CHAPTER IV
RESULT AND DISCUSSION

A. The Description of Data

In this chapter, the researcher would like to present the data as outcome of the research at SMAN 5 Kota Serang. As what has been mentioned in the previous chapter, this research is only directed to the eleventh grade students to explore students' reading comprehension. The researcher took 70 students as a sample which divided into two classes, 35 students of XI IPA 2 as experimental class and 35 students of XI IPA 1 as control class. The writer used the experimental research. It held by taking the scores of 35 students of XI IPA 2 as an experimental group and the scores of 35 students of XI IPA 1 as a control group. Each group has two kinds of data. The first data is taken from the pre-test of reading comprehension and the second data is taken from the post-test of reading comprehension.

To know the effectiveness of the 3-2-1 strategy, the writer identified some result, they are: the students' score before treatment, the students' score after treatment, the differences of students' score in pre-test and post-test, and the differences of students' achievement between the students who are taught by using the 3-2-1 strategy and the students who are not taught by using the 3-2-1 strategy. To know the effectiveness of the 3-2-1 strategy towards students' ability in reading comprehension on report text, the writer gave the test to the both experimental group and control group. There are two types of the test used in this study, they are pre-test and post-test. The pre-test is the test given before treatment. While the post-test is the test given after

treatment. On the test, there are five reading passages and each of them consists of three items in the form of multiple choices related to the reading comprehension aspect. The maximum score is 100 (one hundred) and the lowest score is 0 (zero). The writer describes the data in the experimental group and control group as follow:

1. Experimental class

The writer describes the result of pre-test of the experimental class on the table bellows:

Table 2

The result of pre-test of the experimental class

No	Name	Scores
1	AW	66.6
2	AA	53.3
3	AF	46.6
4	AN	60
5	AP	60
6	APR	60
7	AS	26.6
8	BFA	53.3
9	DS	66.6
10	DNR	66.6
11	DF	60
12	DS	53.3
13	EV	46.6
14	FJSP	53.3
15	FANI	53.3

16	HA	66.6
17	IF	66.6
18	IP	66.6
19	IS	46.6
20	LA	40
21	MK	40
22	MRK	0.13
23	MZ	73.3
24	NHN	73.3
25	NL	53.3
26	PKNT	60
27	RWAS	66.6
28	RD	40
29	RP	53.3
30	RAA	60
31	SGP	73.3
32	SF	60
33	SR	60
34	WH	53.3
35	ZSM	46.6
N=35	Total Score	1925.63
	Average	55.018

The table 1 above shows the result of the students' pre-test scores in reading comprehension of experimental class. The data shows that the maximum score is 73.3 and the minimum score is 0.13. There are three students who got the maximum score and one student who got the

minimum score. The average score of the pre-test is 55.01. While, the result of pot-test of the experimental class are better after given treatment. It can be described as follow:

Table 3

The result of post-test of the experimental class

No	Name	Scores
1	AW	86.6
2	AA	86.6
3	AF	86.6
4	AN	80
5	AP	66.6
6	AEP	66.6
7	AS	80
8	BFA	73.3
9	DS	86.6
10	DNR	86.6
11	DF	80
12	DS	86.6
13	EV	80
14	FJSP	60
15	FANI	66.6
16	HA	86.6
17	IF	80
18	IP	86.6
19	IS	86.6

20	LA	86.6
21	MK	93.3
22	MRK	53.3
23	MZ	80
24	NHN	86.6
25	NL	86.6
26	PKNT	80
27	RWAS	80
28	RD	60
29	RP	86.6
30	RAA	80
31	SGP	86.6
32	SF	60
33	SR	80
34	WH	86.6
35	ZSM	86.6
N=35	Total Score	2785.3
	Average	79.58

The table 2 above shows the result of the students' post-test scores in reading comprehension of experimental class. The data above showed that the maximum score is 93.3 and the minimum score is 53.3. There is one student who got the maximum score and one student who got the minimum score. The average score of post-test is 79.58.

Based on the explanation above, it shows that the result of experimental class got the significance improvement after given

treatment. It can be seen from the average score of post-test is better than the average score of pre-test that 79.58>55.01. It means that using the 3-2-1 strategy was success to improve students' reading comprehension ability on report text

2. The Control Class

The writer describes the result of pre-test of the control class on the table bellows:

Table 4

The result of pre-test of the control class

No	Name	Scores
1	AM	46.6
2	AP	66.6
3	ANANTA	60
4	AA	66.6
5	ADS	46.6
6	ADD	40
7	BN	53.3
8	BSRD	46.6
9	DKO	40
10	DFAN	53.3
11	EJP	46.6
12	FK	46.6
13	FH	46.6
14	FU	46.6
15	IN	46.6
16	IO	46.6

17	IK	46.6
18	KS	66.6
19	MRD	46.6
20	MTA	66.6
21	NAR	60
22	ND	33.3
23	PMF	53.3
24	RNBVP	46.6
25	RWK	66.6
26	RD	60
27	RPW	33.3
28	SKD	46.6
29	SNP	53.3
30	SN	40
31	SS	53.3
32	VNN	60
33	YDNR	66.6
34	ZQNA	53.3
35	PP	66.6
N= 35	Total score	1818.4
	Average	51.95

The table 3 above shows the result of the students' pre-test scores in reading comprehension. The data shows that the maximum score is 66.6 and the minimum score is 33.3. There are seven students who got the maximum scores and two students who got the minimum scores.

The average score of the pre-test is 51.95. While, the result of post-test of the control class is better. It can be described as follow:

Table 5

The result of post-test of the control class

No	Initial Name	Scores
1	AM	80
2	AP	80
3	ANANTA	73.3
4	AA	53.3
5	ADS	73.3
6	ADD	66.6
7	BN	60
8	BSRD	60
9	DKO	60
10	DFAN	80
11	EJP	53.3
12	FK	66.6
13	FH	60
14	FU	73.3
15	IN	73.3
16	IO	73.3
17	IK	80
18	KS	66.6
19	MRD	60
20	MTA	80

21	NAR	46.6
22	ND	40
23	PMF	53.3
24	RNBVP	66.6
25	RWK	60
26	RD	53.3
27	RPW	73.3
28	SKD	60
29	SNP	66.6
30	SN	73.3
31	SS	60
32	VNN	73.3
33	YDNR	60
34	ZQNA	73.3
35	PP	73.3
N= 35	Total score	2305.8
	Average	65.88

The table 4 above shows the results of the students' post-test scores of controlled class in reading comprehension. The data showed that the maximum score is 80 and the minimum score is 40. There are five students who got the maximum score and there is one student who got the minimum score. The average score of the post-test is 65.88.

Based on the explanation above, it shows that the result of controlled class doesn't have the significance improvement after given treatment. It can be seen from the average score of post-test that is

65.88>51.95. This class also experienced improvement but lower than experimental class.
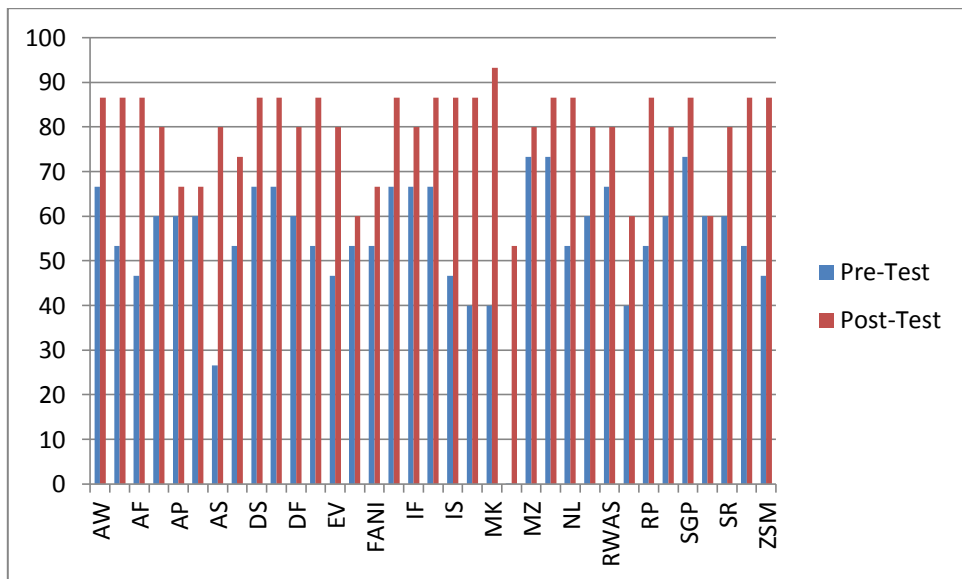
B. Data Analysis

1. Experimental Class

The writer analysis the data by comparing the students' score in pre-test and post-test. It can be seen on the table bellows:

No Name		Test		Deviation $(X = X_2 - X_1)$	Squared Deviation (X^2)
		Pre-test (X_1)	Post-test (X_2)		
1	AW	66.6	86.6	20	400
2	AA	53.3	86.6	33.3	1108.8
3	AF	46.6	86.6	40	1600
4	AN	60	80	20	400
5	AP	60	66.6	6.6	43.5
6	APR	60	66.6	6.6	43.5
7	AS	26.6	80	53.4	2851.5
8	BFA	53.3	73.3	20	400
9	DS	66.6	86.6	20	400
10	DNR	66.6	86.6	20	400
11	DF	60	80	20	400
12	DS	53.3	86.6	33.3	1108.8
13	EV	46.6	80	33.4	1115.5
14	FJSP	53.3	60	6.7	44.8
15	FANI	53.3	66.6	13.3	176.8
16	HA	66.6	86.6	20	400

17	IF	66.6	80	13.4	179.5
18	IP	66.6	86.6	20	400
19	IS	46.6	86.6	40	1600
20	LA	40	86.6	46.6	2171.5
21	MK	40	93.3	53.3	2840.8
22	MRK	0.13	53.3	53.17	2827.04
23	MZ	73.3	80	6.7	44.8
24	NHN	73.3	86.6	13.3	176.8
25	NL	53.3	86.6	33.3	1108.8
26	PKNT	60	80	20	400
27	RWAS	66.6	80	13.4	179.5
28	RD	40	60	20	400
29	RP	53.3	86.6	33.3	1108.8
30	RAA	60	80	20	400
31	SGP	73.3	86.6	13.3	176.8
32	SF	60	60	0	0
33	SR	60	80	20	400
34	WH	53.3	86.6	33.3	1108.8
35	ZSM	46.6	86.6	40	1600
	Total	$\Sigma X_1 = 1925.63$	$\Sigma X_2 = 2785.3$	$\sum X = 859.67$	$\sum X^2 = 28016.3$

The table 5 above shows that there are the differences between pre-test and post-test score of the experimental class. The different score is the result of the post-test score is subtracted by pre-test score. So, there are significant differences between pre-test and post-test score of the

experimental class, the highest difference score is 53.4 and the lowest is 0. It can be seen on the graphic bellows:

The graphic 1 above shows the result of students' pre-test and post-test scores of experimental class. In the pre-test score, there are three students who got the maximum score namely 73.3 and there is one student who got the minimum score namely 0.13. While in the post-test, there is one student who got the maximum score namely 93.3 and one student who got the minimum score namely 53.3.

2. The Control Class

The writer analysis the data by comparing the students' score in pre-test and post-test. It can be seen on the table bellows:

No	Name	Test		Deviation	Squared
		Pre-test (Y_1)	Post-test (Y_2)	$(Y = Y_2 - Y_1)$	Deviation (Y^2)
1	AM	46.6	80	33.4	1115.5
2	AP	66.6	80	13.4	179.5
3	ANANTA	60	73.3	13.3	176.8
4	AA	66.6	53.3	-13.3	176.8
5	ADS	46.6	73.3	26.7	712.8
6	ADD	40	66.6	26.6	707.5
7	BN	53.3	60	6.7	44.8
8	BSRD	46.6	60	13.4	179.5
9	DKO	40	60	20	400
10	DFAN	53.3	80	26.7	712.8
11	EJP	46.6	53.3	6.7	44.8
12	FK	46.6	66.6	20	400
13	FH	46.6	60	13.4	179.5
14	FU	46.6	73.3	26.7	712.8
15	IN	46.6	73.3	26.7	712.8
16	IO	46.6	73.3	26.7	712.8
17	IK	46.6	80	33.4	1115.5
18	KS	66.6	66.6	0	0
19	MRD	46.6	60	13.4	179.5
20	MTA	66.6	80	13.4	179.5
21	NAR	60	46.6	-13.4	179.5
22	ND	33.3	40	6.7	44.8
23	PMF	53.3	53.3	0	0

24	RNBVP	46.6	66.6	20	400
25	RWK	66.6	60	-6.6	43.5
26	RD	60	53.3	-6.7	44.8
27	RPW	33.3	73.3	40	1600
28	SKD	46.6	60	13.4	179.5
29	SNP	53.3	66.6	13.3	176.8
30	SN	40	73.3	33.3	1108.8
31	SS	53.3	60	6.7	44.8
32	VNN	60	73.3	13.3	176.8
33	YDNR	66.6	60	-6.6	43.5
34	ZQNA	53.3	73.3	20	400
35	PP	66.6	73.3	6.7	44.8
	Total	$\Sigma Y_1 = 1818.4$	$\Sigma Y_2 = 2305.8$	$\Sigma Y = 487.4$	$\Sigma Y^2 = 13130.8$

The table 6 above shows that there are the differences between pre-test and post-test score of the control class. The different score is the result of the post-test score is subtracted by pre-test score. So, there is no significant difference between pre-test and post-test score of the control class, the highest different score is 40 and the lowest is -13.4. There are some students who do not experienced improvement.
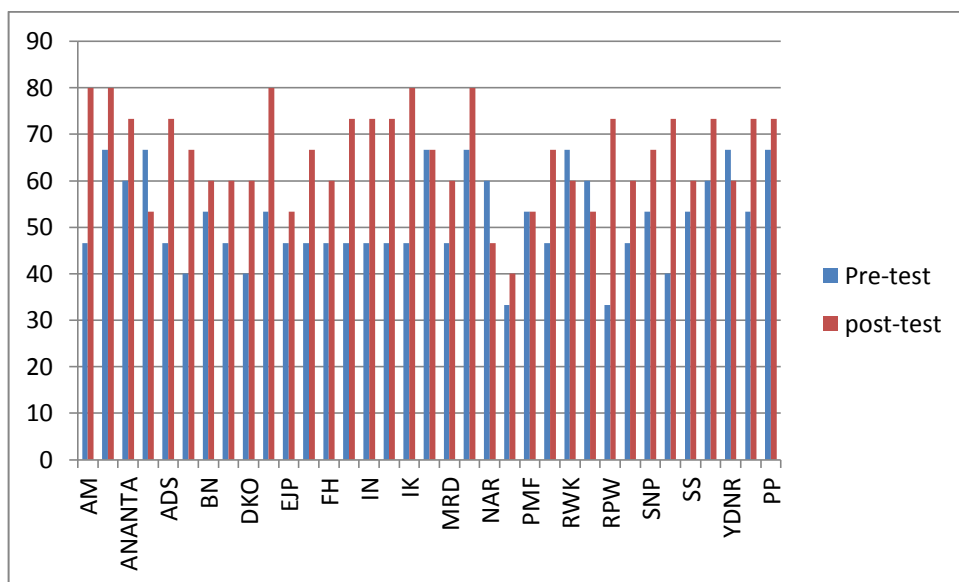
The Graphic 2 above shows the result of the students' score in pre-test and post-test of the control group. In the pre-test score, there are seven students who got the maximum score namely 66.6 and two students who got the minimum score namely 33.3. While in the post-test, there are five students who got the maximum score namely 80 and one student who got the minimum score namely 40.

From the data obtained above, the writer uses t-test formula by the following steps as follow:

1. Determine mean of score experiment class (MX), with formula:

$$MX = \frac{\Sigma X}{N}$$

$$= \frac{859.67}{35}$$

$$= 24.56$$

The result above shows the mean score of the experimental class. The writer got the data from ΣX_1, ΣX_2, and ΣX. Then, the researcher calculated the data based on the formula above.

2. Determine mean score of control class (MY), with the formula:

$$MY = \frac{\Sigma Y}{N}$$

$$= \frac{487.4}{35}$$

$$= 13.92$$

The result above shows the mean score of the control class. The writer got the data from ΣY_1, ΣY_2, and ΣY. Then, the researcher calculated the data based on the formula above.

3. Determine the total square of error of the experimental class (X), with the formula:

$$\Sigma X^2 = \Sigma X^2 - \frac{(\Sigma X)^2}{N}$$

$$= 28016.3 - \frac{(859.67)^2}{35}$$

$$= 28016.3 - \frac{739032.50}{35}$$

$$= 28016.3 - 21115.21$$

$$= 6901.47$$

The result above shows the score quadrates of the experimental class. The writer got the data from ΣX_1, ΣX_2, and ΣX. Then, the researcher calculated the data based on the formula above.

4. Determine the total square of error in the control class (Y), with the formula:

$$\Sigma Y^2 = \Sigma Y^2 - \frac{\Sigma Y2}{N}$$

$$= 13130.8 - \frac{(487.4)^2}{35}$$

$$= 13130.8 - \frac{237558.76}{35}$$

$$= 13130.8 - 6787.39$$

$$= 6343.41$$

The result above shows the score quadrates of the experimental class. The writer got the data from ΣY_1, ΣY_2, and ΣY. Then, the researcher calculated the data based on the formula above.

5. Calculation of T-Test

$$t = \frac{Mx - My}{\sqrt{\left(\frac{\Sigma X^2 + \Sigma Y^2}{Nx + Ny - 2}\right)\left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

$$t = \frac{24.56 - 13.92}{\sqrt{\left(\frac{6901.47 + 6343.41}{35 + 35 - 2}\right)\left(\frac{1}{35} + \frac{1}{35}\right)}}$$

$$t = \frac{10.64}{\sqrt{\left(\frac{13244.88}{68}\right)(0,04)}}$$

$$t = \frac{10.64}{\sqrt{(194.77)(0.04)}}$$

$$t = \frac{10.64}{\sqrt{7.79}}$$

$$t = \frac{10.64}{2.79}$$

$t = 3.81$

The result above shows calculating t-test after the researcher got the data from MX, MY, ΣX^2, and ΣY^2. Then, the researcher calculated the data based on the formula above.

6. Determine the degree of freedom with the formula:

Df = Nx + Ny − 2

   = 35 + 35 − 2

   = 68

The result above shows the score of sample in the both experimental and control class. The writer used 70 students as a sample for this study. The experimental class taken from XI IPA 2 with the total number 35 students and the control class taken from XI IPA 1 with the total number 35 students.

Comparing "t" has been tested in calculating ($t_o = 3.81$) and the degree of freedom (df) for 68, the writer used the closest "df" from 70-2=68. So, the degree of freedom is 68. It has been tested on the t-table (t_t= 5%-=1.99 and t_t=1%=2.65. It can be known that $t_o > t_t$ 5% and $t_o > t_t$ 1%. It means 1.99<3.81>2.65.

C. The Interpretation of Data

The data shows that the students' reading comprehension ability at the eleventh grade students of SMAN 5 Kota Serang before conducted by experiment to apply the 3-2-1 strategy between XI IPA 2 as an experimental class and XI IPA 1 as control class is not different significantly or still low. The mean of the pre-test scores obtained by the students of XI IPA 2 as experimental class was 55.01 and pre-test

scores obtained by the students of XI IPA 1 as control class was 51.95. The highest score of both classes were different namely in the XI IPA 2 as experimental class got 73.3 and in the class XI IPA 1 as control class got the lower score namely 66.6. For the lowest score of pre-test of both classes were 0.13 for experimental class and 33.3 for control class.

Besides, the data also shows that the students' reading comprehension ability at the eleventh grade students of SMAN 5 Kota Serang after conducted by experiment to apply the 3-2-1 strategy between XI IPA 2 as an experimental class and XI IPA 1 as control class is different significantly. The mean score of post-test obtained by the students of XI IPA 2 as experimental class was 79.58. It is higher than XI IPA 1 as control class namely 65.88. The highest post-test scores of XI IPA 2 as experimental class were 93.3. While, the highest scores achieved by control class were 80. The lowest post-test scores of experimental class were 53.3. While, the lowest post-test scores achieved by control class were 40. The distribution scores of experimental class was 93.3-53.3 = 40. While, in the control class was 80-40 = 40.

By the degree of freedom (df) = 68 and analyzed by using t-test, the writer tested that there is an effectiveness of using the 3-2-1 strategy towards students' reading comprehension ability on report text, because t-count is higher than t-table in level significance 5% and 1%. The table with the level significance of 5% is 1.99 and the level significance of 1% is 2.65.

Based on the interpretation above t-count > t-table. It means that there is significant influence of the 3-2-1 strategy on reading comprehension ability especially on report text.

Hypothesis testing is used to know the significance of both variables, and tested as follows:

Ha = $t_o > t_t$

Ho= $t_o < t_t$

Notes:

H_a = Alternative Hypothesis

H_0 = Null Hypothesis

t_0 = the value of t-observation

t_t = the value of t-table

In order to prove the hypothesis data, the data that has been obtained from both classes are calculated by using t-test formula with the assumption as follows:

If $t_o > t_t$: The alternative hypothesis is accepted. It means there is significant influence of using the 3-2-1 strategy on students' reading comprehension ability on report text at the XI IPA 2 as experimental class and XI IPA 1 as control class.

If $t_o < t_t$: The alternative hypothesis is rejected. It means there is no significant influence of using the 3-2-1 strategy on students' reading comprehension ability on report text at the XI IPA 2 as experimental class and XI IPA 1 as control class.

Based on the result of calculation above, it shows that the value of $t_{observation}$ is bigger than t_{table}. $t_{observation} = 3.81 > t_{table} = 1.99$ (5%) or $t_{observation} = 3.81 > t_{table} = 2.65$ (1%), $1.99 < 3.81 > 2.65$. So, H_o is rejected and H_a is accepted. It means there is a significant influence of using the 3-2-1 strategy on students' reading comprehension ability on report

text. It can be seen that the student got good or better score after given treatment by using the 3-2-1 strategy.

After getting the data, the writer compares both degree of level significance 5% and 1% $t_o > t_t$ 5% and $t_o > t_t$ 1%, 2.65<3.81>1.99. It means that the alternative hypothesis of this research is accepted. So, it can be stated that there is significant influence of using the 3-2-1 strategy on students' reading comprehension ability on report text. In other words, there are significant differences between students who were being taught by using the 3-2-1 strategy and the students who were not being taught by using the 3-2-1 strategy. It means that the 3-2-1 strategy is effective to be used in teaching reading comprehension especially on report text.

D. The Progress of Students' Achievement

As what has been mentioned before, this research is done to get the empirical data that the 3-2-1 strategy can improve students' reading comprehension ability at the eleventh grade students of SMAN 5 Kota Serang.

Based on the data and the process during did this research, the writer got some information. First, the process of teaching and learning report text in both classes was well done. Generally, the students in the experimental class and control class have the same level of achievement in which the result of pre-test showed that both classes have the mean score which relative same, experimental class 55.01 and the control class 51.95. The next step was the writer gave the students explanation about report text. After explanation session, the writer distributes the example of report text and the 3-2-1 chart. The writers

gave the time for the students to read along 5 minutes. After finishing their reading, the students are asked to fill the 3-2-1 chart by using their own words. Based on the writer's experience in teaching and learning process which has been conducted in the experimental class, the students are more engaged to follow each step in the 3-2-1 chart; list three things you discovered, two interesting things and propose one question you still have. The 3-2-1 strategy was success to make the students become active and interesting in their reading. All the students involved well in reading the text. It was build the students' interaction with the text and their motivation to read was increased because this strategy requires the students to summarize ideas form the text, find the interesting things from the text, and propose question they have related to the text they read in order to seek for clarification so they become enthusiastic to find the information from the text to complete their 3-2-1 chart. Besides, this strategy requires students to summarize the text by using their own words and most of them could summarize by using their own words although their grammar and spelling were not totally correct but it will enrich the students' vocabulary. After the students have been finished to complete their chart, the writer asked some students to share their chart in front of the class. Then, the classroom atmosphere became more alive and students looked happy especially when the students delivered about question they have about the text and the answer of the question were variety because it depends on the students' opinion.

The strong effort from each student in their reading activity by using the 3-2-1 strategy and also the role of the teacher to help the students comprehend the text is one of the evidence that the 3-2-1 strategy was success to increase students' motivation, vocabulary and make the students' reading comprehension improved.

Meanwhile, the control class was different with the experimental class. After got the pre-test, the writer gave the explanation about report text. Next, the writer asked the students to read the example of report text given, then answer the question. It was look like conventional drills. When the writer compared the pre-test and post-test score of both classes, the score are different significantly between experimental class and control class.

From the result of calculation above, the value of $t_{observation}$ is bigger than t_{table}. $t_{observation} = 3.81 > t_{table} = 1.99$ (5%) or $t_{observation} = 3.81 > t_{table} = 2.65$ (1%), $1.99 < 3.81 > 2.65$. According to the result of the calculation, it can be concluded that the Null Hypothesis (H_o) is rejected and Alternative Hypothesis (H_a) is accepted. It means that there is a significant influence of using the 3-2-1 strategy on students' reading comprehension ability on report text.

E. The Strength and Weakness of the Research

After the writer finished the research, the writer can determine the strength and weakness of this research. The strength of this research is that we can know about the empirical data about the students' reading comprehension ability before conducted by experiment to apply the 3-2-1 strategy, the empirical data about the students' reading

comprehension ability after conducted by experiment to apply the 3-2-1 strategy and we can know that the 3-2-1 strategy is effective to be used in teaching reading to improve the students' reading comprehension ability. The weakness of this research is the limited time. So, the writer suggests to the next researcher who wants to do the same research that to add the research time more than before in collecting the data.