CHAPTER IV

RESULT OF THE STUDY

This chapter covers description of the data, test of normality and homogeneity, result of the data analyses and discussion.

A. Description of The Data

This section discusses the obtained data of the effect of using two stay two stray techniques in teaching reading descriptive text. The presented data consisted of pre-test and post-test scores. The comparison pre test and post test scores were presented in the following table:

4.1 Result of Pre-test and Post Test Score

EXPERIMENTAL CLASS				CONTROL CLASS				
		SCORE					SCORE		
NO	CODE	PRE-TEST	POST-TEST	DIFFERENCE	NO	CODE	PRE-TEST	POST-TEST	DIFFERENCE
1	E-01	41.9	64.5	22.6	1	C-01	54.8	58.0	3.2
2	E-02	61.2	70.9	9.7	2	C-02	51.6	51.6	0
3	E-03	51.6	77.4	25.8	3	C-03	74.1	80.6	6.5
4	E-04	51.6	74.1	22.5	4	C-04	61.2	54.8	-6.4
5	E-05	74.1	80.6	6.5	5	C-05	51.6	61.2	9.6
6	E-06	41.9	64.5	22.6	6	C-06	51.6	61.2	9.6
7	E-07	54.8	70.9	16.1	7	C-07	54.8	74.1	19.3
8	E-08	70.9	83.8	12.9	8	C-08	48.3	61.2	12.9
9	E-09	48.3	74.1	25.8	9	C-09	74.1	77.4	3.3
10	E-10	38.7	67.7	29	10	C-10	64.5	61.2	-3.3
11	E-11	48.3	64.5	16.2	11	C-11	45.1	67.7	22.6
12	E-12	54.8	70.9	16.1	12	C-12	41.9	48.3	6.4
13	E-13	77.4	80.6	3.2	13	C-13	64.5	64.5	0

14	E-14	70.9	77.4	6.5	14	C-14	64.5	61.2	-3.3
15	E-15	67.7	74.1	6.4	15	C-15	74.1	67.7	-6.4
16	E-16	64.5	77.4	12.9	16	C-16	61.2	67.7	6.5
17	E-17	54.8	77.4	22.6	17	C-17	41.9	45.1	3.2
18	E-18	64.5	70.9	6.4	18	C-18	67.7	64.5	-3.2
19	E-19	64.5	80.6	6.1	19	C-19	74.1	77.4	3.3
20	E-20	74.1	83.8	9.7	20	C-20	64.5	61.2	-3.3
21	E-21	61.2	67.7	6.5	21	C-21	45.1	70.9	25.8
22	E-22	58.0	77.4	19.4	22	C-22	67.7	67.7	0
23	E-23	67.7	87.0	19.3	23	C-23	70.9	74.1	3.2
24	E-24	61.2	74.1	12.9	24	C-24	61.2	64.5	3.3
TOTAL		1424.6	1792.3	357.7	25	C-25	45.1	48.3	3.2
MEAN		59.3583	74.6792	14.9042	TOTAL		1476.1	1592.1	116
LOWEST		38.7	64.5		MEAN		59.044	63.684	4.64
HIGHEST		77.4	87.0		LOWEST		41.9	45.1	
					HIGHEST		74.1	80.6	

From the table above the mean score of pre test and post test of the experimental class are 59.3583 and 74.6792. Meanwhile, the highest score pre test and post test of the experimental class are 77.4and 87.0, the lowest scores pre test and post test of the experimental class are 38.7 and 64.5. In addition, the mean score pre test and post test of the control class are 59.044 and 63.684. Meanwhile, the highest score pre test and post test of the control class are 74.1 and 80.6. The lowest scores pre test and post test of the control class are 41.9 and 45.1.

B. Test of Statistical Analysis

1. The Result of Pre-Test Score

The students' pre test score are distributed in the following table in order toanalyze the students' knowledge before conducting the treatment.

Table 4.2 pre-test score of Experimental and Control Group

Experimental Group				Control Group			
Code	Score	CORRECT ANSWER	PREDICATE	CODE	SCORE	CORRECT ANSWER	PREDICATE
E-01	41.9	13	FAIL	C-01	54.8	17	LESS
E-02	61.2	19	ENOUGH	C-02	51.6	16	LESS
E-03	51.6	16	LESS	C-03	74.1	23	GOOD
E-04	51.6	16	LESS	C-04	61.2	19	ENOUGH
E-05	74.1	23	GOOD	C-05	51.6	16	LESS
E-06	41.9	13	FAIL	C-06	51.6	16	LESS
E-07	54.8	17	LESS	C-07	54.8	17	LESS
E-08	70.9	22	GOOD	C-08	48.3	15	FAIL
E-09	48.3	15	FAIL	C-09	74.1	23	GOOD
E-10	38.7	12	FAIL	C-10	64.5	20	ENOUGH
E-11	48.3	15	FAIL	C-11	45.1	15	FAIL
E-12	54.8	17	LESS	C-12	41.9	13	FAIL
E-13	77.4	24	GOOD	C-13	64.5	20	ENOUGH
E-14	70.9	22	GOOD	C-14	64.5	20	ENOUGH
E-15	67.7	21	ENOUGH	C-15	74.1	23	GOOD
E-16	64.5	20	ENOUGH	C-16	61.2	19	ENOUGH
E-17	54.8	17	LESS	C-17	41.9	13	FAIL
E-18	64.5	20	ENOUGH	C-18	67.7	21	ENOUGH
E-19	64.5	20	ENOUGH	C19	74.1	23	GOOD
E-20	74.1	23	GOOD	C-20	64.5	20	ENOUGH
E-21	61.2	19	ENOUGH	C-21	45.1	14	FAIL
E-22	58.0	18	LESS	C-22	67.7	21	ENOUGH
E-23	67.7	21	ENOUGH	C-23	70.9	22	GOOD
E-24	61.2	19	ENOUGH	C-24	61.2	19	ENOUGH
TOTAL		1424.6		C-25	45.1	14	FAIL
AVERAGE		59.3583		TOTAL		1476.1	
Lowest Score		38.7		AVERAGE		59.044	
Highest Score		77.4		Lowest Score		41.9	
				Highest Score		74.1	

The table above shows the comparison of pre test score achieved by experimental and control group. The highest score of experimental group is77.4 and

the lowest score is 38.7. There are five students whose score at fail category. There are six students whose score at less category. There are eight students whose score at enough category and there are five students whose score at at good category. Meanwhile, the highest score of control group is 74.1 and the lowest score is 41.9. There are six students whose score at fail category. There are five students whose score at less category. There are nine students whose score at enough category and there are five students whose score at good category.

a. **The Result of Pretest Score of Experimental group.**

Based on the data above, the highest score is 77.4 and the lowest score is 38.7. To determine the range of score, the class interval, and interval of temporary, the writer calculated using formula as follows:

The Highest Score (H) =77.4

The Lowest Score (L)   = 38.7

The Range of Score (R) =H − L + 1

$$= 77.4 - 38.7 + 1$$

$$=39.7$$

The Class Interval (K) =1 + (3.3) x Log n

$$= 1 + (3.3) \text{ x Log } 24$$

$$=1 + 3.3 \text{ x} 1.380211242$$

$$= 1 + 4.554697098$$

$$= 5.554697098$$

$$= 5.5$$

Interval of Temporary (I) $= \frac{R}{K} = \frac{39.7}{5.5} = 7.21 = 7$

So, the range of score is 39.7, the class interval is 7, and interval of temporary

is 7. Then, it presents using frequency distribution in the following table:

Table 4.3 Frequency Distribution of the Pretest Score

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	The Limitation of each group	Frequency Relative (%)	Frequency Cumulative (%)
1	38.1-44.1	3	41.1	37.6-44.6	12.5	100
2	44.2-50.2	2	47.2	43.7-50.7	8.33	87.84
3	50.3-56.3	5	53.3	49.8-56.8	20.83	79.14
4	56.4-62.4	4	59.4	55.9-62.9	16.66	58.31
5	62.5-68.5	5	65.5	62-69	20.83	41.65
6	68.6-74.1	4	71.6	68.1-75.1	16.66	20.82
7	74.7-80.7	1	77.7	74.2-81.2	4.16	4.16
		$\sum F = 24$			$\sum p = 100$	

The Distribution of students' pretest score of the experimental group can also

be seen in the following figure.

Figure 4.1
The Frequency Distribution of Pre-test for experimental group
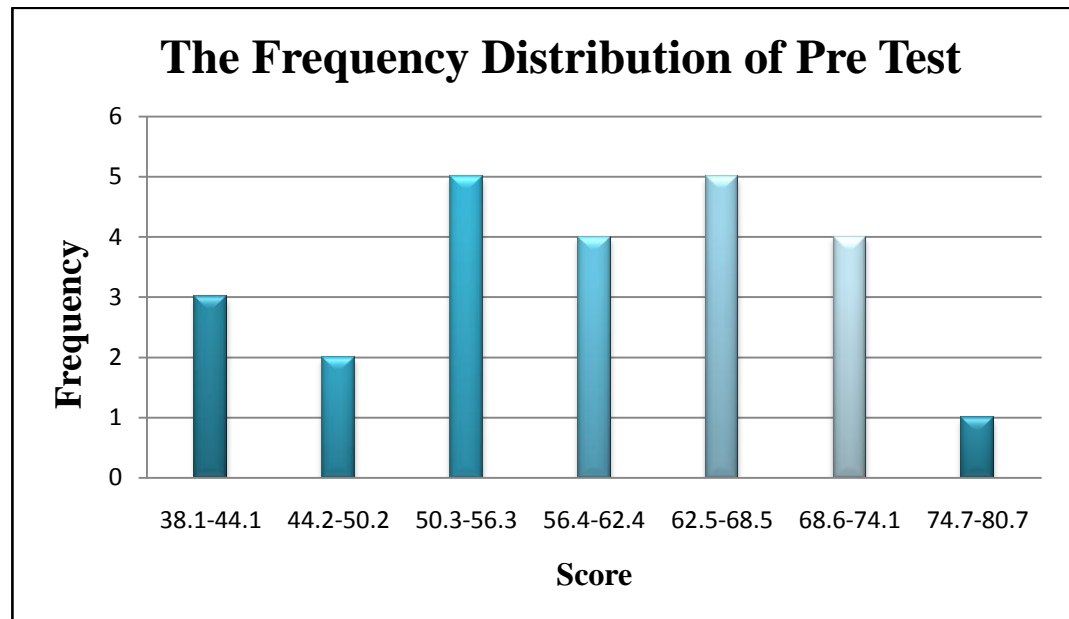
The table and the figure above show the pre test score of the students in the experimental group. There are three students who get score 38.1-44.1 which the percentage is 12,5 %. There are two students who get score 44.2-50.2 which the percentage is 8,3%. There are five students who get score 50.3-56.3 which the percentage is 20,8%. There are four students who get score 56.4-62.4 which the percentage is 16,6%. There are five students who get score 62.5-68.5 which the percentage is 20,8 %. There are four students who get score 68.6-74.6 which the percentage is 16,6%. There is one student who gets 74.7-80.7 which the percentage is 4,16 %.

The next step, the writer tabulated the scores into the table for the calculation of mean, Standard deviation, and standard error as follows:

Table 4.4 The Table for Calculating mean, Standard deviation, and standard error of Pretest Score.

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	Fx	X'	Fx'	Fx'2
1	38.1-44.1	3	41.1	123.3	3	9	27
2	44.2-50.2	2	47.2	94.4	2	4	8
3	50.3-56.3	5	53.3	266.5	1	5	5
4	56.4-62.4	4	59.4	237.6	0	0	0
5	62.5-68.5	5	65.5	327.5	-1	-5	5
6	68.6-74.1	4	71.6	286.4	-2	-8	16
7	74.7-80.7	1	77.7	77.7	-3	-3	9
$\sum$ Total		24		$\sum$Fx=1413.4		$\sum$Fx'=2	$\sum$Fx'2=70

1) **Calculating Mean**

$$Mx = \frac{\sum FX_i}{n} = \frac{1413.4}{24} = 58.89$$

2) **Standard Deviation**

$$SD_1 = i \sqrt{\frac{\sum fx'^2}{N} - (\frac{\sum fx'}{N})^2}$$

$$SD_1 = 7 \sqrt{\frac{70}{24} - (\frac{2}{24})^2}$$

$$SD_1 = 7\sqrt{2.916 - (0.08)^2}$$

$$SD_1 = 7\sqrt{2.916 - 0.0064}$$

$$SD_1 = 7 \sqrt{2.9096}$$

$$SD_1 = 7 \times 1.705754965$$

$$SD_1 = 11.94028$$

3) **Standard Error**

$$\text{SE}_{md} = \frac{S}{\sqrt{N-1}} = \frac{11.94028}{\sqrt{24-1}} = \frac{11.94028}{\sqrt{23}} = \frac{11.94028}{4.79583} = 2{,}489721$$

The result calculation show the mean of the pre test score of experimental group is 58.89, standard deviation of pre test score of the experimental group is 11.94028 and the standard error of pre test score of the experimental group is 2.48972. The next step the writer showed the result calculation of mean, standard deviation and standard error in the following table:

Table 4.5 The Result Calculation Mean, Standard Deviation and Standard Error

EXPERIMENT GROUP	
Mean	58.89
Standard Error	2.489721
Standard Deviation	11.94028

b. **The Result of Pretest Score of Control Group.**

Based on the data above, the highest score is 74.1 and the lowest score is 41.9. To determine the range of score, the class interval, and interval of temporary, the writer calculated using formula as follows:

The Highest Score (H) = 74,1

The Lowest Score (L)   = 41.9

The Range of Score (R) = H − L + 1

$$= 74{,}1 - 41.9 + 1$$

$$= 33.2$$

The Class Interval (K) $= 1 + (3.3)$ x Log n

$$= 1 + (3.3)$$ x Log 25

$$=1+(3.3)x1.39794009$$

$$= 1 + 4,6132020$$

$$= 5,6132020$$

$$= 6$$

Interval of Temporary (I) $=\frac{R}{K} = \frac{33.2}{6} = 5,53 = 5$ or 6

So, the range of score is 33.2, the class interval is 6, and interval of temporary

is 5 or 6. Then, it presents using frequency distribution in the following table:

Table 4.6 Frequency Distribution of the Pretest Score

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	The Limitation of each group	Frequency Relative (%)	Frequency Cumulative (%)
1	41.1-46.1	5	43.6	40.6-46.6	20	100
2	46.2-51.2	1	48.7	45.7-51.7	4	80
3	51.3-56.3	5	53.8	50.8-56.8	20	76
4	56.4-61.4	3	58.9	55.9-61.9	12	56
5	61.5-66.5	4	64	61-67	16	44
6	66.6-71.6	3	69.1	66.1-72.1	12	28
7	71.7-76.7	4	74.2	71.2-77.2	16	16
		$\sum$F=25			$\sum$p=100	

The distribution of students' pretest score can also be seen in the following

figure.

Figure 4.2 the Frequency Distribution of Pre-test score for control group
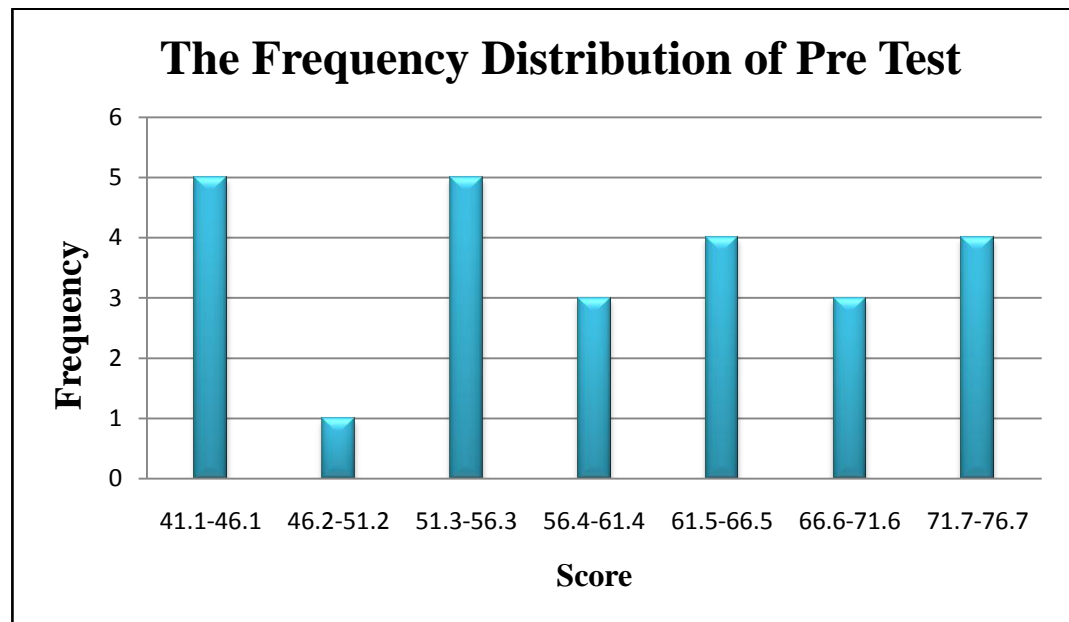
The table and the figure above show the students' pretest score. There are five students who get score 41.1-46.1which the percentage is 20% . There is one student who gets score 46.2-51.2 which the percentage is 4%. There are five studentswho get score 51.3-56,3 which the percentage is 20%. There are three students who get score56,4-61.4 which the percentage is 12%. There are four students who get score 61.5-66.5 which the percentage is 16%. There are three students who get score 66.6-71.6 which the percentage is 12%. There are fourstudents who get score 71.7-76.7 which the percentage is 16%.

The next step, the writer tabulated the scores into the table for the calculation of mean, Standard deviation, and standard error as follows:

Table 4.7 the Table for Calculating mean, Standard deviation, and standard error of Pretest Score

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	Fx	X'	Fx'	Fx'2
1	41.1-46.1	5	43.6	218	3	15	45
2	46.2-51.2	1	48.7	48.7	2	2	4
3	51.3-56.3	5	53.8	269	1	5	5
4	56.4-61.4	3	58.9	176.7	0	0	0
5	61.5-66.5	4	64	256	-1	-4	4
6	66.6-71.6	3	69.1	207.3	-2	-6	12
7	71.7-76.7	4	74.2	296.8	-3	-12	36
$\sum$ Total		25		$\sum$=1472.5		$\sum$Fx'=0	$\sum$Fx'2=106

1) **Calculating Mean**

$$Mx = \frac{\sum FX_i}{n} = \frac{1472.5}{25} = 58.9$$

2) **Standard Deviation**

$$SD_1 = i\sqrt{\frac{\sum fx'^2}{N} - \left(\frac{\sum fx'}{N}\right)^2}$$

$$SD_1 = 6\sqrt{\frac{106}{52} - \left(\frac{0}{25}\right)^2}$$

$$SD_1 = 6\sqrt{4.24 - (0)^2}$$

$$SD_1 = 6\sqrt{4.24}$$

$$SD_1 = 6 \times 2.059126028$$

$$SD_1 = 12.35475$$

3) **Standard Error**

$$\text{SEM}_D = \frac{S}{\sqrt{N-1}} = \frac{12.35475}{\sqrt{25-1}} = \frac{12.35475}{\sqrt{25}} = \frac{12.35475}{4.898979} = 2.52190$$

The result calculation show the mean of the pre test score of control group is 58.9, standard deviation of pre test score of the control group is 12.35475 and the standard error of pre test score of the control group is 2.52190 . The next step the writer shows the result calculation of mean, standard deviation and standard error in the following table:

Table 4.8 The Result Calculation Mean, Standard Deviation and standard Error

CONTROL GROUP	
Mean	58.9
Standard Error	2.52190
Standard Deviation	12.35475

2. **The Result of Post-Test Score**

The students' score are distributed in the following table in order to analyze the students' knowledge after conducting the treatment

Table 4.9 The Post Test score of Experimental and Control Group

Experimental Group				Control Group			
Code	Score	CORRECT ANSWER	PREDICATE	CODE	SCORE	CORRECT ANSWER	PREDICATE
E-01	64.5	20	ENOUGH	C-01	58.0	18	LESS

E-02	70.9	22	GOOD	C-02	51.6	16	LESS
E-03	77.4	24	GOOD	C-03	80.6	25	EXCELLENT
E-04	74.1	23	GOOD	C-04	54.8	17	LESS
E-05	80.6	25	EXCELLENT	C-05	61.2	19	ENOUGH
E-06	64.5	20	ENOUGH	C-06	61.2	19	ENOUGH
E-07	70.9	22	GOOD	C-07	74.1	23	GOOD
E-08	83.8	26	EXCELLENT	C-08	61.2	19	ENOUGH
E-09	74.1	23	GOOD	C-09	77.4	24	GOOD
E-10	67.7	21	ENOUGH	C-10	61.2	19	ENOUGH
E-11	64.5	20	ENOUGH	C-11	67.7	21	ENOUGH
E-12	70.9	22	GOOD	C-12	48.3	15	FAIL
E-13	80.6	25	EXCELLENT	C-13	64.5	20	ENOUGH
E-14	77.4	24	GOOD	C-14	61.2	19	ENOUGH
E-15	74.1	23	GOOD	C-15	67.7	21	ENOUGH
E-16	77.4	24	GOOD	C-16	67.7	21	ENOUGH
E-17	77.4	24	GOOD	C-17	45.1	14	FAIL
E-18	70.9	22	GOOD	C-18	64.5	20	ENOUGH
E-19	80.6	25	EXCELLENT	C19	77.4	24	GOOD
E-20	83.8	26	EXCELLENT	C-20	61.2	19	ENOUGH
E-21	67.7	21	ENOUGH	C-21	70.9	22	GOOD
E-22	77.4	24	GOOD	C-22	67.7	21	ENOUGH
E-23	87.0	27	EXCELLENT	C-23	74.1	23	GOOD
E-24	74.1	23	GOOD	C-24	64.5	20	ENOUGH
TOTAL		1792.3		C-25	48.3	15	FAIL
AVERAGE		74.6792		**TOTAL**		1624.4	
Lowest Score		64.5		**AVERAGE**		64.98	
Highest Score		87.0		**Lowest Score**		45.1	
				Highest score		80.6	

T he table above shows the comparison of post test score achieved by experimental and control group. The highest score of the experimental group is 87.0 and the lowest score is 64.5. There are no students whose score at fail category. There are no students whose score at less category. There are two students whose score at enough category. There are thirteen students whose score at good category. There are

six students whose score at excellent category. Meanwhile, the highest score of control group is 80.6 and the lowest score is 45.1. There are three students whose score at fail category. There are three students whose score at less category. There are thirteen students whose score at enough category. There are five students whose score at good category and there is one student whose score at excellent category.

a. The Result of Post-test Score of Experiment Group.

Based on the data above, the highest score is 87,0 and the lowest score is 64.5. To determine the range of score, the class interval, and interval of temporary, the writer calculated using formula as follows:

The Highest Score (H) = 87,0

The Lowest Score (L) = 64.5

The Range of Score (R) = H-L+1

$$= 87,0 - 64.5 + 1$$

$$= 23.5$$

The Class Interval (K) = 1 + (3.3) x Log n

$$= 1 + (3.3) \text{ x Log } 24$$

$$= 1 + (3.3) \text{ x } 1.380211242$$

$$= 1 + 4.5546970$$

$$= 5.554697$$

$$= 6$$

Interval of Temporary (I) $= \frac{R}{K} = \frac{23.5}{6} = 3.91 = 4$

So, the range of score is 23.5, the class interval is 6, and interval of temporary

is 4. Then, it presents using frequency distribution in the following table:

Table 4.10 Frequency Distribution of the Post-test Score

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	The Limitation of each group	Frequency Relative (%)	Frequency Cumulative (%)
1	64.1-67.1	3	65.6	63.6-67.6	12.5	100
2	67.2-70.2	2	68.7	66.7-70.7	8.33	87.476
3	70.3-73.3	4	71.8	69.8-73.8	16.66	79.146
4	73.4-76.4	4	74.9	72.9-76.9	16.66	62.486
5	76.5-79.5	5	78.2	76-83.1	20.83	45.826
6	79.6-82.6	3	81.1	79.1-83.1	12.5	24.996
7	82.7-85.7	2	84.2	82.2-86.2	8.33	12.496
8	85.8-88.8	1	87.3	85.3-89.3	4.166	4.166
		$\sum F=24$			$\sum P=100$	

The distribution of Students' post test score can also be seen in the following figure:

4.3 The Frequency Distribution of Post Test for Experimental group
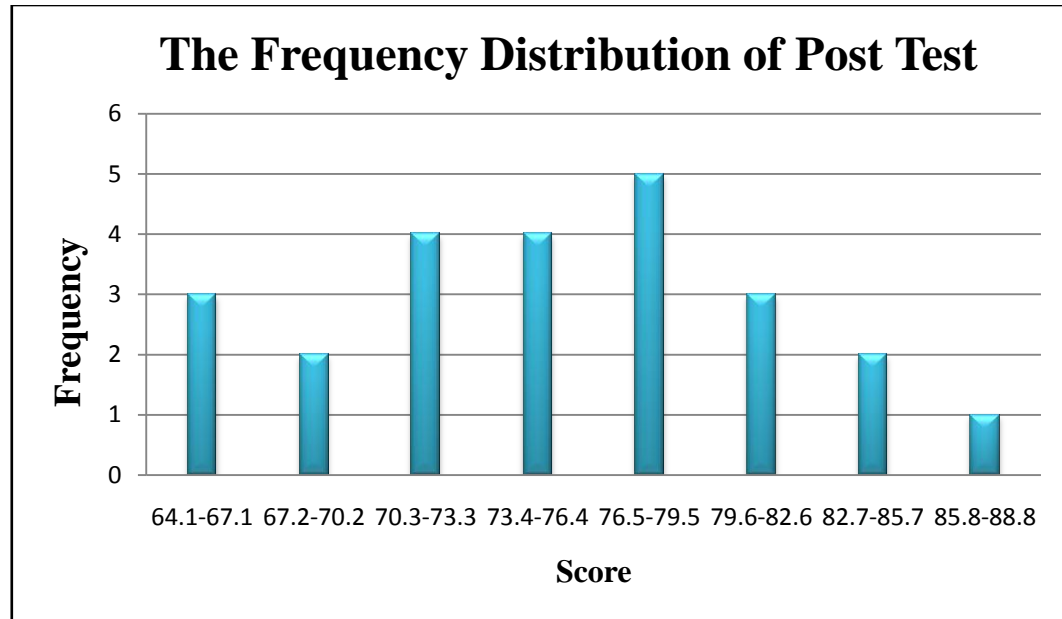
The Frequency Distribution of Post Test

The table and the figure above show the students' post-test score. There are three students who get score 64.1-67.1 which the percentage is 12,5%. There are two students who get score 67.2-70.2 which the percentage is 8,3%. There are four students who get score70.3-73.3 which the percentage is 16,6% . There are four students who get score 73.4-76.4 which the percentage is 16,6%. There are five students who get score 76.5-79.5 which the percentage is 20,8%. There are threestudents who get score 79.6-82.6 which the percentage is 12,5%. There are two students who get score 82.7-85.7 which the percentage is 8,3%. There is one student who gets 85.8-88.8 which the percentage is 4,16%.

The next step, the writer tabulated the scores into the table for the calculation of mean, Standard deviation, and standard error as follows:

Table 4.11 The Table for Calculating Mean, Standard Deviation, and Standard Error of Post-test Score of the Experimental Group.

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	Fx	X'	Fx'	Fx'2
1	64.1-67.1	3	65.6	196.8	3	9	27
2	67.2-70.2	2	68.7	137.4	2	4	8
3	70.3-73.3	4	71.8	287.2	1	4	4
4	73.4-76.4	4	74.9	299.6	0	0	0
5	76.5-79.5	5	78.2	391	-1	-5	5
6	79.6-82.6	3	81.1	243.3	-2	-6	12
7	82.7-85.7	2	84.2	168.4	-3	-6	18
8	85.8-88.8	1	87.3	87.3	-4	-4	16
		$\sum$F=24		$\sum$Fx=1811		$\sum$Fx'=-4	$\sum$Fx'2=90

1) **Calculating Mean**

$$\text{Mx} = \frac{\sum FX_i}{n} = \frac{1811}{24} = 75.45$$

2) **Standard Deviation**

$$SD_1 = i\sqrt{\frac{\sum fx'^2}{N} - (\frac{\sum fx'}{N})^2}$$

$$SD_1 = 4\sqrt{\frac{90}{24} - (\frac{-4}{24})^2}$$

$$SD_1 = 4\sqrt{3.75 - (0.16)^2}$$

$$SD_1 = 4\sqrt{3.75 - 0.0256}$$

$$SD = 4\sqrt{3.7244}$$

$$SD_1 = 4 \times 1.929870462$$

$$SD_1 = 7.719481$$

3) **Standard Error**

$$SE_{md} = \frac{SD}{\sqrt{n-1}} = \frac{7.7194817}{\sqrt{24-1}} = \frac{7.719481}{\sqrt{23}} = \frac{7.71606}{4.795831} = 1,6088$$

The result calculation show the mean of the post test score of the experimental group is 75.45, standard deviation of post test score of the experimental group is 7.71606 and the standard error of post test score of the experimental group is1.6088. The next step the writer shows the result calculation of mean, standard deviation and standard error in the following table:

Table 4.12 The Result Calculation Mean, Standard Deviation and standard

Error

EXPERIMENT GROUP	
Mean	75.45
Standard Error	1.6088
Standard Deviation	7.71606

b. **The Result of Post-test Score of Control Group.**

Based on the data, the highest score is 80.6 and the lowest score is 45.1. To determine the range of score, the class interval, and interval of temporary, the writer calculated using formula as follows:

The Highest Score (H) = 80,0

The Lowest Score (L)   = 48,6

The Range of Score (R) = H-L+1

$$= 80.6\text{-}45.1\text{+}1$$

$$=36.5$$

The Class Interval (K) $= 1 + (3.3) \text{ x Log n}$

$$= 1 + (3.3) \text{ x Log 25}$$

$$= 1 + (3.3) X 1.397940009$$

$$= 1 + 4.6132020$$

$$= 5.613202 = 6$$

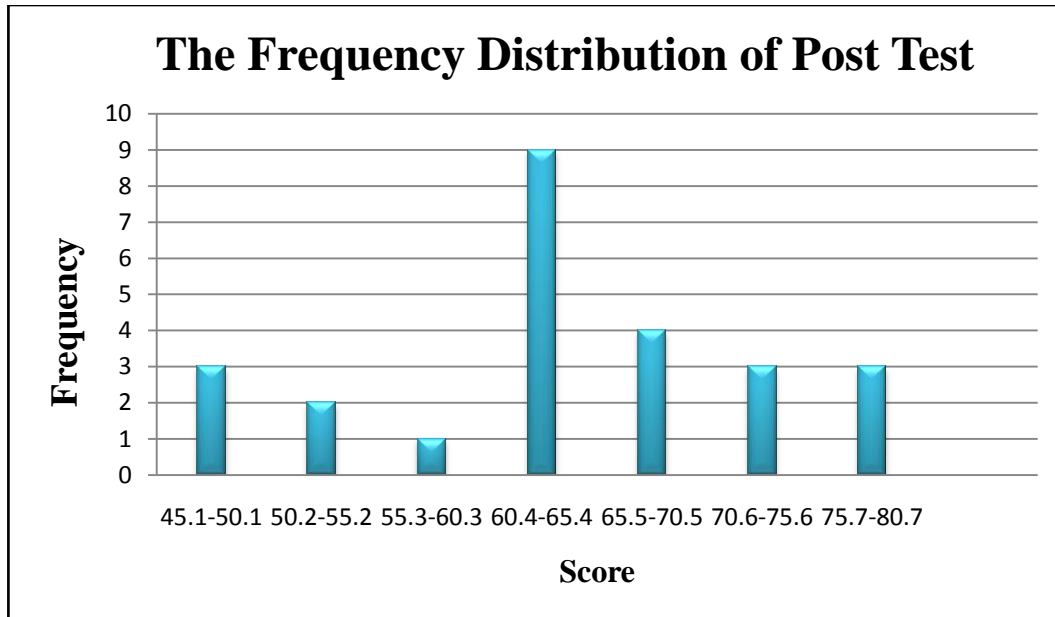Interval of Temporary (I) $= \frac{R}{K} = \frac{36.5}{6} = 6.08 = 6$

So, the range of score is 36.5, the class interval is 6, and interval of temporary

is 6. Then, it was presented using frequency distribution in the following table:

Table 4.13 Frequency Distribution of the Post test Score

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	The Limitation of each group	Frequency Relative (%)	Frequency Cumulative (%)
1	45.1-50.1	3	48.1	44.6-50.6	12	100
2	50.2-55.2	2	52.7	49.7-55.7	8	88
3	55.3-60.3	1	57.8	54.8-60.8	4	80
4	60.4-65.4	9	62.9	59.9-65.9	36	76
5	65.5-70.5	4	68	65-71	16	40
6	70.6-75.6	3	73.1	70.1-76.1	12	24
7	75.7-80.7	3	78.2	75.2-81.2	12	12
		$\sum F=25$			$\sum p=100$	

The distribution of students' post-test score can also be seen in the

following figure:

4.4 The Frequency Distribution of Post Test for Control group

The Frequency Distribution of Post Test

(Bar chart — X-axis: Score, Y-axis: Frequency)

Score	Frequency
45.1-50.1	3
50.2-55.2	2
55.3-60.3	1
60.4-65.4	9
65.5-70.5	4
70.6-75.6	3
75.7-80.7	3

The table and the figure show the students' post test score. There are three students who get score 45.1-50,1 which the percentage is 12%. There are two students who get score 50.2-55.2 which the percentage is 8%. There is one student who gets score 55.3-60.3 which the percentage is 4%. There are nine students who get score 60.4 -65.4 which the percentage is 36%. There are four students who get score 65.5-70.5 which the percentage is 16%. There are threestudents who get score 70.6-75.6 which the percentage is 12%. There are three students who get score75.7-80.7 which the percentage is 12%.

The next step, the writer tabulated the scores into the table for the calculation of mean, Standard deviation, and standard error as follows:

Table 4.14 The Table for Calculating mean, Standard deviation, and standard error of Post-test Score.

Class (K)	Interval (I)	Frequency (F)	Mid Point (x)	Fx	X$'$	Fx'	Fx'2
1	45.1-50.1	3	48.1	144.3	3	9	27
2	50.2-55.2	2	52.7	105.4	2	4	8
3	55.3-60.3	1	57.8	57.8	1	1	1
4	60.4-65.4	9	62.9	566.1	0	0	0
5	65.5-70.5	4	68	272	-1	-4	4
6	70.6-75.6	3	73.1	219.3	-2	-6	12
7	75.7-80.7	3	78.2	234.6	-3	-9	27
		$\sum F=25$		$\sum Fx=1599.5$		$\sum Fx'=-5$	$\sum Fx'2=79$

1) **Calculating Mean**

$$Mx=\frac{\sum FXi}{N}=\frac{1599.5}{25}=63.98$$

2) **Standard Deviation**

$$SD_1 = i\sqrt{\frac{\sum fx'^2}{N}-(\frac{\sum fx'}{N})^2}$$

$$SD_1 = 6\sqrt{\frac{79}{25}-(\frac{-5}{25})^2}$$

$$SD_1 = 6\sqrt{3.16-(0.2)^2}$$

$$SD_1 = 6\sqrt{3.16-0,04}$$

$$SD_1 = 6\sqrt{3.12}$$

$$SD_1 = 6x\ 1.766352173$$

SD_1 =10.59811

3) **Standard Error**

$$\text{SEM}_D = \frac{S}{\sqrt{N-1}} = \frac{10.59811}{\sqrt{25-1}} = \frac{10.59811}{\sqrt{24}} = \frac{10.59811}{4.89897} = \boldsymbol{2.1633}$$

The result calculation show the mean of the post test score of the control group is 63.98, standard deviation of post test score of control group is 10.59811 and the standard error of post test score of control group is 2.1633 . The next step the writer shows the result calculation of mean, standard deviation and standard error in the following table:

Table 4.15 The Result Calculation Mean, Standard Deviation and standard

Error

CONTROL GROUP	
Mean	63.98
Standard Error	2.1633
Standard Deviation	10.59811

B. **Testing of Normality and Homogeneity**

1. **Normality Test**

   It used to know the normality of the data that is going to be analyzed

   whether both groups have normal distribution or not.

   a. Testing normality of pre test experimental and control group

Table 4.16

Testing Normality of Pre Test Experimental and Control Group

One-Sample Kolmogorov-Smirnov Test

		experiment	Control
N		24	25
Normal Parameters[a,b]	Mean	59.358	59.044
	Std. Deviation	10.8762	10.8378
Most Extreme Differences	Absolute	.109	.139
	Positive	.079	.114
	Negative	-.109	-.139
Kolmogorov-Smirnov Z		.533	.694
Asymp. Sig. (2-tailed)		.938	.721

a. Test distribution is Normal.

b. Calculated from data.

The table shows the result of test normality calculation using SPSS.21.0 program. The next step, the writer analyzed normality of data used formula as follows:

If Significance> 0.05= data is normal distribution

If Significance< 0.05= data is not normal distribution

Based on the table above, P value (Sig.) of the pre test scores of the experiment class is 0.938 and control class is 0,721 which higher than the level significance (0.05). Thus, it can be concluded that the data is normal distribution.

Table 4.17

Testing Normality of Post Test Experimental and Control Group

One-Sample Kolmogorov-Smirnov Test

		experiment	Control
N		24	25
Normal Parameters[a,b]	Mean	74.679	63.684
	Std. Deviation	6.3489	9.3785
Most Extreme Differences	Absolute	.124	.156
	Positive	.099	.094
	Negative	-.124	-.156
Kolmogorov-Smirnov Z		.608	.778
Asymp. Sig. (2-tailed)		.853	.581

a. Test distribution is Normal.

b. Calculated from data.

The table shows the result of test normality calculation using SPSS.21.0 program. The next step, the writer analyzed normality of data used formula as follows:

If Significance> 0.05= data is normal distribution

If Significance< 0.05= data is not normal distribution

Based on the table above, P value (Sig.) of the post test scores of the experiment class is 0,853 and control class is 0,581 which higher than the level significance (0.05).Thus, it can be concluded that the data is normal distribution.

2. Homogeneity Test

a. Testing Homogeneity of pre Test Experimental and Control Group.

Table 4.18

Testing Homogeneity of pre Test Experimental and Control Group.

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
2.384	1	47	.129

The table shows the result of homogeneity test calculation using SPSS 21.0 program. To know the homogeneity of data, the formula can be seen as follows:

If Sig.> 0.05= equal variances assumed or homogeny distribution

If Sig.< 0.05= equal variances not assumed or not homogeny distribution

Based on the data above, significant data is 0.129. The result is 0.129> 0.05, it meant that the result of pre test of experimental and control group were homogenous.

b. Testing Homogeneity of Post Test Experimental and Control Group.

Table 4.19

Testing Homogeneity of post Test Experimental and Control Group.

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
.065	1	47	.799

The table shows the result of homogeneity test calculation using SPSS 21.0 program. To know the homogeneity of data, the formula could be seen as follows:

If Sig.> 0.05= equal variances assumed or homogeny distribution

If Sig.< 0.05= equal variances not assumed or not homogeny distribution

Based on the data above, significant data is 0.799. The result is 0.799> 0.05, it meant that the result of post test of experimental and control group were homogenous.

C. The Result of Data Analysis

1. Testing Hypothesis Using SPSS 21.0 Program

The writer applied SPSS 21.0 Program to calculate t-test in testing hypothesis of the study. The result of t-test using SPSS 21.0 is used to support the manual calculation of t-test. The result of t-test using SPSS 21.0 program can be seen as follows:

Table 4.20

The calculation of T-Test Using SPSS 21.0
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	2.384	.129	4.786	47	.000	10.9952	2.2976	6.3730	15.6173
	Equal variances not assumed			4.823	42.320	.000	10.9952	2.2799	6.3952	15.5951

The table shows the result of t-test calculation using SPSS 21.0 Program. To know the variances score of data, the formula could be seen as follows:

If Sig. > 0.05= equal variances assumed

If Sig.< 0.05= equal variances not assumed

Based on the data above, significant data is 0.129. The result is 0.129> 0.05,it meant the t-test calculation used at the equal variances assumed. The result of $t_{observed}$ is 4.786, the result of mean difference between experiment and control group is 10.9952, and the standard error difference between experiment and control group is 2.2976.

The result of t-test is interpreted on the result of degree of freedom to get the t table. The result of degree of freedom is 47. The following table is the result of t observed and t table from 47 df at 5% and 1 % significance level.

Table 4.21 The Result of T-test Using SPSS 21.0 Program

t observe	t table		DF
	5%	**1%**	
4.786	2.021	2.704	47

2. Testing Hypothesis Using Manual Calculation

To test the hypothesis of the study, the writer used t-test statistical calculation. Firstly, the writer calculated the standard deviation and the standard error of X_1 and X_2.It was found the standard deviation and the standard error of post test of X_1 and X_2 at the previous data presentation. It can be seen in the following table:

Table 4.22 The Standard Deviation and the Standard Error of X_1 and X_2

Variable	The Standard Deviation	The Standard Error
X_1	7.716	1.608
X_2	10.598	2.163

Where:

X_1 = Experimental Group

X_2 = Control Group

The table shows the result of the standard deviation calculation of X_1 is 7.716 and the result of the standard error mean calculation is 1.608. The result of the standard deviation calculation of X_2 is 10.598 and the result of the standard error mean calculation is 2.163

The next step, the writer calculated the standard error of the differences mean between X_1 and X_2 as follows:

Standard Error of Mean of Score Difference between Variable I and Variable II:

$$SE_{M1} - SE_{M2} = \sqrt{SEm1^2 + SEm2}^2$$

$$SE_{M1} - SE_{M2} = \sqrt{1.608^2 + 2.163^2}$$

$$SE_{M1} - SE_{M2} = \sqrt{2.585664 + 4.678569}$$

$$SE_{M1} - SE_{M2} \quad = \sqrt{7.264233}$$

$$SE_{M1} - SE_{M2} \quad = 2.695224109$$

Then, it was inserted to the formula to get the value of t observe as follows:

$$t_o = \frac{M_1 - M_2}{SE_{M1} - SE_{M2}}$$

$$t_o = \frac{75..45 - 63.98}{2.695224109}$$

$$t_o = \frac{11.47}{2.695224109}$$

$$t_o = 4.255$$

With the criteria:

If t-test (t-observed) $\geq t_{table}$, it means Ha is accepted and Ho is rejected.

If t-test (t-observed) $< t_{table}$, it means Ha is rejected and Ho is accepted.

Then, the writer interpreted the result of t- test. Previously, the writer accounted the degree of freedom (df) with the formula:

$$df = (N_1 + N_2 - 2)$$

$$= 24 + 25 - 2$$

$$= 47$$

t_{table} atdf 47 at 5% significant level = 2.021

The calculation above show the result of t-test calculation as in the table follows:

Table 4.23 the Result of T-test Using Manual Calculation

t observe	t table		DF
	5%	1%	
4.255	2.021	2.704	47

Where:

X_1 = Experimental Group

X_2 = Control Group

t observe = The calculated Value

t table = The distribution of t value

df = Degree of Freedom

a. **Interpretation**

Based on the result of hypothesis test with manual calculation, the value of $t_{observed}$ is higher than the value of t_{able} at 1% and 5% significance level or 2.021<4.255>2.704, and the result of t-test using SPSS 21.0 Program, the $t_{observed}$ is higher than t_{table} at 5 % and 1 % significance level or 4.786 > 2.021, 4.786> 2.704. it can be interpreted that alternative hypothesis (H_a) statingThere is Effect of Two Stay Two Stray Technique on Reading Comprehension of the Eighth Grade Students of Mts.Islamiyah Palangkaraya is accepted. Null hypothesis(HO) stating that There is no Effect of Two Stay Two Stray Technique on Reading Comprehension of the Eighth Grade Students of MTs.Islamiyah Palangkaraya is rejected.

D. Discussion

The result of analysis shows that there is effect of Two Stay Two Stray Technique on Reading Comprehension of the Eighth Grade Students of Mts.Islamiyah Palangkaraya. The students who were taught used Two Stay Two Stray Technique reached higher score than the students who were taught without used Two Stay Two Stray Technique with 74.67 and 63.68.Moreover, the students' reading comprehension level also increase of percentage of number of students pre test and post test of the experimental group who can answer inferential comprehension from 51,21% to 73.27% and the increased of percentage of number of students pre test and post test of the experimental group who can answer literal comprehension from 63,25% to 75,55%. It means that Two Stay Two Stray technique gives effect of literal comprehension which literal comprehension is higher than inferential comprehension.

Meanwhile, the result of t test using manual calculation of t $_{test}$. The t $_{observed}$ is higher than t $_{table}$ at 5% and 1% significance level or 4.255 > 2.021, 4.255> 2.704, it meant Ha was accepted and Ho was rejected. And the data calculated using SPSS 21.0 Program; the t$_{observed}$is higher than t $_{table}$ at 5% and 1% significance level or 4.786> 2.021, 4.786> 2.704. It meant Ha was accepted and Ho was rejected. This finding indicates that the alternative hypothesis (Ha) stating that there is effect of Two Stay Two Stray Technique on Reading Comprehension of the Eighth Grade Students of Mts.Islamiyah Palangkarayais accepted. The Null hypothesis (Ho) stating that there is noeffect of Two Stay Two Stray Technique on Reading Comprehension

of the Eighth Grade Students of Mts.Islamiyah Palangkaraya is rejected. Based on the result the data analysis shows that using Two Stay Two Stray technique give effect on reading comprehension of the Eighth Grade Students of Mts.Islamiyah Palangkaraya. It gives effect on reading comprehension because this technique makes the students try to find the information of the text with their selves which make them active in the class. Although, the students the students taught without using Two Stay Two Stray technique make them to be passive because they only acquire the information of the text from the teacher not to find with their selves which make the class to be bored.

After the students have been taught by using Two Stay Two Stray technique, the reading scores are higher than before implementing Two Stay Two Stray technique, as a learning technique. It can be seen in the comparison of pre test and post test score of experimental group and control group. This finding indicates that Two Stay Two Stray technique is effective for teaching reading comprehension. It supports the previous research done by DesrinaErlita and August Lewaherilla also stated teaching reading by using Two Stay Two Stray technique is effective. Based on DesrinaErlita's Finding that Two Stay Two Stray technique better improve the students' reading comprehension of recount text and there are some factors that influence the changes of students' reading comprehension of recount text such as

teaching material, classroom management, interesting technique and background knowledge of students.[82]

The reasons of Two Stay Two Stray technique can improve students' reading score because this technique made the class became active which the have a students' main role in the class and they ask to other groups to find the information of text that make them to be more active in the class. The students learn from another group, there is an interaction between the students which the students try to solve the problems and the activities when they shared the information made the class fun not to be bored. It supports with research finding by August lewaherilla, the result showed that Two Stay Two Straytechnique can improve students reading competence. The improvement can also be seen from their result of post test. The average of score increased to 64,62 in the post test 1 and 72,78 in post test2.The students became more activeand enthusiastic in the learning process . They were brave to give opinion using English. Besides, the class became active and alive. It stimulates students to be responsible and active.[83]

---

[82]DesrinaErlita,*Improving Students' Reading Comprehensionof Recount text Through Two Stay Two Stray Technique at Grade VIII of SMPN 2 TilatangKamangAgam, Journal English Language Teaching (ELT) Volum.1,No.2.2013*

[83]August Lewaherilla,*Improving Students Reading Comprehension Through Two Stay Two Stray Technique of SMP YPPK Biak In Academic Year 2010/2011.*