CHAPTER III

METHODOLOGY OF THE RESEARCH

A. Research Design

This research design was an experimental research design, because the purpose of this study is to identify cause-effect between both of the variables, whereas Nominal Group Technique (X) and Students' writing skill in procedure text (Y).

The relationship between both variables is shown in the table below:

Table 3.1
Research Design

Class	Treatment	Post-test
Experimental	X	Y
Control	Ø	Y

Note:

X: Treathment of Experimental Class

Ø: No treatment

Y: Post-test

This research consists of two groups: an experimental group and the control group. They were treated in different ways, the experimental group was taught by using Nominal Group Technique in their activities and the control group was taught by using Conventional Technique (cloze procedure). This experimental research was done in limited time (a month) and students were treated differently, the material given, length of the time and the teacher was same.

Creswell, John (1994: 132) says that quasi-experimental design is the experimental and control classes are selected by random assignment. Both classes take a posttest in order to know the students' writing competence after giving a different treatment.

The design of this research can be seen in this formula:

Group A O ————X———— O

Group B O ——————————O

Where:

A = Experimental group

B = Control group

X = Teaching by using Nominal Group Technique

O = Post-test for Experimental Group and Control Group

B. Population and Sample

1. Population

According to Gay (1987: 102), population is the interesting group for the writer, the group that wants to know the result of the study inductively. It means that population is the total number of the subject on a research. Whereas, the population of this research is the students of IX grade at MTsN 4 Pesisir Selatan. This subject is chosen because the writer is going to apply Nominal Group Technique to support the teacher's technique in teaching English. There are 185 students in total population for this grade. The distribution of students is stated in the following table.

Table 3.2

The Total of Students class IX at MTsN 4 Pesisir Selatan

No	Class	Total
1	IX. A	30
2	IX. B	32
3	IX. C	32
4	IX.D	31
5	IX. E	33
6	IX. F	27
Total Siswa		185

2. Sample

The sample was taken by cluster random sampling. Gay (1987:110) says that cluster random sampling was sampling in which group, not individuals, are randomly selected. The researcher was used this sampling technique because it is hard to regroup the existed group. The samples of this study was IX.B as the experiment class and IX.C as the control class, The selected samples were assumed homogenous since the students were classified based on a same average knowledge and score by the school, By Flapping a coin, one of two groups has been randomly chosen as experimental group and the other as the control group. Then, number of all sample are 64 students. 32 students are in the experimental group and 32 students are in the control group. Dealing with the sample size of experimental research, 64 students were representative enough to be the sample of this research. To get the representative sample of this research, the writer used Cluster Random Sampling. The researcher did these steps:

a. Researcher collected the examination score data from all of students at class IX.

b. The researcher looking for the normality of those classes whether those classes come from normal distribution or not.

Table 3.3
Tests of Normality

	Class	Kolmogrov-Smirnov			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Score	IX.A	.236	30	.000	.877	30	.003
	IX.B	.181	32	.009	.942	32	.002
	IX.C	.139	32	.116	.935	32	.312
	IX.D	.156	31	.053	.941	31	.007
	IX.E	.182	33	.007	.907	33	.008
	IX.F	.142	27	.169	.949	27	.200

***.** This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Based on the table, can be seen that the significance or probability score just two classes (IX.B and IX.C) bigger than 0.05 in both Kolmogorov-Smirnov and Shapiro-Wilk.

c. Test of Homogeneous Variances

After do the normality test, then researcher analyzed the homogeneous variation test. This test had an objective as to know the sample homogeny or not. This test used SPSS with test, if the data significant or the data more than 0.05 it means the data was homogeneous.

Table 3.4
Test of Homogeinity of Variance

		Levene Statistic	Df1	Df2	Sig.
VAR00001	Based on Mean	2.816	5	179	.018
	Based on Median	2.781	5	179	.019
	Based on Median and with adjusted df	2.781	5	161.234	.019
	Based on trimmed mean	2.822	5	179	.018

The decision of column *test of homogeneity of variance* shown that p-value 0.001 is smaller than 0.05, so it can be concluded that all the class were homogeneity.

d. After researcher analyzed the homogeneity and normality test, researcher found all classes was homogeny but there was class was not normal. Then, sample of this research consisted of two classes: an experimental class and control class. Researcher was chosen those normal and homogeny classes as sample in this research. In determining experimental class and control class, the researcher used flapping a coin. So, the researcher got IX. B as Experimental class and IX. C as Control class.

C. Place and Time of Research

This research conducted in MTsN 4 Pesisir Selatan of academic year 2018/2019. MTsN 4 Pesisir Selatan had six classes for each grade. The treatment conducted at the class IX students of first semester.

D. Instrument

Instrument was a tool to collect the data; it was used to get the accurate, complete and systematic research result from the sample. The instrument of this research was test. The test is written test and the researcher makes the test. The test was given at the end of the meeting (post-test). Test used to measure students' skill or to know significant effects from the application of Nominal Group Technique in writing, because through using the test researcher known students' score by mastering all component in writing. The researcher used Jacob's criteria (1981:90) in scoring the students' writing product assessed based on five components that are; content, organization, vocabulary, language use, and mechanics.

The written test was done on treatment and post-test toward two classes (experimental and control classes). The students of experimental class was taught through Nominal Group Technique and the students of control class only taught through conventional.

Table 3.5
Sample of Instrument in Giving Writing Scores

1. Post-test

No. of Students	Aspects					
	C (30)	O (20)	V (20)	LU (25)	M (5)	tal 00)
1						
2						
↓						
32						

E. Procedure of Doing Research

To obtain the achievement in this research, the researcher divided the procedure of this research into three points, they are:

1. Preparation

The researcher was collected the data that related with preparation steps:

a. Determining the research place and time

b. Determining the population and sample

c. Preparing the lesson plan arranged by curriculum or syllabus for six meeting to experimental and control class

d. Explain to the students about the planning in learning process.

e. Preparing the post test

2. Aplication (process)

Table 3.6
Treatment procedure of teaching writing in the classroom

No	Teacher Activity	Students Activity
1.	**Pre-teaching Activity (10 Minutes)** 1. Greeting 2. Praying 3. Check attendance list 4. Teacher gives apperception and motivation 5. Review the last material 6. The teacher tells about the purpose of the lesson plan	1. Students answer the teacher's greeting 2. Students are praying 3. Students listen when the teacher checks attendance list 4. Students listen the teacher gives apperception and motivation 5. Students listen when the teacher reviews the material 6. Students listen when the teacher tells about the purpose of learning
2.	**Main Activity (60 Minutes)** **1. <u>Observation</u>** a. The teacher provides various examples of topic about recipes and manuals, short and simple, in accordance with the context of their use. b. The teacher explains the language features, social functions, generic structure, tenses used and matters related to the procedure text. **2. <u>Questioning</u>** a. Teacher guide the students asks question. b. The teacher asks other students who can answer questions from their friends.	a. Students read / listen to various examples of prescription and manual drawings, short and simple, in the context of their use. b. Students observe to the teacher who explained the language features, social functions, generic structure, tenses used and matters relating to the procedure text. a. Students ask for differences between kind of procedure text. b. The other students answered the questions posed by their friends. c. After being assisted by

	c. Teacher helps the students who answer questions from their friends d. The teacher straightens the answers to the student's questions and answers the questions. **3. <u>Exploration</u>** a. Teacher tells the students about the role of Nominal Group Technique. **4. <u>Association</u>** a. The teacher opens the session and explains to the students about the division of the group and said topics to be discussed (procedure text). b. The teacher gets every student to write down the topic of the procedure text that they know by individuals. c. The teacher instruction the students to make the idea based on the topic by themselve without being influenced by others in the group. **5. <u>Communicating</u>** a. The teacher instructions students to discuss about their idea concerning the	the teacher, students answer questions with confidence and responsibility. a. Students observe the teacher tells about the technique a. The students observe the teacher opens the session, explains about the division of the group and said topics to be discussed (procedure text). b. Students try to write by self (individually). c. Students start to make the sentences based on the topic by themselve without being influenced by others in the group. a. The students discuss about their idea concerning the topic of

	topic b. The teacher gets the students to choose the ideas of the most important and in accordance with the topic of learning about the procedure text. c. Teacher asks the the students to discuss about ideas they have chosen and went to work on the topic learning.	the procedure text. b. The students choose the ideas of the most important and in accordance with the topic of learning about the procedure text. c. The students discuss about the ideas they have chosen and went to work on the topic of learning.
3.	**Post-Activity (10 Minutes)** a. Teacher gives feedback to the teaching process. b. the teacher concludes what has been learned. c. Teacher informs the next material. b. Teacher close the class	a. Students listen teacher give feedback. b. Students listen to teachers conclude lessons. c. Students pay attention to information for the next meeting.

3. Finishing (Evaluation)

   a. Giving post-test to experimental and control class.

   b. Processing data.

   c. Taking conclusion from technique of data collection.

F. Technique of Data Collection

1. Test

The data of this research was the student's score in post-test. The researcher gave treatment to experiment and control class. The classes conducted for six meetings. And the material was taught is *procedure text* by using Nominal Group Technique in experimental

class and conventional Technique. In this section, the researcher prepares an instructional design for each meeting.

At the end of this research, the researcher gave the post-test to students in experimental and control class. Post-test was the process of giving the test after giving the treatment. It was aimed to find out the effect of treatments to students' writing score.

2. Scoring

Researcher used scoring technique of Jacob (1981: 92) in this research to assess students' writing.

Table 3.7
Weighting Table for Writing

No	Rating Quality	Score				
		C	O	V	LU	M
1	Excellent to very good	27-30	18-20	18-20	22-25	5
2	Good to average	22-26	14-17	14-17	18-21	4
3	Fair to poor	17-21	10-13	10-13	11-17	3
4	Very Poor	13-16	7-9	7-9	5-10	2
5	Max Score	30	20	20	25	5

G. Technique of Data Analysis

Technique of data analysis in this research used statistical procedure and supported by SPSS program. It gave a way to analyze the differences between the groups. To analyze the students' score in post-test, the researcher used T-test formula. In this case, T-test means a statistical procedure used to determine whether there was any significant effect of the mean score between the two sets of tests. The purpose was to see difference of students' writing Skill between experimental class and control class.

In analyzing students' test score, some steps were done before analyzing the different mean by using t-test formula as follows Sudjana (2005:67, 93, 239):

T-test formulas develop which was presented as follow:

I. This formula was used to decide mean of students' test score in experiment and control class:

$$\bar{X}_1 = \frac{\sum F_1 X_1}{\sum F_1} \qquad \text{(Experiment class)}$$

$$\bar{X}_2 = \frac{\sum F_2 X_2}{\sum F_2} \qquad \text{(Control class)}$$

II. This formula was used to decide standard deviation of experiment class

$$S_1^2 = \frac{n_1 \sum F_1 X_1^2 \ (\sum F_1 X_1)^2}{n_1(n_1 - 1)}$$

III. This formula was used to decide standard deviation of control class

$$S_2^2 = \frac{n_2 \sum F_2 X_2^2 \ (\sum F_2 X_2)^2}{n_2(n_2 - 1)}$$

The formula of T-test was followed by Sudjana, (1996: 239)

$$t = \frac{\bar{x}_1 - \overline{x_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

With $S^2 = \frac{(n_1+1)S_1^2 + (n_2+1)S_2^2}{n_1+n_2-2}$

Where:

t = the value of t calculated

X_1 = mean score of experiment class

X_2 = mean score of control class

n_1 = the number of subject of experiment class

n_2 = the number of subject of control class

S_1^2 = standard deviation of experiment group

S_2^2 = standard deviation of control group

The T_{table} uses to see whether there was any significant effect between the mean score of post-test experiment class and control class. The value of $T_{calculated}$ was consulted with the value of T_{table}. The data was analyzed by using simple regression for hypothesis with 5 % (=0, 05) of significance level and the value of T-table of the degree of freedom (N1-1). If the value of $T_{calculated}$ was bigger than the value of T_{table}, the hypothesis was accepted. On the contrary, if the value of the $T_{calculated}$ was smaller than the value T_{table}, the hypothesis was not accepted.