

CHAPTER IV

FINDING AND DISCUSSION

This chapter presents the result and discussion of the research. It is divided into the calculation of the data description, the data analysis, hypotheses testing, and the data interpretation.

4.1 Finding

This part showed the general description of students' scores in both the experimental and control class. The description was divided into two sections: the pre-test scores and the post-test scores.

4.1.1 The Pre-Test Score

The table 4.1 below described the pre-test score of the experimental group and control group. There were 18 students in both the experimental and the control group.

Table 4.1
The Students' Pre-Test Scores

Students	The pre-test scores of experimental group	The pre-test scores of control group
1	50	65
2	55	70
3	65	55
4	55	80
5	55	60
6	55	50
7	80	65
8	65	45
9	55	60
10	65	55
11	55	70

12	45	60
13	70	70
14	60	65
15	45	40
16	80	55
17	60	50
18	55	45
Σ	1070	1060
Mean	59,4	58,8

The table above showed the students' pre-test scores of experimental group and control group. The test was given to the students in first meeting before the researcher giving treatment to the students. The table above showed the different scores of lowest and highest. In the experimental had the lowest scores was 45 and the highest score was 80. Whereas the control group had the lowest score was 40 and the highest score was 80. Then, the mean score of experimental group was 59,4 and the control group was 58,8. It can be concluded that the pre-test score of experimental group and control group is different.

After gave the pre-test the researcher gave treatment to the students in experimental group and also control group. Then, after the the researcher gave treatment the researcher gave post-test to both of classes. The post-test is given to know the students' improvement after teaching speaking by using Two Stay Two Stray model.

4.1.2 The Post-Test Scores

In this part, table 4.2 described the students' post-test scores of experimental group and control group. There were 18 students both in experimental and control group.

Table 4.2
Students' post-test scores

Students	The post-test scores of experimental group	The post-test scores of control group
1	60	70
2	70	70
3	75	70
4	65	85
5	65	75
6	65	50
7	95	75
8	75	70
9	70	65
10	80	60
11	70	70
12	55	65
13	80	70
14	65	65
15	60	45
16	95	60
17	70	50
18	70	50

Σ	1285	1125
Mean	71,3	62,2

The data aboved showed the post-test score of experimantal group and control group. The post-test was given after the researcher gave treatment to the students in the last meeting. The post-test was given to know the result after giving the treatment. The data showed the lowest scores ofexpeimental group was 55 and the control group was 45. The highest score of post-test in experimental scores was 95 and the control group was 85. The mean of the experimental group was 71,3 and the control group was 62,2. The data showed that the experimental post-test score was highest than contol group after treatment.

4.2 The Data Analysis

Table 4.4

The Comparasion Post-test Scores of Each Student in the Experimental Group and the Control Group

students	X	y	X-MX	Y-MY	(X-MX) ²	(Y-MY) ²
1	65	70	-6,3889	7,5	40,8179	56,25
2	70	70	-1,3889	7,5	1,92901	56,25
3	75	65	3,61111	2,5	13,0401	6,25
4	70	75	-1,3889	12,5	1,92901	156,25
5	65	65	-6,3889	2,5	40,8179	6,25
6	60	50	-11,389	-12,5	129,707	156,25
7	95	70	23,6111	7,5	557,485	56,25
8	70	60	-1,3889	-2,5	1,92901	6,25
9	70	65	-1,3889	2,5	1,92901	6,25
10	75	60	3,61111	-2,5	13,0401	6,25
11	70	70	-1,3889	7,5	1,92901	56,25
12	60	65	-11,389	2,5	129,707	6,25
13	80	65	8,61111	2,5	74,1512	6,25
14	65	70	-6,3889	7,5	40,8179	56,25
15	60	45	-11,389	-17,5	129,707	306,25

16	95	60	23,6111	-2,5	557,485	6,25
17	70	50	-1,3889	-12,5	1,92901	156,25
18	70	50	-1,3889	50	1,92901	2500
Σ	1285	1125	0	62,5	1740,28	3606,25
mean	71,38889	62,5	0	3,47222	96,6821	200,347

The procedures of calculation are as follow:

- a. Determining Mean of variable X, with formula:

$$M_1 = \frac{\Sigma X}{N_1}$$

$$M_1 = \frac{1285}{18}$$

$$= 71,38$$

- b. Determining Mean of variable Y, with formula :

$$M_2 = \frac{\Sigma Y}{N_2}$$

$$M_2 = \frac{1125}{18}$$

$$= 62,5$$

- c. Determining Standard of Deviation score of variable X, with formula :

$$SD_1 = \sqrt{\frac{\Sigma X^2}{N_1}}$$

$$= \sqrt{\frac{1740,28}{18}}$$

$$= \sqrt{96,68}$$

$$= 9,83$$

- d. Determining Standard Deviation score of variable Y, with formula :

$$SD_2 = \sqrt{\frac{\Sigma Y^2}{N_2}}$$

$$= \sqrt{\frac{3606,25}{18}}$$

$$= \sqrt{200,34}$$

$$= 14,2$$

e. Determining Standard Error Mean of variable X, with formula :

$$SE_{M1} = \frac{SD_1}{\sqrt{N_1 - 1}}$$

$$= \frac{9,83}{\sqrt{18 - 1}}$$

$$= \frac{9,83}{\sqrt{17}}$$

$$= \frac{9,83}{4,12}$$

$$= 2,38$$

f. Determining Standard Error Mean of variable Y, with formula :

$$SE_{M2} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

$$= \frac{14,2}{\sqrt{18 - 1}}$$

$$= \frac{14,2}{\sqrt{17}}$$

$$= \frac{14,2}{4,12}$$

$$= 3,43$$

- g. Determining Standard Error of different Mean of variable X and Mean of variable Y, with formula :

$$\begin{aligned}
 SE_{M_1-M_2} &= \sqrt{SE_{M_1}^2 + SE_{M_2}^2} \\
 &= \sqrt{(2,38)^2 + (3,43)^2} \\
 &= \sqrt{5,69 + 11,8} \\
 &= \sqrt{17,5} \\
 &= 4,18
 \end{aligned}$$

- h. Determining t_0

$$\begin{aligned}
 t_0 &= \frac{M_1 - M_2}{SE_{M_1 - M_2}} \\
 &= \frac{71,38 - 62,5}{4,18} \\
 &= 2,13
 \end{aligned}$$

- i. Determining t-table in significance level 5% with degree of freedom (df)

$$df = (N_x + N_y) - 2$$

$$df = (18 + 18) - 2$$

$$df = 36 - 2$$

$$df = 34$$

The value of degree freedom is 34 at the degree of significance 5% and the t_{observe} 2,13. Clearly it can be seen that the post-test score of experimental class is higher than the score of controlled class.

Secondly, after analyzing the t-test score in experimental and controlled class by using manual calculation, the t-test was also done for post-test score in the experimental and controlled class by using SPSS calculation. The result can be seen as follows :

Students	N	Mean	Std. Deviation	Std. Error Mean
Post_test Exp_class	18	71.3889	10.11777	2.38478
Cont_class	18	62.5000	8.61770	2.03121

	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
Post_test	.001	.976	2.838	34	.008	8.88889	3.13257	2.52274	15.25504
Equal variances assumed			2.838	33.160	.008	8.88889	3.13257	2.51680	15.26098
Equal variances not assumed									

4.3 Hypotheses testing

In this research, the researcher purposes null hypotheses (H_0) and alternative hypotheses (H_a).

H_0 : the use of Two Stay Two Stray (TSTS) technique is not effective in -- teaching speaking in first grade students of SMA ISLAM Jepara.

H_a : the use of Two Stay Two Stray (TSTS) technique is effective in teaching speaking in first grade students of SMA ISLAM Jepara.

The assumption of these hypotheses as follows:

If $t_0 > t_{table}$, the null hypotheses (H_0) is rejected and the alternative hypotheses (H_a) is accepted. It means the use of Two Stay Two Stray (TSTS) is effective in teaching speaking ability in the tenth grade of SMA Islam Jepara.

If $t_0 < t_{table}$ the null hypotheses (H_0) is accepted and the alternative hypotheses (H_a) is rejected. It means the use of Two Stay Two Stray (TSTS) is not effective in teaching speaking in the tenth grade of SMA Islam Jepara.

Based on the description of data calculation, it can be inferred that :

1. The value of t_0 is 2,112
2. The degree of freedom (df) is 34, so the value of t_{table} in the significance 5% =2

It shows that $t_0 > t_{table}$, it means that the null hypotheses (H_0) is rejected and the alternative hypotheses (H_a) is accepted.

4.4 The Data Interpretation

Two Stay Two Stray model is a model where the students should speak especially speaking English. It can be used some topic or problem and asked the student to solved it by discussing with their group and then share the conclusion to other group. It is effective to improve students speaking ability. In Two Stay Two Stray model the students had same opportunity to speak up.

The result of data analysis using t_{test} showed, the value of t_0 is 2,13 and the value of t_{table} is 2,03 with degree of freedom 34 in the significance degree of 5%. It means that $t_0 > t_{table}$ (t_0 is higher than t_{table}). Therefore, the null hypothesis (H_0) is rejected. Then, the alternative hypothesis (H_a) is accepted that the use of Two Stay Two Stray model in teaching speaking ability in the tenth grade of SMA Islam Jepara. The

result showed there is different score in both classes. The experiment class got increase score than control class. It could be seen from the mean of pre-test and post-test from both classes. The mean of pre-test in control class is 58,8 and the post-test in experimental class is 59,4. Meanwhile the mean of post-test in experimental class is 71,3 and the post-test scores in control group is 62,2. From the result of the research, it can be concluded that the used of Two Stay Two Stray model is effective in teaching speaking ability in the tenth grade of SMA Islam Jepara.

