CHAPTER III

METHOD OF THE RESEARCH

A. Research Design

The design of the research was experimental research. Dealing with the statement, Creswell (2012:294) stated that an experimental design was the traditional approach to conducting quantitative research. This type research was quasi-experimental research. According to Creswell (2008:313), quasi-experimental research includes assignment, but not random assignment of participant to groups. This research involved two groups; they were control group and experimental group. Both of classes would be given pre-test and post-test. Meanwhile the experimental class would be treated by using Round Table technique but the control class was not.

Based on Cohen et al. (2007:276) the type of this research can be design as follows:

Table III.1
Quasi-experimental Research

Group	Pre-test	Treatment	Post-test
Experimental	RO_1	X	O_2
Control	RO_3	-	O_4

RO_1 = Pre-test to experimental group
RO_3 = Pre-test to control group
X = Receive treatment by using Round Table technique
O_2 = Post-test experimental group
O_4 = Post-test to control group
\- = Using conventional technique

B. Time and Location of the Research

This research was conducted from January 2017 to February 2017. This research was conducted at State Senior High School 2 Bangkinang Kota. It is located on JL. DR. A. Rahman Saleh no.55 Bangkinang Kota, Kampar Regency.

C. Subject and Object of the Research

The subject of this research was tenth grade students of State Senior High School 2 Bangkinang Kota in 2016/2017 academic year and the object of this research was the effect of using Round Table technique in teaching writing on students' writing narrative text ability.

D. Population and Sample of the Research

1. Population

The population of this research was tenth grade students of State Senior High School 2 Bangkinang Kota in 2016/2017 academic year. The total population of the tenth grade at State Senior High School 2 Bangkinang Kota was 324 students. They were divided into 10 classes, 5 classes were X MIA and 5 classes were X IIS.

2. Sample

The population was too large to be taken as sample. Pertaining to Hartono (2015:208), if the population more than 100 persons, so the sample would be taken between 10-15 % or 20-25% or more than it. So, the writer selected two classes to be taken as samples. The writer

took sample by using cluster random sampling. According to Gay and Airasian (2000:120) stated that sampling is the process of selecting a number of individuals for a study in such a way that they represent the larger group from which they were selected.

Cluster random sampling is most useful when the population is large on spread out over a wide geographic area. Based on explanation above, to find the sample, the writer used lottery by passing out small rolled paper marked by sequence name of the class. Then after passing out the paper, the samples of this research were X MIA 1 as experimental class and X MIA 2 as control class. Those were as the sample of the research by number 64 students.

E. Technique of Collecting Data

In this research, the writer used test to measure the students' writing narrative text ability. The writer used pre-test and post-test for collecting data. Pre-test that was used to know students' writing narrative text ability before doing treatment. In pre-test the students wrote a narrative text based on the topic for 45 minutes. After that, the writer began to do the treatment by using Round Table technique in teaching writing narrative text and gave an exercise of writing. At the last meeting the writer gave post-test for students. Post test was used to know the effect of using Round Table technique to got the data about students' writing ability.

The students' ability in writing narrative text was measured by using writing assessment used by the English teacher in State Senior High

School 2 Bangkinang Kota. The criteria of assessment would be measured by using 5 components. They were content, organization (generic structures), vocabulary, language features (grammatical features), and mechanics (spelling and punctuation). Each component had 1 as minimum score and 4 as maximum. The maximum score for all components was 20. To get the students' score, the writer used formula as follows:

$$\text{Final Score} = \frac{\text{Total Score}}{Maximum\ \ Soore}\ x\ 80$$

According to Arikunto (2009:245), there were 5 components to categorize students' writing ability. Each components had 20 as the highest score and the total of the components was 100. In this research, the writer took 80 as the highest score. Then the score was interpreted into following category:

1. 80 - 100 = A (Very Good)
2. 66 - 79 = B (Good)
3. 56 - 65 = C (Enough)
4. 40 - 55 = D (Less)
5. 30 – 39 = E (Bad)

1. Validity of the Test

According to Fraenkel and Norman (2006:150-152) stated that the term of validity in the research refers to appropriateness, correctness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect.

Validity depends on the amount and type of evidence there is support the interpretation writers wish to make concerning data they have collected. There are three types of validity. They are content validity, criterion-related validity, and construct validity. In order to know the validity of writing ability test, the writer used content validity.

Content validity is partly a matter of determining if the content that the instrument contains is an adequate sample of domain of content, it is supposed to represent. Content validity refers to the content and format of the instrument. How appropriate the content or format is. Thus, the writer gave the test based on the material that was studied by the students. The material of the test was taken from the textbook.

2. Reliability of the Test

Pertaining to Gay and Airisian (2000:169), reliability is the degree to which a test consistently measure whatever it is measuring. The testing of students' writing ability must have reliability in order to get the same scores obtained when the test done more than once. In reference to Brown (2003:20), a reliable test is consistent and dependable. So reliability here is used to measure the quality of the test score and consistent of the test.

In this research the writer used the rater agreement type of reliability concerned with inter rater reliability as the scores are given by two raters. Then, inter-correlation of the raters was used to finding

the reliability of the test. The writer used *Pearson Product Moment* to obtain the correlation between scores from rater 1 and rater 2. Based on Henning (1987:85), to know the level of correlation through *Spearman-Brown Prophecy Formula* as follows:

$$r_{tt} = \frac{nrA,B}{1+(n-1)rA,B}$$

where:

r_{tt} = inter-rater reliability

n= the number of raters whose combined estimates the final mark for the examines

r_{AB} = the correlation between raters, or the average correlation among all raters if there are more than two

In reference to Arikunto (2009:75) the following table is category of reliability test used in determining the level of reliability of the test.

Table III.2
The Level of Reliability

No.	Reliability	Level of Reliability
1.	0.0 – 0.200	Very Low
2.	0.21 – 0.400	Low
3.	0.41 – 0.600	Sufficient
4.	0.61 – 0.80	High
5.	0.81 – 1.00	Very High

The following table described the correlation between scores given by rater 1 and rater 2 by using *Pearson Product Moment* formula through SPSS 17 version.

Table III.3
Correlations

		Rater1	Rater2
Rater1	Pearson Correlation	1	.646**
	Sig. (2-tailed)		.000
	N	32	32
Rater2	Pearson Correlation	.646**	1
	Sig. (2-tailed)	.000	
	N	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

From the table above, it could be seen that the coefficient of correlation product moment $r_{obtained}$ (r_o) between scores given by rater 1 and rater 2 is 0.646. Before comparing it to r_{table} (r_t), the writer obtained the df (degree of freedom).df= N-nr

df : degree of freedom

N : number of cases

nr : number of correlated variable

df= 32-2 = 30

After obtaining the degree of freedom (df) = 30, the coefficient product moment $r_{obtained}$ was compared to r_{table} either at level 5% or 1%. At level 5% r_{table} is 0.361; while at level 1% is 0.463. Based on $r_{table,}$ it could be analyzed that (r_o) was higher than (r_t) either at level 5% and 1%. It was clear that 0.361<0.646>0.463. So that, the writer concluded that H_o was rejected and H_a was accepted. It means that there was a significant correlation between scores given by rater 1 and

rater 2. In other words, the writing test was reliable. Then, r_{obtained} is adjusted by the *Spearman-Brown Prophecy* formula below:

$$r_{tt} = \frac{nr_{A,B}}{1 + (n-1)r_{A,B}}$$

$$r_{tt} = \frac{(2)(0.646)}{1 + (2-1)(0.646)}$$

$$r_{tt} = \frac{1.292}{1 + 0.646}$$

$$= 0.7849 = 0.78$$

Based on the calculation above, the writer obtained that inter rater reliability was 0.78. So, it could be concluded that the reliability of writing test included was high level.

3. Normality of the Data

The technique of collecting data was using test. The data analyzed by using statistical analysis. In analyzing the data, the writer used scores of post-test of experimental and control classes. This score was analyzed statistically. In order to found the answer, the writer analyzed the data by using SPSS 17 as follows:

Table III.4
Tests of Normality

		Kolmogorov-Smirnov[a]		
	Group	Statistic	Df	Sig.
Score	1	.105	32	.200*
	2	.135	32	.149

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Hypothesis :

Ho (Null Hypothesis): Data is normally Distributed

Ha (Alternative Hypothesis): Data is abnormally Distributed

Testing criteria :

If probably (sig) > 0.05, H_a is Accepted

If probably (sig) < 0.05, H_o is Rejected

According to Priyatno (2012: 36) If the "Sig" column of either test is higher than 0.05, the data are normally distributed. From the table III.8 above, the significant value of post-test experimental and control classes were 0.200 and 0.149. Because of *sig* > 0.05 (0.200 > 0.05) and (0.149 > 0.05), the initial data of experimental and control classes were normally distributed. Therefore, the writer used independent sample T-test.

4. Homogeneity of the Data

According to Siregar (2013:167), the purpose of homogeneity test is to know whether the object of the research has the same variance or not. The method used in this test was comparing the biggest variance

with the smallest one. In this research, the writer assessed the homogeneity of the data by using SPSS 17 version. The result of the test as follows:

Table III.5
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	.629	1	62	.431
	Based on Median	.764	1	62	.385
	Based on Median and with adjusted df	.764	1	59.890	.385
	Based on trimmed mean	.630	1	62	.430

Based on the table above, the probability (sig) based on trimmed mean was 0.430. It was higher than 0.05 (0.430 > 0.05). It can be concluded that the data were homogeneous.

F. Analysis of the Data

In analyzing the data, the writer used students' post test score in experimental and control classes. This score was analyzed statistically. In this research the writer used these formulas:

1. Independent Sample T-test

According to Pallant (2007:232) suggested that an independent sample t-test is used to compare the mean score, on some continuous variable, for two different groups of subjects.

Hartono (2015:177) mentioned about independent sample t-test also. He said that independent sample t-test is used to find out whether there is or not significant difference between two variables.

In this research, the data were analyzed by using SPSS 17 version. The significant value was employed to see whether there is or not a significant difference among the mean scores both of experimental and control classes. Statistical hypothesis:

H_0 = sig. (2 tailed) > 0.05 or t_0 (t_{obtain}) < t_{table}

H_a = sig. (2 tailed) < 0.05 or t_0 (t_{obtain}) > t_{table}

2. Effect Size

According to Pallant (2005:173,175) effect size is the strength of the difference between groups or the influence of independent variable. There are a number of different effect size statistic, the most common of which are eta squared. Eta squared can range from 0 to 1 and represents the proportion of variance in the dependent variable that is explained by the independent (group) variable.

The formula of eta squared is as follows:

$$\eta^2 = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

Where:

η = eta squared

t^2 = t_o

N = number of students

The guidelines proposed by Cohen (1988:284-287) quoted in Pallant for interpreting these values are:

.01 = small effect

.06 = moderate effect

.14 = large effect