

CHAPTER IV

RESEARCH FINDING

A. Description of Data

In this chapter, the writer would like to present the description of the data. The sample of this research was the students of the eighth grade of SMAN 3 Pandeglang, as stated in previously, she divided them into two groups. The first was experimental class that consists of 35 students from class X MIA 1 and the second was control class that consist of 35 students from X MIA 2.

The goal of this research is to know the effectiveness of Reading Connections technique toward students' reading comprehension and to give the report of score of pre-test and post-test from both the experiment class and control class. The writer analyze the data quantitatively.

The result of pre-test showed that students of the eighth grade of SMAN 3 Pandeglang have poor ability in reading comprehension. The students have the difficulties in

understanding a text and they have poor in understanding English text but after using reading connections technique. the students' reading comprehension increase gradually, so that they were easy to do post-test. It can be seen from the result of post test and the students' progress in learning activities. In learning reading especially for experimental class the researcher utilized reading connections technique and employed the graphic organizer so the students were assisted to comprehend English text because while the students were able to activate their background knowledge by connecting previous knowledge and recalling pass experiences.

To know the effectiveness of reading connections technique toward students' reading comprehension, the writer gave the test to students as sample both at the experimental class and control class. The test that used in this research divided in two types, they are pre-test and post-test. The pre-test is given before treatment and post test is given after treatment. Both the reading comprehension tests, pre-test and post-test which the writer gave to the students were questions those are 25 (twenty

five) multiple choices, the correct answer is given score 1 (one) and the incorrect answer is 0 (zero) in multiple choices.

The writer described the students' result of pre-test and post-test in experimental class and control class by the table below:

Table 4.1
Data from Pre-test and Post-test of Experimental Class

NO	Name of students	Pre-test	Post-test	Gained
1	AK	44	56	12
2	ACN	52	76	24
3	AAH	68	80	12
4	ATH	44	48	8
5	AAA	52	64	12
6	AM	44	76	32
7	D	44	68	24
8	EA	60	68	8
9	EG	52	72	20
10	FNA	72	84	12
11	HC	52	76	24
12	IF	60	64	4
13	LS	44	76	32
14	MM	64	80	16
15	MPB	48	72	24
16	MH	48	64	16
17	MZ	52	76	24
18	NW	52	72	20
19	NU	56	72	16
20	NF	64	80	16
21	PP	64	88	24
22	R	72	80	8
23	RHHA	48	76	28

24	SS	52	72	20
25	SN	44	48	8
26	SB	60	84	24
27	SFN	64	88	24
28	SM	48	64	16
29	TMK	60	80	20
30	TIM	68	84	16
31	TA	44	60	16
32	TS	52	76	24
33	VM	72	84	12
34	YS	56	56	0
35	Z	44	48	8
N=35	TOTAL SCORE	1920	2512	604
	AVARAGE	54,85	71,77	

Determine mean score pre-test and post-test of experimental class, the writer follows the formula :

$$\begin{aligned}
 M_1 &= \frac{\sum X_1}{N_1} & M_2 &= \frac{\sum X_2}{N_2} \\
 &= \frac{1920}{35} & &= \frac{2512}{35} \\
 &= 54.85 & &= 71.77
 \end{aligned}$$

Determine mean with the formula :

$$\begin{aligned}
 M &= M_2 - M_1 \\
 &= 71.77 - 54.48 \\
 &= 17.29
 \end{aligned}$$

Note :

M	= Mean
M ₁	= Mean of Pre-test
M ₂	= Mean of Post-test
X ₁	= Students` score of Pre-test
X ₂	= Students` score of Post-test
N	= Number of Students

The table above showed the students' score of pre-test and post-test at the experimental class. The highest score of pre-test was 72, it was gotten by three students and the lowest score was 44, it was gotten by nine students and the average of pre-test score 54.85. Then the highest score of post-test was 88, it was gotten by one student and the lowest score was 56, it was gotten by one student and the average score of post-test was 71.77. the students' result can show that the post-test is higher score after applied reading connections technique. From the calculation of the determine mean the experimental class, the average between the pre-test and post-test increase amount 17.29.

Table 4.2
Data from pre-test and post-test of Control class

No	Name of students	Pre-test	Post-test	Gained
1	AF	36	64	28
2	AP	40	60	20
3	ANS	36	56	20
4	AR	40	52	12
5	AF	60	60	0
6	CAL	36	56	20
7	DG	40	44	4
8	EAP	36	40	4
9	FLR	44	64	20
10	H	52	56	4
11	HAP	44	44	0
12	IS	40	52	12
13	K	52	60	8
14	MFS	48	68	20
15	MFH	36	40	4
16	MJ	56	64	8
17	MI	36	52	16
18	MM	48	52	4
19	NHP	36	56	20
20	NA	40	64	24
21	NI	52	48	-4
22	PN	40	64	24
23	PSA	36	52	16
24	RR	36	60	24
25	S	40	48	8
26	SL	36	64	28
27	SR	40	52	12
28	SW	36	64	28
29	SN	40	48	8
30	SNF	36	48	12
31	SA	44	60	16
32	ST	48	56	8

33	TF	48	48	0
34	UN	44	48	4
35	UF	36	64	28
N=35	TOTAL SCORE	1468	1928	460
	AVARAGE	41,94	55,08	

Determine mean score pre-test and post-test of control

class, the writer follows the formula :

$$\begin{aligned}
 M_1 &= \frac{\sum Y_1}{N_1} & M_2 &= \frac{\sum Y_2}{N_2} \\
 &= \frac{1468}{35} & &= \frac{1928}{35} \\
 &= 41.94 & &= 55.08
 \end{aligned}$$

Determine mean with the formula :

$$\begin{aligned}
 M &= M_2 - M_1 \\
 &= 55.08 - 41.94 \\
 &= 13.14
 \end{aligned}$$

Note :

- M = Mean
- M₁ = Mean of Pre-test
- M₂ = Mean of Post-test
- Y₁ = Students` score of Pre-test

Y_2 = Students' score of Post-test

N = Number of Students

The table 4.2 showed that lowest score of pre-test 36, it was gotten by thirteen students and the highest score of pre-test is 60, it was gotten by one student and the average score of pre-test was 41.94. Then, highest score of post-test was 68, it was gotten by one student and the lowest score of post-test 40, it was gotten by two student and the average score of post-test was 55.08. the students' score in control class was less because in this class not use reading connections technique. After the calculation of the determine mean the control class, the average between pre-test and post-test increase amount 6.57.

After comparison between the score of pre-test and post test in experimental class and control class, the writer calculates deviation and squared deviation. The result of the calculation by using the formula t-test can be seen at the analysis of the data.

B. Analyzing the Data

After the writer got the data from pre-test and post-test score from experimental and control class. The writer analyzed

the data by t-test formula with the degree of significance 5% and the writer used steps of formula.

Table 4.3
The score of Distribution Frequency

No	X	Y	X	Y	X ²	Y ²
1	56	64	-15.77	8.92	248.69	79.56
2	76	60	4.23	4.92	17.89	24.20
3	80	56	8.23	0.92	67.73	0.08
4	48	52	-23.77	-3.08	565.01	9.48
5	64	60	-7.77	4.92	60.37	24.20
6	76	56	4.23	0.92	17.89	0.84
7	68	44	-3.77	-11.08	14.21	122.79
8	68	40	-3.77	-15.08	14.21	227.40
9	72	64	2.3	8.92	5.29	79.56
10	84	56	12.23	0.92	149.57	0.08
11	76	44	4.23	-11.08	17.89	122.76
12	64	52	-7.77	-3.08	60.37	9.48
13	76	60	4.23	4.92	17.89	24.20
14	80	68	8.23	12.92	67.73	166.92
15	72	40	2.3	-15.08	5.29	227.40
16	64	64	-7.77	8.92	60.37	79.56
17	76	52	4.23	-3.08	17.89	9.48
18	72	52	2.3	-3.08	5.29	9.48
19	72	56	2.3	0.92	5.29	0.84
20	80	64	8.23	8.92	67.73	79.56
21	88	48	16.23	-7.08	263.41	50.12
22	80	64	8.23	8.92	67.73	79.56
23	76	52	4.23	-3.08	17.89	9.48
24	72	60	2.3	4.92	5.29	24.20
25	48	48	-23.77	-7.08	565.01	50.12
26	84	64	12.23	8.92	149.57	79.56
27	88	52	16.23	-3.08	263.41	9.48
28	64	64	-7.77	8.92	60.37	79.56
29	80	48	8.23	-7.08	67.73	50.12

30	84	48	12.23	-7.08	149.57	50.12
31	60	60	-11.77	4.92	138.53	24.20
32	76	56	4.23	0.29	17.89	0.08
33	84	48	12.23	-7.08	149.57	50.12
34	56	48	-15.77	-7.08	248.69	50.12
35	48	64	-23.77	8.92	565.01	79.56
Σ	2512	1928	10.4	6.65	4216,27	1984,27

Note :

X : Score of Post-test of the Experimental Class

Y : Score Post-test of the Control Class

x : Deviation of Experimental Class

y : Deviation of Control Class

x^2 : The Squared of Control Class

y^2 : The Squared Deviation of Control Class

- a. Determining mean of variable X (variable I) with formula:

$$\begin{aligned}
 M_x &= \frac{\Sigma X}{N_1} \\
 &= \frac{2512}{35} \\
 &= 71.77
 \end{aligned}$$

- b. Determining mean of variable Y (variable II) with formula:

$$\begin{aligned}
 M_y &= \frac{\sum Y}{N_2} \\
 &= \frac{1928}{35} \\
 &= 55.08
 \end{aligned}$$

- c. Determining deviation standard of variable I with formula:

$$\begin{aligned}
 SD_x &= \sqrt{\frac{\sum x^2}{N_1}} \\
 &= \sqrt{\frac{4216.27}{35}} \\
 &= \sqrt{120.46} \\
 &= 10.97
 \end{aligned}$$

- d. Determining deviation standard of variable II with formula:

$$\begin{aligned}
 SD_y &= \sqrt{\frac{\sum Y^2}{N_1}} \\
 &= \sqrt{\frac{1984.27}{35}} \\
 &= \sqrt{56.69}
 \end{aligned}$$

$$= 7.52$$

- e. Determining standard error of mean variable I with formula:

$$\begin{aligned} SE_{M_x} &= \frac{SD_1}{\sqrt{N_1 - 1}} \\ &= \frac{10.97}{\sqrt{35 - 1}} \\ &= \frac{10.97}{\sqrt{34}} \\ &= \frac{10.97}{5.83} \\ &= 1.88 \end{aligned}$$

- f. Determining standard error of mean variable II with formula:

$$\begin{aligned} SE_{M_y} &= \frac{SD_2}{\sqrt{N_2 - 1}} \\ &= \frac{7.52}{\sqrt{35 - 1}} \\ &= \frac{7.52}{\sqrt{34}} \end{aligned}$$

$$= \frac{7.52}{5.83}$$

$$= 1.28$$

- g. Determining standard error of mean difference variable I and variable II with formula:

$$SE_{M_1-M_2} = \sqrt{SE_{M_1^2} + SE_{M_2^2}}$$

$$= \sqrt{1.88^2 + 1.28^2}$$

$$= \sqrt{3.53 + 1.63}$$

$$= \sqrt{5.16}$$

$$= 2.27$$

- h. Analyzing the result by using calculation of the t-test as follow:

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

$$= \frac{71.77 - 55.08}{2.27}$$

$$= \frac{16.69}{2.27}$$

$$= 7.35$$

- i. Determining degrees of freedom (df) with formula:

$$\begin{aligned}df &= (N_1 + N_2) - 2 \\&= (35 + 35) - 2 \\&= 70 - 2 \\&= 68\end{aligned}$$

From the data, that mean of pre-test score obtained by students of X MIA 1 as experimental class = 54.85 and the pre-test score obtained by students of X MIA 2 as control class = 41.94. the highest score in two classes was different that was X MIA 1 as experimental class got 72 and X MIA 2 as control class got 60. And the lowest score of pre-test in both classes was 44 for experimental and 36 for control class.

Then, the means of post-test at the experimental score = 71.77 was greater than control class = 55.08 the highest score of post-test at experimental class got 88 and control class got 68, and the lowest post-test score of experimental class is 56, and the lowest post-test score of control class is 40.

According to the statistical calculation above, the value of t_o is 7.35 and the degree of freedom is 68 with 5% degree of

significance used by the writer. Based on the significance, it can be seen that on $df = 68$ in significance 5% the value of t_{table} 1.99 by comparing the result of the t_{table} and t_o in the degree of significance of 5%, $t_o \geq t_{table} = 7.35 \geq 1.99$. From the result of statistical calculation, it was obtained the t-observation t_o was 7.35; meanwhile, the t-table (t_{table}) of df 68 in significance 5% was 1,99. It means t-observation (t_o) was higher than t-table (t_{table}), so null hypothesis (H_o) rejected and alternative hypothesis (H_a) is accepted.

C. Interpretation of the Data

In this research, the writer described the interpretation of the research findings and testing the hypothesis of research. The research was held to answer the question how is students' reading comprehension on recount text? how is the effectiveness of using reading connection in teaching reading on biography text at the tenth grade of SMAN 3 Pandeglang? In order to answer the question the writer formulated the Null Hypothesis (H_o) and the Alternative Hypothesis (H_a) as follow :

H_a (Alternative Hypothesis) : there is a significant difference of students' reading comprehension achievement between students who are taught using reading connection technique and students who are taught without using reading connection technique.

H_o (Null Hypothesis) : there is not significant difference of students reading comprehension achievement between students who are taught using reading connection technique and students who are taught without using reading connection technique.

The assumption of this hypothesis of this hypothesis as follow :

If $t_o \geq t_{table}$ the Null Hypothesis is rejected and Alternative Hypothesis is Accepted. It means there is a significant difference of students' reading comprehension achievement between students who are taught using reading connection and students who are taught without using reading connection.

The writer summarized that $t_o \geq t_{table}$ it means that the Null Hypothesis is rejected and Alternative Hypothesis is accepted. The writer analyzed the result of calculation that H_o rejected and

H_a is accepted. It can be seen from the calculation of t-test that shows that in the degree of significance of 5%, $t_o \geq t_{table} = 7.35 \geq 1.99$. From the result of statistical calculation, it was obtained the t-observation t_o was 7.35; meanwhile, the t-table (t_{table}) of df 68 in significance 5% was 1,99. It means t-observation (t_o) was higher than t-table (t_{table}), so null hypothesis (H_o) rejected and alternative hypotesis (H_a) is accepted.

Based on the data above, the study can be inferred that reading connection has effect on students' reading comprehension. Besides, the data also show that the increasing of learning reading skill caused by using reading connection to solve the problem that has thought in the statement of problem. The writer use reading connection to build their background knowledge and also to give motivation in learning reading. As the writer state that the problem of students in learning reading. So that, the writer used reading connection to teach reading comprehension in order to build the connections from their own knowledge, prior knowledge and experience so when they read a text they interest to the text and comprehend a text easily.

Besides that, the writer used reading connection technique and implement it by graphic organizer, because graphic organizer include both words and visual images and facilitate the integration of long-term memory and new learning.¹ So the student will more interest and generally have more background and long-term knowledge.

¹ Katherine S. McKnight, *The teacher's Big Book of Graphic Organizer*, P.1