

CHAPTER IV

FINDING AND DISCUSSION

This study was quasi experimental study which used non equivalent control group design as the design. This study was aimed to know pair work technique is effective or not in case to improve students' speaking skill on descriptive text. In doing this research, the writer used two classes, experimental class who taught using pair work technique and control class who taught without pair work technique. The experimental class was 24 students of X MIA 1. Meanwhile the control class was 22 students of X MIA 2.

Both of experimental class and control class was given pre test and post test. Pre test for both experimental class and control class was held on January 9, 2019. Meanwhile post test for both experimental class and control class was held on January 26, 2019. Both pre test and post test was in the form of oral test. The students were asked to describe tourist object in the picture orally.

4.1 Finding

4.1.1 Try Out the Instrument

a. Validity Test

Validity is the extent to which the test measures what it is wanted to measure, or it can be said that a valid test can really measure what it is supposed to measure (Sugianto, 2017:23). For example if the test is supposed to measure the students' speaking ability then the test has to be in form of oral test. In this research, the writer chose content validity

Content validity is validity that is estimated by testing the properness or relevance of content of the test through rational analysis from competent panels or through expert judgment (Hendryadi, 2014:1). In this research the content validity is analyzed by using Lawshe's CVR. The analysis is below.

Table 4.1 Data of Competent Panels for Content Validity

Item Number	Indicator	Basic Competence	Panel (essential, appropriate but not essential, or useless)
1	Appropriate to the basic competence and also can measure students ability of speaking especially on descriptive text	Create spoken and written descriptive text shortly and simply, relate to tourist object and well-known historical site by paying attention to the social function, generic structure, and language features correctly and contextually.	Essential
2			Essential

$$I. \quad CVR_{item\ 1} = \left(n_e - \frac{N}{2}\right) : \left(\frac{N}{2}\right)$$

$$CVR_{item\ 1} = \left(1 - \frac{1}{2}\right) : \left(\frac{1}{2}\right)$$

$$CVR_{item\ 1} = \frac{1}{2} : \frac{1}{2}$$

$$CVR_{item\ 1} = 1$$

$$II. \quad CVR_{item\ 2} = \left(n_e - \frac{N}{2}\right) : \left(\frac{N}{2}\right)$$

$$CVR_{item\ 2} = \left(1 - \frac{1}{2}\right) : \left(\frac{1}{2}\right)$$

$$CVR_{item\ 2} = \frac{1}{2} : \frac{1}{2}$$

$$CVR_{item\ 2} = 1$$

In Lawshe's CVR analysis the result is around +1 until -1. If the result is higher than 0 then it means that the question is important or essential. It also means that the content validity is high (Hendryadi, 2014:4). The calculation above shows that CVR_{item1} is 1 and CVR_{item2} is also 1. It means that item number 1 and item number 2 have high content validity. It is because $-1 < 1$.

b. Reliability Test

Reliability is test consistency and dependability (H. D. Brown, 2004:20). Consistent means that how many times the test is hold then the result will be similar or have stable change. In this study, the writer uses inter rater reliability which is meant that different raters rate same performance. The analysis of the reliability is below.

Table 4.2 Two Set of Holistic Score

Student's Code	Rater 1	Rater 2	Agreement
EC01	7	7	1
EC02	13	13	1
EC03	7	7	1
EC04	9	9	1
EC05	11	6	0
EC06	10	10	1
EC07	10	7	0
EC08	7	7	1
EC09	7	7	1
EC10	7	7	1
EC11	7	7	1
EC12	8	8	1
EC13	10	10	1
EC14	8	8	1
EC15	14	14	1
EC16	8	8	1
EC17	8	8	1
EC18	8	8	1
EC19	8	8	1
EC20	8	11	0

EC21	15	10	0
EC22	9	9	1
EC23	15	8	0
EC24	8	8	1
CC01	5	5	1
CC02	9	9	1
CC03	9	1	1
CC04	9	9	1
CC05	9	9	1
CC06	10	9	0
CC07	8	8	1
CC08	14	11	0
CC09	8	8	1
CC10	5	5	1
CC11	11	11	1
CC12	7	6	0
CC13	5	5	1
CC14	9	7	0
CC15	8	8	1
CC16	14	11	0
CC17	14	14	1
CC18	10	10	1

CC19	18	15	0
CC20	8	8	1
CC21	10	10	1
CC22	6	6	1
TOTAL			1=35 0=11

In the table above 1 meant agreements, meanwhile 0 meant disagreements. It will be acceptable if the agreement is 75% or higher (Stephanie, 2016:1). The total of agreements in this study is 35, meanwhile the disagreements is 11.

$$\text{agreement level} = \frac{\text{total of agreements}}{\text{total contestant}} \times 100\%$$

$$\text{agreement level} = \frac{35}{44} \times 100\%$$

$$\text{agreement level} = 79,5\%$$

From the calculation above, the result is 79,5%. It means that the test is acceptable. It is because it was higher than 75%.

4.1.2 Pre Test

Pre test was given to know students' ability before they are given treatments. In this study, the pre test was in the form of oral test with 2 questions. The students were asked to describe pictures of Kartini Beach and Kartini Museum. Pre test was done on 9th January 2019 for both experimental class (X MIA 1) and control class (X MIA 2). Then, the result of the pre test is below:

a. Score of Pre Test

Table 4.3 Pre Test Score of Both Experimental Class and Control Class

Students' Code	Score	Students' Code	Score
EC01	7	CC01	5
EC02	13	CC02	9
EC03	7	CC03	9
EC04	9	CC04	9
EC05	11	CC05	9
EC06	10	CC06	10
EC07	10	CC07	8
EC08	7	CC08	14
EC09	7	CC09	8
EC10	7	CC10	5
EC11	7	CC11	11
EC12	8	CC12	7
EC13	10	CC13	5
EC14	8	CC14	9
EC15	14	CC15	8
EC16	8	CC16	14
EC17	8	CC17	14
EC18	8	CC18	10

EC19	8	CC19	18
EC20	8	CC20	8
EC21	15	CC21	10
EC22	9	CC22	6
EC23	15	-	
EC24	8	-	
Total (Σ)	222	Total (Σ)	206
Mean (\bar{X}_1)	9,25	Mean (\bar{X}_2)	9,36

In the table above, EC is code for experimental class while CC is code for Control Class. From the table above, it can be known that the mean score of the control class is little bit higher than the experimental class. The mean score of experimental class is 9,25, meanwhile the mean score of control class is 9,36. The highest score of the experimental class is 15. Meanwhile the highest score of the control class is 18. The lowest score of experimental class is 7 while the lowest score of control class is 5.

b. Analysis of Pre Test Data

Table 4.5 Comparison Pre Test Score between Experimental Class and Control Class

Students (X)	Students (Y)	X	Y	$X-\bar{X}_1$	$Y-\bar{X}_2$	$(X-\bar{X}_1)^2$	$(Y-\bar{X}_2)^2$
EC01	CC01	7	5	-2,25	-4,36	5,06	19,04
EC02	CC02	13	9	3,75	-0,36	14,06	0,13
EC03	CC03	7	9	-2,25	-0,36	5,06	0,13

EC04	CC04	9	9	-0,25	-0,36	0,06	0,13
EC05	CC05	11	9	1,75	-0,36	3,06	0,13
EC06	CC06	10	10	0,75	0,64	0,56	0,40
EC07	CC07	10	8	0,75	-1,36	0,56	1,86
EC08	CC08	7	14	-2,25	4,64	5,06	21,50
EC09	CC09	7	8	-2,25	-1,36	5,06	1,86
EC10	CC10	7	5	-2,25	-4,36	5,06	19,04
EC11	CC11	7	11	-2,25	1,64	5,06	2,68
EC12	CC12	8	7	-1,25	-2,36	1,56	5,59
EC13	CC13	10	5	0,75	-4,36	0,56	19,04
EC14	CC14	8	9	-1,25	-0,36	1,56	0,13
EC15	CC15	14	8	4,75	-1,36	22,56	1,86
EC16	CC16	8	14	-1,25	4,64	1,56	21,50
EC17	CC17	8	14	-1,25	4,64	1,56	21,50
EC18	CC18	8	10	-1,25	0,64	1,56	0,40
EC19	CC19	8	18	-1,25	8,64	1,56	74,59
EC20	CC20	8	8	-1,25	-1,36	1,56	1,86
EC21	CC21	15	10	5,75	0,64	33,06	0,40
EC22	CC22	9	6	-0,25	-3,36	0,06	11,31
EC23		15		5,75		33,06	
EC24		8		-1,25		1,56	
Total (Σ)		222	206	0	0,00	150,50	225,09

Mean (\bar{X})	9,25	9,36	0	0,00	6,27	10,23
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I. Mean of variable X

$$\bar{X}_1 = \frac{\Sigma X}{n_1}$$

$$\bar{X}_1 = \frac{222}{24}$$

$$\bar{X}_1 = 9,25$$

II. Mean of variable Y

$$\bar{X}_2 = \frac{\Sigma Y}{n_2}$$

$$\bar{X}_2 = \frac{206}{22}$$

$$\bar{X}_2 = 9,36$$

III. Standard deviation of variable X

$$S_1^2 = \frac{\Sigma(X - \bar{X}_1)^2}{n_1 - 1}$$

$$S_1^2 = \frac{150,50}{24 - 1}$$

$$S_1^2 = \frac{150,50}{23}$$

$$S_1^2 = 6,543$$

$$S_1 = 2,558$$

IV. Standard deviation of variable Y

$$S_2^2 = \frac{\Sigma(Y - \bar{X}_2)^2}{n_2 - 1}$$

$$S_2^2 = \frac{225,09}{22 - 1}$$

$$S_2^2 = \frac{225,09}{21}$$

$$S_2^2 = 10,719$$

$$S_2 = 3,274$$

V. Standard deviation of both variable X and Y

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S^2 = \frac{(24 - 1)6,543 + (23 - 1)10,719}{24 + 22 - 2}$$

$$S^2 = \frac{23 \times 6,543 + 22 \times 10,719}{44}$$

$$S^2 = \frac{150,489 + 225,099}{44}$$

$$S^2 = \frac{375,588}{44}$$

$$S^2 = 8,536$$

$$S = 2,922$$

VI. T value

$$t_0 = \frac{\bar{X}_1 - \bar{X}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t_0 = \frac{9,25 - 9,36}{2,922 \sqrt{\frac{1}{24} + \frac{1}{22}}}$$

$$t_0 = \frac{-0,11}{0,833}$$

$$t_0 = -0,132$$

VII. Degree of freedom (df)

$$df = n_1 + n_2 - 2$$

$$df = 24 + 22 - 2$$

$$df = 44$$

From the degree of freedom (df) it can be concluded that the t table is 2,021. Then, according to Sa'idah (2017:95) Ho will be accepted if $-t_{table} \leq t_{value} \leq t_{table}$ and Ho will be refused if $t_{value} > t_{table}$. The result of t test from pre test t_{value} is lower than t_{table} ($-2,021 \leq -0,132 \leq 2,021$). It means that in the post test Ho is accepted and Ha is refused.

Then the manual calculation above is proven with SPSS. It is known if the manual calculation is correct. Independent Sample T Test was used as the analysis method. The result of the analysis by using SPSS is below.

Figure 4.1 Group Statistics of Pre Test

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	Experimental C	24	9,25	2,558	,522
	Control C	22	9,36	3,274	,698

The data above shows that the mean of pre test score of experimental class is 9,25 with the total of students 24. Meanwhile, the mean of pre test of control class is 9,36 with the total of students 22. The standard deviation of the experimental class is 2,558 and 3,274 for control class. The result in the table above is same with the manual calculation.

Figure 4.2 Independent Sample T Test of Pre Test

		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
Score	Equal variances assumed	,448	,507	-,132	44	,896	-,114	,862	1,852	1,624
	Equal variances not assumed			-,130	39,722	,897	-,114	,872	1,876	1,649

The Equal variances assumed of table above shows that t_{value} is $-0,132$ and the Sig. (2-tailed) is $0,896$. H_0 will be accepted if $t_{\text{value}} < t_{\text{table}}$. The t_{table} is $2,021$. In this study, the t_{value} is lower than t_{table} ($-0,132 < 2,021$). So here H_0 is accepted. The result in the table above is same with the manual calculation. So, based on the pre test score analysis pair work is not effective to improve students speaking skill on descriptive text.

4.1.3 Post Test

Post test was a test given to both experimental class' students and control class' students. It was held to know the students' improvement after the treatments. Post test for both experimental class and control class was held on 26th of January 2019. The test

was in the form of oral test. The students were asked to describe two pictures orally. The result of the post test is below:

a. Score of Post Test

Table 4.5 Post Test Score of Both Experimental Class and Control Class

Students' Code	Score	Students' Code	Score
EC01	14	CC01	13
EC02	21	CC02	17
EC03	19	CC03	20
EC04	20	CC04	15
EC05	19	CC05	15
EC06	21	CC06	19
EC07	20	CC07	16
EC08	14	CC08	17
EC09	13	CC09	17
EC10	14	CC10	15
EC11	11	CC11	17
EC12	23	CC12	19
EC13	22	CC13	15
EC14	19	CC14	12
EC15	19	CC15	14
EC16	19	CC16	23

EC17	22	CC17	16
EC18	22	CC18	18
EC19	19	CC19	20
EC20	19	CC20	19
EC21	20	CC21	15
EC22	21	CC22	18
EC23	23	-	
EC24	20	-	
Total (Σ)	454	Total (Σ)	370
Mean (\bar{X}_1)	18,92	Mean (\bar{X}_2)	16,82

The table above shows the post test score of both experimental class and control class. The result shows that the mean score of experimental class is higher than control class. Mean score of experimental class is 18,92 while mean score of control class is 16,82. The highest score of experimental class is 23 same as the control class. Then, the lowest score of experimental class is 11. Meanwhile, the lowest score of control class is 12.

b. Analysis of Post Test Data

Table 4.6 Comparison Post Test Score between Experimental Class and Control Class

Students (X)	Students (Y)	X	Y	$X-\bar{X}_1$	$Y-\bar{X}_2$	$(X-\bar{X}_1)^2$	$(Y-\bar{X}_2)^2$
EC01	CC01	14	13	-4,92	-3,82	24,17	14,58

EC02	CC02	21	17	2,08	0,18	4,34	0,03
EC03	CC03	19	20	0,08	3,18	0,01	10,12
EC04	CC04	20	15	1,08	-1,82	1,17	3,31
EC05	CC05	19	15	0,08	-1,82	0,01	3,31
EC06	CC06	21	19	2,08	2,18	4,34	4,76
EC07	CC07	20	16	1,08	-0,82	1,17	0,67
EC08	CC08	14	17	-4,92	0,18	24,17	0,03
EC09	CC09	13	17	-5,92	0,18	35,01	0,03
EC10	CC10	14	15	-4,92	-1,82	24,17	3,31
EC11	CC11	11	17	-7,92	0,18	62,67	0,03
EC12	CC12	23	19	4,08	2,18	16,67	4,76
EC13	CC13	22	15	3,08	-1,82	9,51	3,31
EC14	CC14	19	12	0,08	-4,82	0,01	23,21
EC15	CC15	19	14	0,08	-2,82	0,01	7,94
EC16	CC16	19	23	0,08	6,18	0,01	38,21
EC17	CC17	22	16	3,08	-0,82	9,51	0,67
EC18	CC18	22	18	3,08	1,18	9,51	1,40
EC19	CC19	19	20	0,08	3,18	0,01	10,12
EC20	CC20	19	19	0,08	2,18	0,01	4,76
EC21	CC21	20	15	1,08	-1,82	1,17	3,31
EC22	CC22	21	18	2,08	1,18	4,34	1,40
EC23		23		4,08		16,67	

EC24		20		1,08		1,17	
Total (Σ)		454	370	0,00	0,00	249,83	139,27
Mean (\bar{X})		18,92	16,82	0,00	0,00	10,41	6,33

I. Mean of Variable X

$$\bar{X}_1 = \frac{\Sigma X}{n_1}$$

$$\bar{X}_1 = \frac{454}{24}$$

$$\bar{X}_1 = 18,92$$

II. Mean of Variable Y

$$\bar{X}_2 = \frac{\Sigma Y}{n_2}$$

$$\bar{X}_2 = \frac{370}{23}$$

$$\bar{X}_2 = 16,82$$

III. Standard Deviation of Variable X

$$S_1^2 = \frac{\Sigma(X - \bar{X}_1)^2}{n_1 - 1}$$

$$S_1^2 = \frac{249,83}{24 - 1}$$

$$S_1^2 = \frac{249,83}{23}$$

$$S_1^2 = 10,862$$

$$S_1 = 3,296$$

IV. Standard Deviation of Variable Y

$$S_2^2 = \frac{\Sigma(Y - \bar{X}_2)^2}{n_2 - 1}$$

$$S_2^2 = \frac{139,27}{22 - 1}$$

$$S_2^2 = \frac{139,27}{21}$$

$$S_2^2 = 6,632$$

$$S_2 = 2,575$$

V. Standard Deviation of both Variable X and Y

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S^2 = \frac{(24 - 1)10,862 + (22 - 1)6,632}{24 + 22 - 2}$$

$$S^2 = \frac{23 \times 10,862 + 21 \times 6,632}{44}$$

$$S^2 = \frac{249,826 + 139,272}{44}$$

$$S^2 = \frac{389,098}{44}$$

$$S^2 = 8,843$$

$$S = 2,974$$

VI. T Value

$$t_0 = \frac{\bar{X}_1 - \bar{X}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t_0 = \frac{18,92 - 16,82}{2,974 \sqrt{\frac{1}{24} + \frac{1}{22}}}$$

$$t_0 = \frac{2,1}{0,878}$$

$$t_0 = 2,391$$

VII. Degree of Freedom (df)

$$df = n_1 + n_2 - 1$$

$$df = 24 + 22 - 1$$

$$df = 44$$

From the degree of freedom (df) above, it can be known that the t_{table} is 2,021. Then, according Sa'idah (2017:95) H_0 will be accepted if $-t_{table} \leq t_{value} \leq t_{table}$ and H_0 will be refused if $t_{value} > t_{table}$. In this study, t_{value} is higher than t_{table} ($2,391 > 2,021$). It means that H_0 is refused and H_a is accepted.

The manual calculation above then proven by using SPSS. It is to know whether the manual calculation is correct or not. Same as pre test, to analyze post test score writer also used independent sample t test. Then, the result is below.

Figure 4.3 Group Statistics of Post Test

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	Experimental C	24	18,92	3,296	,673
	Control C	22	16,82	2,575	,549

The data above shows that the mean of post test score from 24 students of experimental class is 18,92. Meanwhile the mean score of post test score from 22 students of control class is 16,82. The standard deviation is 3,296 for experimental class and 2,575 for control class. It is same with the manual calculation.

Figure 4.4 Independent Sample T Test for Post Test

		Independent Samples Test									
		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
Score	Equal variances assumed	,413	,524	2,391	44	,021	2,098	,878	,330	3,867	
	Equal variances not assumed			2,417	42,966	,020	2,098	,868	,347	3,850	

The table above shows that the t_{value} is 2,391 and the Sig. (2-tailed) is 0,021. H_0 will be accepted if t_{value} is lower than t_{table} ($t_{\text{value}} < t_{\text{table}}$). In the degree of freedom in this study is 44 resulting t_{table} 2,021. The t_{value} is higher than t_{table} ($2,391 > 2,021$). So, H_0 is refused and H_a is accepted. It means that pair work technique is effective to improve students' speaking skill on descriptive text.

4.2 Discussion

The concern of this study was the effectiveness of pair work technique in improving students' speaking skill especially on descriptive text. Speaking was one of the English language skills and it was different from writing. Chaney and Burk (1985:20) as cited in Samad et al. (2017:99) stated that speaking is the process of sharing and constructing the sense of

using oral or verbal in variety contexts. Or in other word, speaking was way of conveying message by producing vocal sound.

There were many techniques and methods that could be used to improve speaking skill. One of the techniques was pair work techniques. It was a technique that required students to work in pair. In pair work technique students could practice language together, study a text, research language, and take part in information gap activities (Harmer, 2001:166).

Subject of this study was tenth grade students of MA Walisongo Pecangaan in academic year of 2018/2019. X MIA 1 was chosen as experimental class and X MIA 2 was chosen as control class. Both of experimental and control class were given pre test, 4 meetings in treatments, and post test. The result of pre test and post test is below.

Table 4.7 The Different Score between Pre Test and Post Test

	Mean Score	T _{value}	T _{table}	T test Result
Pre Test	Experimental class = 9,25	-0,132	2,021	Ho is accepted ($-t_{table} \leq t_{value} \leq t_{table}$) ($-2,021 \leq -0,132 \leq 2,021$)
	Control class = 9,36			
Post Test	Experimental class = 18,92	2,391	2,021	Ha is accepted ($t_{value} > t_{table}$) ($2,391 > 2,021$)
	Control class = 16,82			

The table above showed that in pre test mean score of experimental class was lower than the mean score of control class. The mean score of experimental class was 9,25 while the mean score of control class was 9,32. The result of the t test showed that t_{value} was lower than t_{table} ($-0,132 < 2,021$). It meant that H_0 was accepted. It was happened because pre test was given before the treatments.

In the treatments, students of experimental class were taught by using pair work technique which required students to work in pair. Meanwhile, students of control class were taught by using conventional teaching technique which required students to work individually. The treatments for both experimental class and control class were done in 4 meetings for each.

Then, the table 4.7 also showed that the score for both experimental class and control class increased. The mean score of experimental class was higher than mean score of control class ($18,92 > 16,82$). The t test result was also positive. The t_{value} was higher than t_{table} ($2,391 > 2,021$). It meant that H_a is accepted and H_0 is rejected. So, it could be stated that pair work technique is effective to improve students speaking skill especially on descriptive text.