CHAPTER IV

FINDING AND DISCUSSION

A. Findings

It was found that the aplication of Generating Interaction between Schemata and Text (GIST) strategy on teaching in writing narrative text gave a significant effect. It is shown by the data analyzed that the students thought by conventional method.

The data were collected by giving test which was consisted into pre-test and post-testthe range of the score from 0-100. The students score in writing was given based on the scoring rubrics (tabel 3.4). They were Orientation (O), Complication (C), Resolution (R), Grammar (G), and Vocabulary (V).

In research the sample was consisted into two groups namely experimental and control group.The table 4.1 (See Appendix I) shown in the experimental group, the highest score of pre-test was 75 and the lowest score was 45, while the highest score of post-test was 85 and the lowest score was 50. The total score of the pre-test of experimental group was 1317 and the total score of post-test was 1468.

The table 4.2(See Appendix II) show that in control group , the highest score of pre-test was 60, and the lowest score of pre-test was 35.while the highest score of post-test of control gruop was 65, and the lowest score of post test in control group was 30. The total score of pre-test of control group was 1070 and the total of post-test of control group was 1158.

The two score both experimental and control group was different. The mean score of the post-test of experimental group was higher than the mean score of post-test of the control group (63,82 > 50,34). The result of the t-test showed that the $t\text{-}_{observed}$ was higher that $t\text{-}_{table}$ was (5,48 > 2,02), (See Appendix VII). Ha hypothesis is accepted at the level of significance 0.05 for two tailed and the degree of fredom (df) = Na+Nb-2 = 44,(See Appendix XII). The conclusion shows that the using of Generating Interaction between Schemata and Text (GIST) strategy on students' achievement in writing narrative text affects the students ability.

1. Data Analysis

1.1 Normality Testing

Normality testing used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

1.1.1 Normality Testing of Experimental Group

Table.4.1
Frequency Distribution of Pre Test in Experimental Group

No	Xi	Fi	Fi.Xi	Xi2	Fi.Xi2
1	45	1	45	2025	2025
2	47	1	47	2209	2209
3	50	8	400	2500	20000
4	55	4	220	3025	12100
5	60	3	180	3600	10800
6	65	2	130	4225	8450
7	70	1	70	4900	4900
8	75	3	225	5625	16875
	Total	23	1317	28109	77359

Based on the data above, the result of $Fi.Xi^2$ is 77359 and FiXi is 1317. After getting the calculation of mean, variant and deviation standard (See Appendix XIII),then the next step is to found out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality writing narrative text can be seen in the following table:

Table 4.2
Normality Testing of Pre Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	45	-1,29	0,09852533	0,04	0,058525329
2	47	-1,08	0,14007109	0,08	0,06007109
3	50	-0,76	0,22362729	0,43	-0,20637271
4	50	-0,76	0,22362729	0,43	-0,20637271
5	50	-0,76	0,22362729	0,43	-0,20637271
6	50	-0,76	0,22362729	0,43	-0,20637271
7	50	-0,76	0,22362729	0,43	-0,20637271
8	50	-0,76	0,22362729	0,43	-0,20637271
9	50	-0,76	0,22362729	0,43	-0,20637271
10	50	-0,76	0,22362729	0,43	-0,20637271
11	55	-0,23	0,40904588	0,6	-0,19095412
12	55	-0,23	0,40904588	0,6	-0,19095412
13	55	-0,23	0,40904588	0,6	-0,19095412
14	55	-0,23	0,40904588	0,6	-0,19095412
15	60	0,29	0,61409188	0,73	-0,11590812
16	60	0,29	0,61409188	0,73	-0,11590812
17	60	0,29	0,61409188	0,73	-0,11590812
18	65	0,82	0,79389195	0,82	-0,02610805

19	65	0,82	0,79389195	0,82	-0,02610805
20	70	1,36	0,91308504	0,86	0,053085038
21	75	1,89	0,97062102	1	-0,02937898
22	75	1,89	0,97062102	1	-0,02937898
23	75	1,89	0,97062102	1	-0,02937898
			Lo=0,060		
			Lt= 0,173		

From the table above, it can be seen that Liliefors (See Appendix XV) observation or L_o = 0.060 with n = 23 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.173. It is known that the coefficient of L_o (0.060) < L_t (0.173). So it can be concluded that the data distribution of the student's ability in writing narrative text is **normal.**

Table.4.3
Frequency Distribution of Post- Test in Experimental Group

No	Xi	Fi	Fi.Xi	Xi2	Fi.Xi2
1	50	4	200	2500	10000
2	53	2	106	2809	5618
3	55	3	165	3025	9075
4	60	4	240	3600	14400
5	70	3	210	4900	14700
6	72	1	72	5184	5184
7	75	2	150	5625	11250
8	80	3	240	6400	19200
9	85	1	85	7225	7225
	Total	**23**	**1468**	**41268**	**96652**

Based on the data above, the result of Fi.Xi^2 is 96652 and Fi.Xi is 1468 .After getting the calculation of mean, variant and deviation standard (See Appendix XIII), then the next step is to found out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality writing narrative text can be seen in the following table:

Table 4.4
Normality Testing of Post- Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	50	-2,05	0,020182	0,17	0,14981778
2	50	-2,05	0,020182	0,17	0,14981778
3	50	-2,05	0,020182	0,17	0,14981778
4	50	-2,05	0,020182	0,17	0,14981778
5	53	-0,93	0,176186	0,26	0,08381446
6	53	-0,93	0,176186	0,26	0,08381446
7	55	-0,75	0,226627	0,39	0,16337265
8	55	-0,75	0,226627	0,39	0,16337265
9	55	-0,75	0,226627	0,39	0,16337265
10	60	-0,32	0,374484	0,56	0,18551583
11	60	-0,32	0,374484	0,56	0,18551583
12	60	-0,32	0,374484	0,56	0,18551583
13	60	-0,32	0,374484	0,56	0,18551583
14	70	0,53	0,701944	0,69	0,01194403
15	70	0,53	0,701944	0,69	0,01194403
16	70	0,53	0,701944	0,69	0,01194403
17	72	0,7	0,758036	0,73	0,02803635
18	75	0,96	0,831472	0,82	0,01147239

19	75	0,96	0,831472	0,82	0,01147239
20	80	1,39	0,917736	0,95	0,03226444
21	80	1,39	0,917736	0,95	0,03226444
22	80	1,39	0,917736	0,95	0,03226444
23	85	1,83	0,966375	1	0,03362497
		Lo= 0,028			
		Lt= 0,173			

From the table above, it can be seen that Liliefors observation or L_o = 0.028 with n = 23 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.173. It is known that the coefficient of L_o (0.028) < L_t (0.173). So it can be concluded that the data distribution of the student's ability in writing narrative text is **normal.**

1.1.2. Normality Testing of Control Group

Table.4.5
Frequency Distribution of Pre- Test in Control Group

No	Xi	Fi	FiXi	Xi2	FiXi2
1	35	1	35	1225	1225
2	40	8	320	1600	12800
3	45	4	180	2025	8100
4	50	5	250	2500	12500
5	55	3	165	3025	9075
6	60	2	120	3600	7200

	Total	23	1070	13975	50900

Based on the data above, the result of $FiXi^2$ is 50900 and FiXi is 1070. Then the following is the calculation of mean, variant and standard deviation. After getting the calculation of mean, variant and deviation standard (See Appendix XIII), then the next step is to found out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality writing narrative text can be seen in the following table:

Table 4.6
Normality Testing of Pre- Test Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	35	-1,61	0,053698928	0,04	0,013698928
2	40	-0,91	0,181411255	0,39	-0,20858875
3	40	-0,91	0,181411255	0,39	-0,20858875
4	40	-0,91	0,181411255	0,39	-0,20858875
5	40	-0,91	0,181411255	0,39	-0,20858875
6	40	-0,91	0,181411255	0,39	-0,20858875
7	40	-0,91	0,181411255	0,39	-0,20858875
8	40	-0,91	0,181411255	0,39	-0,20858875
9	40	-0,91	0,181411255	0,39	-0,20858875
10	45	-0,21	0,416833837	0,56	-0,14316616
11	45	-0,21	0,416833837	0,56	-0,14316616
12	45	-0,21	0,416833837	0,56	-0,14316616
13	45	-0,21	0,416833837	0,56	-0,14316616
14	50	0,49	0,687933051	0,78	-0,09206695
15	50	0,49	0,687933051	0,78	-0,09206695

16	50	0,49	0,687933051	0,78	-0,09206695
17	50	0,49	0,687933051	0,78	-0,09206695
18	50	0,49	0,687933051	0,78	-0,09206695
19	55	1,19	0,882976804	0,91	-0,0270232
20	55	1,19	0,882976804	0,91	-0,0270232
21	55	1,19	0,882976804	0,91	-0,0270232
22	60	1,89	0,97062102	1	-0,02937898
23	60	1,89	0,97062102	1	-0,02937898
			Lo= 0,013		
			Lt= 0,173		

From the table above, it can be seen that Liliefors observation or L_o = 0.013 with n = 23 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.173. It is known that the coefficient of L_o (0.013) < L_t (0.173). So it can be concluded that the data distribution of the student's ability in writing narrative text is **normal.**

Table.4.7
Frequency Distribution of Post- Test in Control Group

No	Xi	Fi	FiXi	Xi2	FiXi2
1	30	1	30	900	900
2	40	4	160	1600	6400
3	45	3	135	2025	6075
4	50	6	300	2500	15000
5	55	3	165	3025	9075
6	58	1	58	3364	3364

7	60	3	180	3600	10800
8	65	2	130	4225	8450
	Total	**23**	**1158**	**21239**	**60064**

Based on the data above, the result of $FiXi^2$ is 60064 and FiXi is 1158.. After getting the calculation of mean, variant and deviation standard (See Appendix XII), then the next step is to found out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality writing narrative text can be seen in the following table:

Table 4.8
Normality Testing of Post- Test Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	30	-2,27	0,011604	0,04	0,028396208
2	40	-1,15	0,125072	0,21	0,084928064
3	40	-1,15	0,125072	0,21	0,084928064
4	40	-1,15	0,125072	0,21	0,084928064
5	40	-1,15	0,125072	0,21	0,084928064
6	45	-0,59	0,277595	0,34	0,062404675
7	45	-0,59	0,277595	0,34	0,062404675
8	45	-0,59	0,277595	0,34	0,062404675
9	50	-0,03	0,488034	0,6	0,111966473
10	50	-0,03	0,488034	0,6	0,111966473
11	50	-0,03	0,488034	0,6	0,111966473
12	50	-0,03	0,488034	0,6	0,111966473
13	50	-0,03	0,488034	0,6	0,111966473
14	50	-0,03	0,488034	0,6	0,111966473

15	55	0,52	0,698468	0,73	0,031531788
16	55	0,52	0,698468	0,73	0,031531788
17	55	0,52	0,698468	0,73	0,031531788
18	58	0,86	0,805105	0,78	0,025105479
19	60	1,08	0,859929	0,91	-0,05007109
20	60	1,08	0,859929	0,91	-0,05007109
21	60	1,08	0,859929	0,91	-0,05007109
22	65	1,64	0,949497	1	0,050502583
23	65	1,64	0,949497	1	0,050502583
			Lo=0,025		
			Lt=0,173		

From the table above, it can be seen that Liliefors observation or L_o = 0.035 with n = 23 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.173. It is known that the coefficient of L_o (0.025) < L_t (0.173). So it can be concluded that the data distribution of the student's ability in writing narrative text is **normal.**

1.2 Homogeneity Testing

1.2.1 Homogeneity Testing of Pre Test

Where :

S_1^2 = the biggest variant

S_2^2 = the smallest variant

Based on the variants of both samples of pre-test found that:

S_{ex}^2 = 88,47 N = 23

S_{co}^2 = 50,9 N = 23

So:

$F_{obs} = \frac{S_{ex}^2}{S_{co}^2}$

$F\ obs = \frac{88,47}{50,9}$

F obs = 1,73

Then the coefficient of F_{obs} = 1.73 is compared with $F_{table,}$ where F_{table} is determined at real level α = 0.05 and the same numerator dk = N - 1 = 23 - 1 = 22 that was exist dk numerator 22, the denominator dk = n - 1 (23 - 1 = 22). Then F_{table} can be calculated $F_{0.05(22,22)}$ = 2,084

So $F_{obs} < F_{table}$ atau (1.73 < 2,084) so it can be concluded that the variant is homogenous.

1.2.2 Homogeneity Testing of Post Test

$$F_{obs} = \frac{S_1^2}{S_2^2}$$

Where : S_1^2 = the biggest variant

S_2^2 = the smallest variant

Based on the variants of both samples of post-test found that:

S_{ex}^2 = 134,3 N = 23

S_{co}^{2} = 80 N = 23

So:

$$F_{obs} = \frac{S_{ex}^{2}}{S_{co}^{2}}$$

$$F\ obs = \frac{134{,}3}{80} = 1{,}67$$

Then the coefficient of F_{obs} = 1.67 is compared with $F_{table,}$ where F_{table} is determined at real level α = 0.05 and the same numerator dk = N - 1 = 23 - 1 = 22 that was exist dk numerator 22, the denominator dk = n - 1 (23 - 1 = 22). Then F_{table} can be calculated $F_{0.05(22,22)}$ = 2,048

So $F_{obs} < F_{table}$ atau (1.67 < 2,048) so it can be concluded that the variant is homogenous.

1.3 T-test Testing

Data Analysis by Using T-test Formula:

The procedures of analyzing the data were as follow:

a. Scoring the pre-test of experimental and control group

b. Scoring the post-test of experiment and control group

c. Comparing the mean of two group (experiment and control)

d. Analyzing the data by using t-test formula as follows:

$$t = \frac{Ma - Mb}{\sqrt{\frac{da^2 + db^2}{Na + Nb - 2} x \frac{1}{Na} + \frac{1}{Nb}}}$$

Where:

Ma : mean value of the experimental group

Mb : mean value of the control group

da^2 : variance of the experimental group

db^2 : variace of the control group

Na : the number of students in the experimental group

Nb : the number of students in the control group

The calculation shows that:

Ma	: 6,56	Mb	: 3,82	Na	: 23
da^2	: 799,6	db^2	: 647,3	Nb	: 23

$$t = \frac{Ma - Mb}{\sqrt{\frac{da^2 + db^2}{Na + Nb - 2} x \frac{1}{Na} + \frac{1}{Nb}}}$$

$$t = \frac{6,56 - 3,82}{\sqrt{\frac{799,6 + 647,30}{(23 + 23) - 2} x \frac{1}{23} + \frac{1}{23}}}$$

$$t = \frac{2,74}{\sqrt{\frac{1426,9}{44} x \frac{1}{23} + \frac{1}{23}}}$$

$$t = \frac{2,74}{\sqrt{3,247 x 0,08}}$$

$$t = \frac{2,74}{\sqrt{0,259}}$$

$$t = \frac{2,74}{0,50}$$

$$t\ obs = 5,48$$

From the calculation, it was obtained that critical value of t-observed is 5,48 in the degree of freedom 44(Na-Nb-2).(more detailed can be shown in Appendix XII)

2. Testing Hypothesis

The hypothesis testing aimed at showing the result of the analysis. From criteria of the hypothesis , if $t\text{-}_{observed} > t\text{-}_{table}$ the hyphotesis was accepted. But if it-$_{observed} < t\text{-}_{table}$ the hypothesis was rejected.

Based on the data analysis , it was found that $t\text{-}_{observed}$ was higher than $t\text{-}_{table.}$ It means that there was significant effect of using Generating Interaction between Schemata and Text (GIST) strategy on students' achievement in writing narrative text. Thus, the altenative the hyphothesis (Ha) was accepted and the null hyphotesis (Ho) was rejected.

$t\text{-}_{observed} > t\text{-}_{table}$ (p =0,05) with df 44

5,48 > 2,02 (p = 0.05) with df 44

B. Discussion

In the theory Generating Interaction between Schemata and Text (GIST) strategy was explained as a strategy show students to generate their schemata to build the ideas of the text. This interaction is supposed to happen between the shemata, that is the best experiences and background knowledge of the students and the text they will read.This strategy can facilitate students writing because in writing process students are requared to generate interaction between schemata and text likewise in reading process.

Based on the data analysis it is found that students which are thought with Generating Interaction between Schemata and Text (GIST) strategy gave improvement in their score. In experimental group, the highest score is significantly improve from pre-test to post-test that is in different of 15 (70-85). While in control group, which students are thought without using GIST strategy, the highest score is not significantly improved that is in different of 5 (55-65).