

CHAPTER IV
RESULT OF THE STUDY

In this chapter, the writer presents the obtained data. The data are presented in the following steps.

A. Students' Difference Score on Pre-Test and Post Test

The students' difference score on pre-test and post test in experiment group were presented in the following table.

Table 4.1 Students' Difference Score in Experiment Group

Experiment Group			
Students' Code	Score		
	Pre-Test	Post-Test	Difference
E01	46,6	66,6	20
E02	63,3	73,3	10
E03	66,6	90	23,4
E04	83,3	96,6	13,3
E05	83,3	73,3	-10
E06	53,3	73,3	20
E07	50	60	10
E08	63,3	66,6	3,3
E09	50	66,6	16,6
E10	66,6	80	13,4
E11	50	63,3	13,3
E12	53,3	70	16,7
E13	60	80	20
E14	56,6	63,3	6,7
E15	50	60	10
E16	73,3	73,3	0
E17	73,3	80	6,7
E18	63,3	76,6	13,3
E19	53,3	63,3	10
E20	56,6	66,6	10
E21	50	60	10
E22	43,3	63,3	20
E23	43,3	60	16,7
E24	46,6	66,6	20
E25	60	70	10
E26	46,6	83,3	36,7
TOTAL	Σ1505,8	Σ1845,9	Σ340,1

Based on the data above, it was known the difference score between pre and post test achieved by experimental group was 340,1.

The students' difference score on pre-test and post test of the control group were presented in the following table.

Table 4.2 Students' Difference Score in Control Group

Control Group			
Students' Code	Score		
	Pre-Test	Post-Test	Difference
C01	56,6	70	13,4
C02	66,6	56,6	-10
C03	46,6	46,6	0
C04	53,3	53,3	0
C05	63,3	60	-3,3
C06	60	66,6	6,6
C07	63,3	63,3	0
C08	56,6	60	3,4
C09	50	53,3	3,3
C10	60	63,3	3,3
C11	80	86,6	6,6
C12	60	56,6	-3,4
C13	53,3	53,3	0
C14	56,6	60	3,4
C15	66,6	70	3,4
C16	80	80	0
C17	63,3	60	-3,3
C18	76,6	73,3	-3,3
C19	73,3	70	-3,3
C20	63	60	-3
C21	66,6	63,3	-3,3
C22	86,6	83,3	-3,3
C23	60	53,3	-6,7
C24	70	70	0
C25	53,3	50	-3,3
C26	60	53,3	-6,7
C27	60	60	0
TOTAL	$\Sigma 1705,5$	$\Sigma 1696$	$\Sigma -9,5$

Based on the data above, it was known the difference score between pre and post test achieved by control group was -9,5.

Based on the difference result between experiment group and control group, it can be interpreted that self-questioning strategy which given in experiment group could increase students' reading score. Meanwhile, control group which taught without any strategy, there was not any development.

B. Students' Difference Number of Producing Self Questioning

The students' difference number of producing self-questioning in experiment group were presented in the following table.

Table 4.3 Students' Difference Result of Producing Self Questioning in Experiment Group

STUDENTS' CODE	PRE TEST	POST TEST	DIFFERENCE
E01	3	8	5
E02	4	10	6
E03	6	15	9
E04	7	20	13
E05	5	16	11
E06	6	12	6
E07	4	5	1
E08	3	5	2
E09	2	17	15
E10	10	15	5
E11	5	10	5
E12	5	5	0
E13	5	7	2
E14	5	14	9
E15	4	13	9
E16	5	9	4
E17	5	15	10
E18	13	18	5
E19	3	7	4
E20	5	10	5
E21	6	13	7
E22	5	6	1
E23	2	5	3
E24	5	8	3
E25	5	5	0
E26	5	7	2
Total	133	275	142

Based on the data above, it was known the students' difference number of producing self-questioning in experiment group was 142.

The students' difference score on pre-test and post test in control group were presented in the following table.

Table 4.4 Students' Difference Number of Producing Self Questioning in Control Group

STUDENTS' CODE	PRE TEST	POST TEST	DIFFERENCE
C01	5	4	-1
C02	5	5	0
C03	10	8	-2
C04	5	5	0
C05	8	9	1
C06	6	7	1
C07	5	3	-2
C08	3	5	2
C09	3	4	1
C10	5	10	5
C11	5	5	0
C12	5	5	0
C13	5	7	2
C14	5	10	5
C15	5	10	5
C16	5	5	0
C17	5	5	0
C18	5	6	1
C19	4	4	0
C20	5	6	1
C21	7	8	1
C22	5	5	0
C23	4	5	1
C24	5	2	-3
C25	4	9	5
C26	5	7	2
C27	5	5	0
Total	139	164	25

Based on the data above, it was known the students' difference number of producing self-questioning in control group was 25.

Based on the difference result between experiment group and control group, it can interpreted that self-questioning strategy which given in experiment group could increase students' number of producing self-questioning. Meanwhile, control group which taught without any strategy, there was not any development.

C. Percentage of the Students' Score Category

The percentage of experiment group's score based on category were presented in the following table.

Table 4.5 Percentage of Experiment Group's Score based on Category

Rubric Score	Grade	Category	Frequency	Percentage
80-100	A+	Excellent	11	42,30769
65-70	A	Excellent	11	42,30769
55-60	B+	Good	4	15,38462
45-50	B	Good	-	-
35-40	C+	Fair	-	-
25-30	C	Fair	-	-
15-20	U	Unsatisfactory	-	-
5-10	U	Unsatisfactory	-	-
0	U	Unsatisfactory	-	-
TOTAL			26	∑100%

The table above showed the result of post-test score achieved by the experiment group. It could be seen that there were 11 students who got 80-100 (42,30769%). 11 students got 65-70 (42,30769%). 4 students got 55-60 (15,38462%).

The percentage of control group's score based on category were presented in the following table.

Table 4.6 Percentage of Control Group's Score based on Category

Rubric Score	Grade	Category	Frequency	Percentage
80-100	A+	Excellent	4	14,81481
65-70	A	Excellent	8	29,62963
55-60	B+	Good	13	48,14815
45-50	B	Good	2	7,407407
35-40	C+	Fair	-	-
25-30	C	Fair	-	-
15-20	U	Unsatisfactory	-	-
5-10	U	Unsatisfactory	-	-
0	U	Unsatisfactory	-	-
TOTAL			27	Σ100%

The table above showed the result of post-test score achieved by the control group. It could be seen that there were 4 students who got 80-100 (14,81481%). 8 students got 65-70 (29,62963%). 13 students got 55-60 (48,14815%). 2 students got 45-50 (7,407407%).

Based on the difference result between experiment group and control group, it can interpreted that students who got 'excellent' criteria in experiment group was higher than in control group. It means self questioning strategy which given in experiment group could influenced students' reading score.

D. Students' Score Percentage Based on the Item Level

The percentage of experiment group's score based on the item level were presented in the following table.

Table 4.7 Percentage of Experiment Group's Score based on the Item Level

No.	Literal (50%)	Inferencial (40%)	Critical (10%)
1	26	26	17
2	19	21	11

No.	Literal (50%)	Inferencial (40%)	Critical (10%)
3	26	22	24
4	23	23	-
5	10	20	-
6	21	26	-
7	12	16	-
8	15	11	-
9	8	22	-
10	15	19	-
11	21	22	-
12	8	21	-
13	4	-	-
14	19	-	-
15	26	-	-
TOTAL	253	249	52
AVERAGE	16,86667	20,75	17,33333
PERCENT	64,87179%	79,80769%	66,66667%

Note: Average: Total/Number Items
Percent: Average/Total Students*100

The table above showed the percentage of total students who answer literal items, inferential items and critical items in experiment group. It could be seen that the average of students who answer literal items is 16,867 (64,872%). The average of students who answer inferential items is 20,75 (79,808%). The average of students who answer critical items is 17,333 (66,667%).

The percentage of control group's score based on the item level were presented in the following table.

Table 4.8 Percentage of Control Group's Score based on the Item Level

No.	Literal (50%)	Inferencial (40%)	Critical (10%)
1	23	24	19
2	17	15	14
3	15	26	21
4	22	20	-
5	10	14	--
6	12	22	-
7	4	15	-

No.	Literal (50%)	Inferencial (40%)	Critical (10%)
8	19	11	-
9	10	24	-
10	17	14	-
11	17	17	-
12	10	19	-
13	16	-	-
14	19	-	-
15	23	-	-
TOTAL	234	221	54
AVERAGE	15,6	18,41667	18
PERCENT	57,77778%	68,20988%	66,66667%

Note: Average: Total/Number Items
Percent: Average/Total Students*100

The table above showed the percentage of total students who answer literal items, inferential items and critical items in control group. It could be seen that the average of students who answer literal items is 15,6 (57,778%). The average of students who answer inferential items is 18,4167(68,210%). The average of students who answer critical items is 18 (66,667%).

Based on the difference result between experiment group and control group, it can interpreted that self questioning strategy which given in experiment group influenced students' answer on literal and inferencial items level, meanwhile, on critical items, there is no significance difference between both of groups.

E. The Result of Data Analysis

1. Testing Hypothesis Using Manual Calculation

The writer chose the significance level on 5%, it means the significant level of refusal of null hypothesis on 5 %. The writer decided the significance level at 5 % due to the hypotheses type stated on non – directional (two – tailed test). It meant that the hypothesis can't direct the prediction of

alternative hypothesis. Alternative hypothesis symbolized by "1". This symbol could not direct the answer of hypothesis, "1" can be ($>$) or ($<$). The answer of hypothesis could not be predicted whether on more than or less than.

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 appendix 19 and 20. It could be seen on this following table.

Table 4.9 The Standard Deviation and the Standard Error of X_1 and X_2

Variable	The Standard Deviation	The Standard Error
X_1	8.194	1.639
X_2	9.078	1.780

Where:

X_1 = Experimental Group

X_2 = Control Group

The table showed the result of the standard deviation calculation of X_1 was 8.194 and the result of the standard error mean calculation was 1.639. The result of the standard deviation calculation of X_2 was 9.078 and the result of the standard error mean calculation was 1.780.

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

$$\begin{aligned}
SE_{M_1} - SE_{M_2} &= \sqrt{SE_{M_1}^2 - SE_{M_2}^2} \\
SE_{M_1} - SE_{M_2} &= \sqrt{1.639^2 - 1.780^2} \\
SE_{M_1} - SE_{M_2} &= \sqrt{2.686321 + 3.1684} \\
SE_{M_1} - SE_{M_2} &= \sqrt{5.854721} \\
SE_{M_1} - SE_{M_2} &= 2.419653 \\
SE_{M_1} - SE_{M_2} &= 2.420
\end{aligned}$$

The calculation above showed the standard error of the differences mean between X_1 and X_2 was 2.420. Then, it was inserted to the t_o formula to get the value of t observe as follows:

$$\begin{aligned}
t_o &= \frac{M_1 - M_2}{SE_{M_1} - SE_{M_2}} \\
t_o &= \frac{71.346 - 64.037}{2.420} \\
t_o &= \frac{7.309}{2.420} \\
t_o &= 3.020
\end{aligned}$$

With the criteria:

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

If $t\text{-test (t-observed)} < t_{\text{table}}$, it means H_a is rejected and H_o is accepted.

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

$$\begin{aligned}
 df &= (N_1 + N_2 - 2) \\
 &= (25 + 27 - 2) \\
 &= 50
 \end{aligned}$$

t_{table} at df 50/40 at 5% significant level = 2.021

The writer chose the significance level on 5%, it means the significant level of refusal of null hypothesis on 5 %. The writer decided the significance level at 5 % due to the hypothesis type stated on non – directional (two – tailed test). It meant that the hypothesis can't direct the prediction of alternative hypothesis. Alternative hypothesis symbolized by "1". This symbol could not direct the answer of hypothesis, "1" can be ($>$) or ($<$). The answer of hypothesis could not be predicted whether on more than or less than

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

Table 4.10 The Result of T-test

Variable	t observe	t table		Df/db
		5%	1%	
$X_1 - X_2$	3.020	2.021	2.704	50

Where:

X_1 = Experimental Group

X_2 = Control Group

t observe = The calculated Value

t table = The distribution of t value

df/db = Degree of Freedom

Based on the result of hypothesis test calculation, it was found that the value of t_{observed} was greater than the value of t_{table} at 1% and 5% significance level or $2.021 < 3.020 > 2.704$. It meant H_a was accepted and H_o was rejected.

It could be interpreted based on the result of calculation that H_a stating that self-questioning strategy gives effect on the students' reading score was accepted and H_o stating that self-questioning strategy does not give effect on the students' reading score was rejected. It meant that reading using self-questioning strategy gave significant effect on the students' reading score of the thirdsemester English students at STAIN Palangka Raya

2. Testing Hypothesis Using SPSS Calculation

The writer also applied SPSS 17.0 program to calculate t test in testing hypothesis of the study. The result of the t test using SPSS 17.0 was used to support the manual calculation of the t test. The result of the t test using SPSS 17.0 program could be seen as follows:

Table 4.11 The Standard Deviation and the Standard Error of X_1 and X_2

VAR0001	N	Mean	Std. Deviation	Std. Error Mean
1.00	26	70.9962	9.55642	1.87417
2.00	27	62.8148	10.03221	1.93070

The table showed the result of the standard deviation calculation of X_1 was 9.55642 and the result of the standard error mean calculation was

result of t-test was interpreted on the result of degree of freedom to get the t_{table} . The result of degree of freedom (df) was 50, it found from the total number of the students in both group minus 2. The following table was the result of $t_{observed}$ and t_{table} from 50 df at 5% and 1% significance level.

Table 4.13 The Result of T-test Using SPSS 17.0

Variable	t observe	t table		Df/db
		5%	1%	
$X_1 - X_2$	3.041	2.021	2.704	50

The interpretation of the result of t-test using SPSS 17.0 program, it was found the t observe was greater than the t table at 1 % and 5 % significance level or $2.021 < 3.041 > 2.704$. It meant H_a was accepted and H_o was rejected.

It could be interpreted based on the result of calculation that H_a stating that self-questioning strategy gives effect on the students' reading score was accepted and H_o stating that self-questioning strategy does not give effect on the students' reading score was rejected. It meant that reading with self-questioning strategy gave significant effect on the students' reading score of the third semester English students of STAIN Palangka Raya.