CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter presents the result of the findings in the fields and to find out any differences between the use of guiding question technique and traditional technique in teaching writing among students year X at SMK NU Lamongan. In this study, quantitative method used that measured by t-test formula that applied to calculate the result of pretest and posttest from experimental and control group. This chapter divided into three subheadings, they are: data presentation, hypothesis, and discussion. Data presentation covers the result of pretest of experimental and control group

A. Data Presentation

This study was conducted to find out whether there was significant difference between the student who are taught using guiding question technique and those who are not taught by using guiding question technique. The data collected from the students' pretest and posttest test score. The post test was administered after the treatment to both experiment and control groups. Before that, the researcher was administered pretest for all the students. The result of pretest was given information that the students of X APK 1 and X APK 2 have similar ability in English writing skill.

1. The Result of Pretest of Experimental and Control Group

The data was collected from two groups. The experimental and control groups. The pretest was administered before guiding question technique was implemented in experimental group while pretest was administered before traditional technique implemented in control group.

Pretest was conducted on the Friday, 8th of June 2012. The pretest in experimental group was given on the third and fourth meeting, while the control group was given pretest on the first and second meeting. Pretest was administered directly by the English teacher, Mr.Syafi'i. He asked the students to describe "flash disk" consists of approximately 150-200 words (Appendix). The pretest was conducted to determine whether both groups of class X APK have same ability or not.

a. The Result of Pretest of Experimental Group

As the test has been proven to be a test, pretest was administered to the class X APK 1 at SMK NU Lamongan as experimental group in this research. There are 33 students in class X APK 1 has been following the pretest. The score of experimental group which was showed in five components: content, organization, vocabulary, language use and mechanic (Appendix). Then, the score of pretest of experimental group was assessed based on the ESL Composition. The mean score of experimental group can be seen in the following table:

Table 4.1

Components	Pretest of experimental group						
	Content	Org	Vocab	Lang.Use	Mech	Total	
TOTAL	612	461	442	440	134	2089	
Mean	18	13	13	13	4	63.3	

The Result of Pretest Of Experimental Group

The table showed that the sum of the pretest scores of control group was 2089. While, the mean of the pretest scores of the control group was 63.3. The mean gotten from counting the students score from five components (content, organization, vocabulary, language use and mechanic) and divided by numbers of students (33).

b. The Result of pretest of control group

The pretest also administered for class X APK 2 in SMK NU Lamongan as a control group. Where control group was not administered by guiding question technique after pretest was given. But they have been taught by the traditional technique has been attended by 32 students. The score of control group which was showed in five components: content, organization, vocabulary, language use and mechanic (Appendix). Then, the score of pretest of experimental group was assessed based on the ESL Composition also. The mean score of experimental group can be seen in the following table:

Table 4.2

Components	Pretest of control group						
	Content	Org	Vocab	Lang.Use	Mech	Total	
TOTAL	619	448	410	403	135	2015	
Mean	19	14	12	12	4	62.9	

The Result of Pretest Of Control Group

The table showed that the sum of the pretest scores of experimental group was 2015. While, the mean of the pretest scores of the control group was 62.9. The mean gotten from counting the students score from five components (content, organization, vocabulary, language use and mechanic) and divided by numbers of students (32).Some of them were poor in grammar and vocabulary it made them got difficulties in arranged the sentences into the good order.

The score of experimental group and control group can be seen as following table bellow:

Tabel:4.3

Group	Ν	Total	Mean
Experimental group	33	2089	63.30303
Control group	32	2015	62.96875

The Result of Pretest of Experimental and Control Group

Figure 4.1





In this table shows that the results of pretest of experiment group was 63.3 and the control group was 62.9. The score of pretest both group did not so different, and almost the same. It is means that students in classes X

APK 1 and X APK 2 have the same ability in writing English descriptive text. From the analysis of the pretest in experimental group and control group can be concluded that the students' of the two groups had equal ability before the treatments were given.

2. The Result of Posttest of Experimental and Control group

After giving pretest, the teacher taught writing to the experimental and the control groups. For the experimental group, the researcher presented the material of writing by guiding question technique and for control group taught without using guiding question technique and directly taught and explain about descriptive text. The posttest was attended by 65 students. There were 33 students from experimental group and 32 students from control group. After giving pretest, the researcher did the treatment twice to the experimental group and control group. The experimental group was taught by guiding question technique while control group was taught by traditional technique.

The posttest was conducted on June 22, 2012. Posttest in experimental group was conducted on the third and fourth meeting, while the control group was given pretest on the first and second meeting. Posttest was conducted to know the students' English writing ability of descriptive text after the implementation of guiding question technique.

a. The Result of posttest of Experimental Group

The data was gotten by giving posttest after implementation of guiding question technique to the experimental group. Posttest on the Experimental group was held on third and fourth meeting on June 22, 2012. Before posttest was given, the treatments were done twice on June 18, 2012 and June 22, 2012. The first treatment used "The Office Equipment" as the topic and the topic of second meeting was "Profession".

The score of posttest of experimental group which was showed in five components: content, organization, vocabulary, language use and mechanic (Appendix). Then, the score of posttest of experimental group was assessed based on the ESL Composition. The mean score of posttest of experimental group can be seen in the following table:

Table 4.4

Components	Posttest of experimental group						
	Content	Org	Vocab	Lang.Use	Mech	Total	
TOTAL	805	571.5	524	565.5	233	2699	
Mean	24	17	15	17	7	81	

The Result of Posttest Of Experimental Group

Based on the table above, it can be concluded that scores of posttest in experimental group got some improvement. The mean of posttest of

experimental group was 81. It is mean that mean score of experimental group increase about 18 point, from 63 to 81. It was gotten from the total of five components: content, organization, vocabulary, language use and mechanics then divided by the number of students (33). The students' mean of organizing their ideas in writing was 17. Based on the ESL composition profile, it is good to average. It is mean that students can organize their idea well but main ideas stand out, limited support, logical but incomplete sequencing. The mean of language use was 17 or fair to poor. In terms of mechanics, the means was 7. According ESL composition it is excellent to very good. The students have few errors of spelling, punctuation, and paragraphing. Beside that, the mean of content is in range 22-26. It is means that the students sure knowledge of subject. In conclusion, the scores of each component got some improvement.

b. The Result of posttest of control group

Posttest was also given to the class X APK 2 at SMK NU Lamongan as a control group. The control group was not given the treatment by guiding question technique. The teacher was taught by traditional technique. In traditional technique the teacher gives the material to the students besides on the explanation and book. The posttest was attended by 32 students at the first and the second meeting on June 22, 2012. The data of posttest of control group was analyzed based on the five components: content, organization, vocabulary, language use and mechanic. The result of posttest of control group can be seen in the following table.

Table 4.5

Components	Posttest of control group						
	Content	Org	Vocab	Lang.Use	Mech	Total	
TOTAL	655.5	456.5	465.5	543	146.5	2267	
Mean	20	14	14	16	4	70	

The Result of Posttest Of Control Group

On the contrary, the posttest of control group had not improved significantly as the experimental group. From the table above it can be seen that the students' English writing mean score of pretest of control group was 70,8. The students' means of organizing their ideas in writing was 14. Based on the ESL composition profile, it is good to average. Moreover, the mean of language use and vocabulary was fair to poor. In terms of mechanics, the means was 4. According ESL composition it is good to average. It is means that there were many students did not mastered the technique of writing well as occasional, spelling errors, punctuation, capitalization, paragraphing but meaning not obscured. In conclusion, the mean of each component above had not improved in terms of vocabulary and language use. It did not improve significantly. They just increase one or two point in posttest.

From the data above, it can be concluded that class X APK 1 as control group did not got some improvement significantly. The differences between pretest and posttest mean scores was about 8 point, from 62 to 70. It is lower than experimental group. The result of the posttest score and mean score of experimental and control group were presented in following table:

Table: 4.6

The Result of Posttest of Experimental and Control Group

Group	n	Total	Mean
Experimental group	33	2699	81,7
Control group	32	2267	70,8

Figure 4.1



Chart of Posttest Score and Mean in the both of Groups

From the table above it can be seen that the mean score of experimental group is 81.7 and the mean score of control group is 70,8. The results of the posttest showed that there were differences in mean score between experimental group and control group. It means that the students of the two groups had different of ability after the treatment **was given**. Students' score in experimental group were increasing. It briefly described in the chart above to see whether yes or not, the experimental group to improve English writing ability of descriptive text.

B. The Data Analysis

After collecting data by giving pretest and posttest from experimental and control group, then the data was analyzed by calculated mean of each group. The researcher calculated the different mean of posttest both groups using t-test to know the result significant or not. T-test was a tool that was used for comparative hypothesis of two sample test if the data was on the interval or ratio scale¹. T-test was aimed to compare whether the mean score of posttest both groups were significantly different or not. Before that, the researcher was did normality test and homogeneities test. The normality test was used to check whether the posttest score of experimental group and control group were normally distribution or not. While homogeneity test was

¹ Nanag Hartono, *Metode Penelitian Kuantitatif* (Jakarta:PT Raja Grafindo Persada, 2011) 171

used to calculate the homogeneity of variance of both experimental and control group posttest score.² The procedure is as follows:

1. Normality Test

The normality test was used to check whether the posttest score of experimental group and control group were normally distribution or not, the following steps are:

a. Determine the limitation of interval class, the formula is,

The long interval class	bigest data-smallest data		
The long interval class	6 (the number of interval class)		
	$=\frac{90-59}{6}$		
	$=\frac{31}{6}$		
	= 5,18 ≈ 6		

b. Arrange into a frequency distribution table

Table 4.7

The Result of Normality Test Table

Interval	fo	f_h	$f_0 - f_h$	$(f_0 - f_h)^2$	$\frac{(f_0 - f_h)^2}{f_h}$
59 - 64	4	2	2	4	2
65 - 70	11	8,5	2,5	6,25	0,7
71 – 76	19	22	-3	9	0,40

² Zaenal Arifin, Metodologi Penelitian Pendidikan (Suranaya: Lentera Cendikia, 2009) 123

77 - 82	16	22	-6	36	1,6
83 - 88	12	8,5	3,5	12,25	1,4
89 - 94	3	2	1	1	0,5
Total	65	65	0		6,6

Explanation:

- f_0 = frequency / the number of data from the result of pretest
- f_h = the number / frequency of the expected (percentage area of each field multiplied by n)

 $f_0 - f_h$ = the differences between f_0 and f_h

- c. Calculate f_h (the frequency of the expected)
- d. Calculate f_n , based on the percentage area of each field in normal curve, than multiplied by the number of data from the result of pretest (the number of individuals in the sample). Number of individuals in the sample = n.
 - The first line : 2,7 % x 65 = 1,755 become 2
 - The second line : 13,53 % x 65 = 8,7945 become 8,5
 - The third line : $34,13 \% \ge 65 = 22,1$ become 22
- The fourth line : 34,13 % x 65 = 22,1 become 22
- The fifth line: 13,53 % x 65 = 8,7945 become 8,5

- The sixth line: $2,7 \% \times 65 = 1,755$ become 2
- e. Include the value of f_0 to the table columns f_h , and than calculate the value

of $(f_0 - f_h)^2$ and $\frac{(f_0 - f_h)^2}{f_h}$

- f. X table is 11.070 (Appendix)
- g. Conclusion

Chi square value was 6.6 and Chi square table was 111.070 with df= 5, and alpha 0.05. It could be concluded that the data from the posttest of experimental and control group were normally distributed as chi square value (6.6) was smaller than the table chi square table (11.070).

2. Homogeneity test

The homogeneity test was used to check whether the posttest score of experimental group and control group have same variants or not. The following steps of homogeneity test as followed:

a. Find the biggest variant score and the smallest variant score, the formula is:

$$F_{hit} = \frac{S_1^2}{S_2^2} = \frac{26,120}{30,110} = 0,668$$

Explanation:

 S_L^2 = the larger of variance S_8^2 = the smaller of variance

b. Find the F score

$$F = 0,01 (32/31) = 1,82$$

c. Conclusion

From the calculation above, F score smaller than the F table. So the score of posttest both group was homogeneity

3. T test

The result of pretest and posttest from experimental and control group was analyzed by normality and homogeneity test. The result above showed that these data were on interval or ratio scale. After the test of normality and homogeneity test, the next step was to analyze the data by t-test. The aim was to know whether there are differences between experimental group who was taught by guiding question technique and control group who was taught by traditional technique.

The result of posttest of experimental and control group was analyzed by t-test formula, before it was done the standard deviation and variant both of group was calculated first by SPSS. This table below presented the result of calculation.

Table 4.8

Contro	ol class	Treatment class		
Subject	Score	Subject	Score	
1	70	1	83	
2	69	2	80	
3	65	3	78	
4	71	4	79	
5	71	5	80	
6	72	6	81	
7	80	7	88	
8	59	8	87	

The Result Calculation of Standard Deviation (sd) and Varian (v)

9	79	9	82
10	71	10	82
11	74	11	82
12	65	12	90
13	66	13	82
14	72	14	77
15	69	15	84
16	68	16	73
17	69	17	88
18	63	18	76
19	63	19	77
20	73	20	88
21	76	21	90
22	70	22	87
23	75	23	76
24	64	24	76
25	73	25	77
26	75	26	78
27	76	27	87
28	76	28	86
29	76	29	88
30	74	30	89
31	78	31	73
32	65	32	70
		33	85
Mean	$\bar{X}_{1} = 70,594$	Mean	$\bar{X}_{2} = 81,788$
St.deviation	$S_1 = 5,111$	St.deviation	$S_2 = 5,487$
Variants	$S_1^2 = 26,120$	Variants	$S_2^2 = 30,110$

Next, the students' score of posttest calculate using the formula bellow:

a. To test the result of posttest between experimental and control group. The formula is:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$
$$= \frac{70,594 - 81,788}{\sqrt{\frac{26,120}{32} + \frac{30,110}{33}}}$$
$$= \frac{-11,194}{\sqrt{0,816 + 0,912}}$$
$$= \frac{-11,194}{\sqrt{1,728}}$$
$$= \frac{-11,194}{1,314}$$
$$= -8,519$$

b. Determining alpha (a)

α = 0,05

c. After all data calculate, the number of degree of freedom calculates. The formulas is:

$$df = (N1 + N2) - 2$$

= (33 + 32) - 2
= 65 - 2
= 63

From the calculation of the data above, it was found that standard deviation of the experimental group was 5.4 while the control group was 5,1. T-value comparing with t-table distribution with significant 0,05 and degree of freedom (df) 63. It was found that t-table was -2.000 while the result of t-value was -8.519.

So it was clear that there was significant different between the students' English writing achievement who were taught by guiding question technique and who were not taught by guiding question technique. In other words, the use of guiding question technique to improve the students' English writing achievement of the tenth year of SMK NU Lamongan in the experimental group was effective than the control group who were not taught by guiding question technique.

4. Hypothesis Testing

To test the hypothesis was compare t-score with t-table. Before that, firstly the researcher look for the degree of freedom (db) by the formula db= n1 + n2 - 2 = 32 + 33 - 2 = 63. Then, the score of db was assessed on a table by significance level 5%. T-table score was 2.00.

It can be seen that the t-value < t table at a significance level of 5%. It was mean that alternative hypothesis was accepted and approved or rejected the null hypothesis. So, there was improvement English writing achievement between experimental group who was taught by guiding question technique and control group who was taught by traditional technique or old technique.

The mean score of posttest of experimental group was 81.7 and control group was 70.5. It was mean that mean score of experimental group better than mean score of control group. So the question guiding technique is more effective than traditional learning in teaching writing text among students class X APK at SMK NU Lamongan.

C. Discussion

This section was intended to discuss the research findings. All data collected from the research instrument that has been provided basic information about the object in this research. This study was about the effectiveness of guiding question technique in teaching writing. Guiding question was used as a new technique in teaching writing. This study was quasi experiment method that compares two techniques in teaching writing. The guiding question was a new technique and traditional technique was old technique or usual technique used by teacher in teaching writing text both classes. Class X APK 1 as experimental group that has been taught by guiding question technique and class X APK 2 as control group that has been taught by traditional technique.

This study was conducted over four meeting. The first meeting was pretest that has been attended for both classes X APK 1 and X APK 2. The second and third meeting was treatment, the use of guiding question technique in experimental group and traditional technique in control group was conducted with the same theme. Fourth meeting was posttest. This was to know the students' English writing achievement after the implementation of guiding question technique. This test was conducted on two classes that were X APK 1 as experimental group and X APK 2 as control group.

The result of students' achievement could be seen from pretest and posttest result. From the pretest, the mean score of pretest of experimental group was 63.3 and mean score of control group was 62.9. It means that the students of the two groups had similarity skill before the treatment was given. From the pretest results could be concluded that students had difficulty in describing the object and organizing their idea in writing. The pretest and posttest was attended by 65 students. There were 33 students from experimental group and 32 students from control group.

On the other hand, the result of posttest both groups show different value. The mean score of experimental group was 81.7 and mean score of control group was 70.5. The experimental achieved higher improvement than control group. It means that guiding question technique more effective than traditional technique.

By the application of guiding question technique, students were motivated being an active in mastering English well by improving their composition. Furthermore guiding question technique made the students feel that writing was not a difficult activity. In other words, guiding question technique helps the students organize their idea when they were writing. The result of this research shows that guiding question technique could help the English teacher in teaching writing. It could be conclude that teaching English writing by using traditional technique make the students feel bored and did not interest to the learning process. Unfortunately, writing was felt quite difficult to be taught. So, the teacher needs a new strategy a new strategy that involves students actively in the learning process. So students do not just shut up and accept the explanation from the teacher only. A teacher must be able to make learning interesting and fun.