0.95)(88)}$ = 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 that control group after getting treatments.

Since the obtained t-score was higher than the critical score on the table, the difference was statistically significance. Therefore, based on the computation there was a significance difference between the teaching of pronunciation of affix "s" added to sibilant sounds in the simple present tense by Performing Drama and the pronunciation of affix "s" added to sibilant sounds in the simple present tense without Performing Drama for the eighth grade students of SMPN 23 Semarang.

Teaching pronunciation of affix "s" added to sibilant sounds in the simple present tense by performing drama technique

seemed to be more effective than teaching pronunciation of affix "s" added to sibilant sounds in the simple present tense without Performing Drama. It can be seen from the result of the test where the students taught pronunciation of affix "s" added to sibilant sounds in the simple present tense by Performing Drama got higher scores than the students taught pronunciation of affix "s" added to sibilant sounds in the simple present tense without Performing Drama.

C. Discussions

The data were obtained from the students' achievement scores of the test of speaking transactional and interpersonal text. They were pre-test and post-test scores from the experimental and control group. The average score for experimental group was 53.69 (pre-test) and 65.66 (post-test). The average score for control group was 54.68 (pre-test) and 62.58 (post-test). The following was the simple tables of pre and post-test students' average score and students' average score of each speaking components.

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	53.69	65.66
2	Control	54.68	62.58

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

No	Component of Speaking	Group	The Average Score of Pre-test	The Average Score of Post-test
1	Pronunciation	Experimental	2.36	3,17
		Control	2.31	2.92

2	Grammar	Experimental	3,03	3,53
		Control	2,86	3,44
3	Vocabulary	Experimental	2.92	3.17
		Control	2,89	3,28
4	Fluency	Experimental	2.47	2.97
		Control	2.47	2.92

1. **Students' Condition in Control Group**

   In this study, source of data that become as control group was class VII A. In the control group, there was not a new treatment in a teaching learning process. They were given a usual treatment. They were taught pronunciation of affix "s" added to sibilant sounds in the simple present tense using conventional method. By making and memorizing the pattern in sentences in the teaching learning process, teacher had used a grammar translation method that could not increase students' taught pronunciation of affix "s" added to sibilant sounds in the simple present tense. Students could not enjoy in practicing their skill in speaking especially in pronunciation because they only make and memorize those pattern in sentences in daily life without practice to use it as its function. It was proven with the control group's average in the post-test (62.58) which was lower than the experimental group (65.66).

2. **Students' Condition in Experimental Group**

   a. **Analysis Students' Pronunciation Before Treatment (Pre-test)**

      In the pre-test, students' ability in pronunciation of affix "s" added to sibilant sounds in the simple present tense was low. Pre-test was conducted before the treatment. From the result of pre-test, it was known that students faced many difficulties in pronunciation of affix "s" added to sibilant sounds in the simple present tense. Students' word voice of sibilant sounds was not exactly clear. Therefore, students' ability of pronunciation of affix "s" added to sibilant sounds in the simple present tense was hard to be understood. To minimize the

number of students' mistakes in their pronunciation, the researcher collected students' speaking especially in pronunciation form after they do their conversation, gave correction, and returned the paper to them in the next day. From the correction of their mistakes, students' were supposed to learn more and improve their ability in pronunciation of affix "s" added to sibilant sounds in the simple present tense.

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

Based on the analysis of students' ability, it was found that students' ability after getting treatment was improved. In the treatment, students can drill their conversation in practice pronunciation in the script, especially in affix "s" added to sibilant sounds in the simple present tense.

The finding that shows students' ability is namely the increasing of students' average score. There were still some mistakes that students had made like grammar and pronunciation. But it was very human. So, it could be concluded that the implementation of performing drama as method in the teaching of pronunciation of affix "s" added to sibilant sounds in the simple present tense was 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 students' pronunciation of affix "s" added to sibilant sounds by performing drama as method was better than without performing drama.

Based on t-test analysis that was done, it was found that the t-score (1.754) 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 (Performing Drama) and the improvement of students achievement that was given a usual treatment.

D. Limitation of Research

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