CHAPTER III

RESEARCH METHOD

The methodology of the research is very important in every research as a guideline to attain the objective of the study. This chapter provides information about methodology of research that the writer applies in this study. It covers research design, population and sample of the study, variable of the study, data collection method, research instrument, validity, reliability, normality and homogeneity testing.

A. Research Design

This study belonged to experimental research. Experimental research is a scientific investigation in which the researcher manipulates one or more independent variables, controls any other variables, and observes the effect of the manipulates on the dependent variables. The goal of experimental research is to determine whether a causal relationship exist between two or more variables.

Experimental research is classified into: pre-experimental design, true experimental design and quasi experimental design. Pre-experimental designs do not have random assignment of subjects to group or other strategies to control extraneous variables. True experimental designs (also called randomized designs) use randomization and provide maximum control of extraneous variables. Quasi-experimental designs lack randomization but employ other strategies to provide some control over extraneous variables.
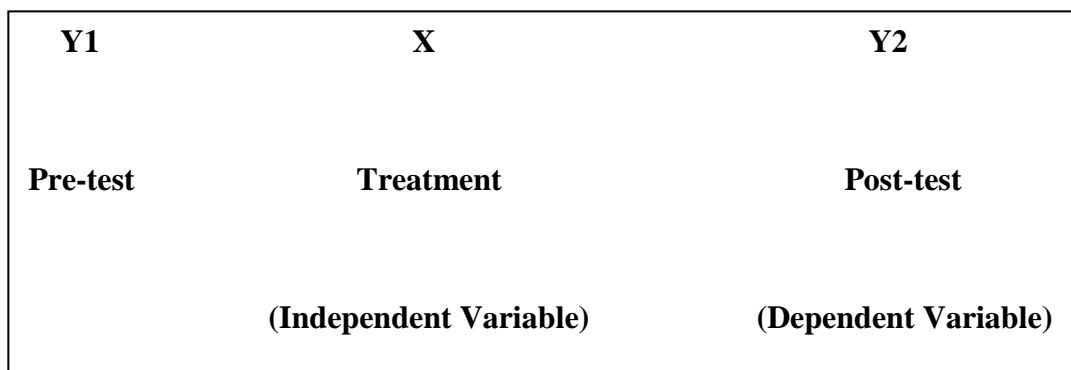
This study employed pre experimental research design in the form of pre-test and post-test design with quantitative approach. This study was classified as pre experimental design because it had no control variable. In this study, the researcher just put one group and used pre-test and post test to see the result of the test. The subject was not randomized, and there was not pre-treatment.

According to Sugiono (2008:82), pre-experimental design is not the real experiment in which there is the other independent variables can influence the dependent variable. In this study, the researcher used pre-experimental design with one group pre- test and post-test design that usually involves three steps as follow:

1. Administering a pre-test to measure the dependent variable

2. Giving the experimental treatment to subjects

3. Administering a post-test to measure the dependent variable.

Differences attributed to application of the experimental treatment are then evaluated by comparing the pre-test and post-test scores.

Table 3.1   : A diagram of one group pre-test and post-test design:

Y1	X	Y2
Pre-test	Treatment	Post-test
	(Independent Variable)	(Dependent Variable)

The procedures of experimental research that use one group pre-test and post-test design applied in this study are:

1. Administering a pre-test to measure writing achievement of ninth grade students at SMP Terpadu Darur Roja' Selokajang Srengat Blitar before being taught by using video to write procedure text.

2. Giving treatment by using video to write procedure text.

3. Administering a post-test to measure writing achievement of ninth grade students SMP Terpadu Darur Roja' Selokajang Srengat Blitar after being taught by using video to write procedure text.

4. Comparing the scores of pre-test and post-test.

In this research, the researcher wanted to know the effectiveness of using video in teaching writing by conducting pre-experimental research. Pre-test and post-test were given to measure if there were significant difference scores before and after the students being taught by using video.

B. Population, Sample and Sampling

1.Population

Population is the object or subject that has some qualities and characteristic those are chosen to be learned and to be concluded by researcher (Sugiono 2013:117). The unit of population is whatever that is counted. In this study, the population was all the ninth grade students of SMP Terpadu Selokajang Srengat Blitar in the first semester.

The ninth grade of SMP Terpadu Selokajang Srengat Blitar consists of three classes. Those are class IX-A – IX-C. Total of population consist of 95 students.

2. Sampling

Sampling is technique to choose sample that the number of sample is appropriate to collect the data source by considering the nature and the distribution of population so that gotten the representative sample (Margono 2003: 103). Sugiyono (2013) also states "sampling is technique to take sample". The number of sample taken should appropriate to collect the data. The way to get the representative sample is by considering the nature and the distribution of population. From this statement, it can be defined that sampling is the process of selecting a number of individual as a sample whom will represent the population.

Generally, sampling is divided into two types; they are probability sampling and non-probability sampling. Probability sampling involves sample selection in which the elements are drawn by chance procedure. The main character of probability sampling is that every member of element of the population has known probability of being chosen in the sample. Non-probability sampling includes methods of selection in which elements are not chosen by chance procedures. It means that each element has zero chance to be selected as sample.

In this research, the researcher chose one kind of non-probability sampling that is purposive sampling. Purposive sampling is a technique of taking sample by some consideration (Sugiyono, 2013:124). In purposive sampling, also referred to as

judgment sampling, sampling elements judged to be typical or representative are chosen from the population (Ary et al, 2006:156). In other words, the researcher should be sure that the sample is representative and suitable with the purpose of research since it was impossible to take the sample randomly. The researcher decided to choose IX-A classes that consist of 30 students as the sample. The consideration of choosing IX-A as the sample was because in applying the experimental stage, the samples must not be to "good" and too "bad" in their writing achievement. It's intended to reduce the extraneous variable may appears since the design is pre-experimental research without control group. And also, according to the English teacher, class A was assumed to be homogenous so that is why the researcher decided to choose that class.

3. Sample

Arikunto (2010:172) states sample is a part of the population that is being observed. The sample has representative of the population. The sample of this research was the ninth grade students of SMP Terpadu Darur Roja' Selokajang Srengat Blitar in class IX-A which consist of 30 students.

C. Variable of the study

According to Ary (2002), a variable is an attribute that is regarded as reflecting or expressing some concept or construct. Variable is divided into two kinds. They are independent variable and dependent variable.

a. Independent Variable (X)

Independent variable is a variable is which is observer the side effect. Independent variable can appear and exist by itself without any other supported. It influences and gives special effects independent variable. Independent variable cannot stand by itself without dependent variable. In this study, independent variable is the using video (X) in teaching writing procedure text.

Description of treatment by using video (X) in teaching writing procedure text has many steps. The steps of treatment are mainly discussed as follow: In the first step, the researcher will explain about video use writing procedure text and about procedure text. Then, the researcher will give a material about procedure text. Researcher will add explanation about the material in the classroom also. After that give some questions about the material that they do not understand and the researcher will give feedback. The researcher will give an example about procedure text.

Then, the researcher will give an explanation about writing process. She gives example how to start writing, drafting, and revising until finish to make writing. The researcher believes that the students will know and understand to make a good writing.

Next steps, the researcher will give an example of making grammatically correct sentence and also explain simple past tense that will use in the procedure text. The researcher gives instruction to the students to write procedure text that they know before. The researcher believes that this activity can improve grammatically students

in writing procedure text. Because of the students will practice more to write a grammatically correct sentence.

Then, the researcher will give some topics about how to make something, for examples: How to Make Milk Tea, How to make coffee and How to Make Omelet. The researcher will ask the students to write a paragraph about one of these topics and the researcher asks the students to give the identification about generic structure of procedure text. The researcher believes that the students will more creative, interesting, and motivating to write. Finally, the students can submit their writing and the researcher will give a score, corrections, and feedback.

b. Dependent Variable (Y)

Dependent variable is the response or the criterion variable that is presumed to be influenced by the independent treatment conditions and any other. In this research the dependent variable is students' writing achievement in procedure text.

D. **Data Collection Method and Research Instrument**

1. **Data Collection Method**

Data collection method is a systematically and standard procedure used to collect data that is needed. Data of this study are in the term of number or scores. Those data were collected by employing one method of collecting data using an instrument that is a test. According to Djiwandono (2008:12) on Isnawati, test is a tool or procedure used

to measure the students' language proficiency. From a test, the teacher will get quantitative score which can be analyzed by the tester (the teacher).

The data collection method in this study was done in three steps:

1. **Pre Test**

As stated previously, the researcher administered pre-test before the treatment was given. It was done on Monday, 27th February 2017. The number of the test given instruction and give two topic how to make something and the students write procedure text.

2. **Treatment**

After administering the pre-test, the researcher gave the treatment to the students. The researcher applied the treatment of to learn procedure text used video on Wednesday 1st March2017, Monday 6th March 2017 and Wednesday 8th March 2017. Before the video was played The researcher given material about procedure text, in the procedure text researcher learn about how to write and what the content to write procedure text like, aim, material and steps in the content of procedure text. Then, the researcher gives instruction to students to watch and pay attention

on the video. After the video was played, the researcher asked to students to write down again with their own words. After finished to write, then discussed them then invited the students and the students write the correct answer.

Table 3.2 : Steps the treatment of video to writing procedural text

No	Steps	Researcher' activities	Students' activities
1	Opening	Greeting	• Answer greting
2.	Main strategy	Introducing about tutorial video as media to writing procedural text. • Explain about used tutorial video.	• Understanding about the material.
		Give the materials (procedural text) • Give an example of procedural text and Explain the generic structure of procedural text • Explain *Simple Past Tense* for writing procedural text	• Read the explanation of the materials • Identify the generic structure of procedural text
		Give an explanation about writing process • How to start writing, drafting, and revising	• Write a paragraph based on the writing process
		Give video about procedural text and ask the students to write the procedural text	• make a drafting first • Write a procedural text

		about the topics from video. • identify the generic structure	based on the topic from the video. • Write again about procedural text from video.
3	Closing	Ask the students to submit their writing • Give score • Correction • And give feedback	• Submit the writing

3. Post test

The last, the researcher administered the last again by giving post-test to the students. It was applied on Monday 13th March 2017. The researcher gave the same test format as pre-test that give instruction and give two topic and to write procedure text used with their own words. The test was done 45 minutes.

Table 3.3   : The Schedule of Test and Treatment

No.	Activity	Date
1.	Pretest	February 27th 2017
2.	Treatment 1	March 1st 2017
3.	Treatment 2	March 6th 2017
4.	Treatment 3	March 8th 2017
5.	Posttest	March 13th 2017

2. Research Instrument

According to Sugiyono (2013) research instrument is a tool or instrument used to measure nature and social phenomena observed. In this research, the researcher collected data through administering test. Test is instrument or procedure designed to measure the student's ability.

In this study, the researcher administered two kinds of test, pre-test and post-test. Pre-test is given to measure their ability before giving the statement and while post-test is given after giving the statement. The question of test is instruction to write procedure text and give two topic the students choose one topic and write with their own words.

The result of those test were compared to know whether there's significant difference before and after the students given the treatment.

Furthermore, the writer gave score to the students' writing by using scoring guide of writing according to Cohen (1994:328-329) in the following formula below:

Table 3.4   : Scoring Guide of Writing

Aspects	Scores	Indicators
Content	5 (Excellent)	Main ideas started clearly and accurately, change of opinion very clear
	4 (Good)	Main ideas stated fairly clearly and accurately, change of opinion relatively clear
	3 (Average)	Main ideas somewhat unclear and

		inaccurate, change of opinion somewhat weak
	2 (Poor)	Main ideas not clear or accurate, change of opinion weak
	1 (Very Poor)	Main ideas not all clear or accurate, change of opinion very weak
Organization	5 (Excellent)	Well organized and perfectly coherent
	4 (Good)	Fairly well organized and generally coherent
	3 (Average)	Loosely organized but main ideas clear, logical but incomplete sequencing
	2 (Poor)	Ideas disconnected, lacks logical sequencing
	1 (Very Poor)	No organization, incoherent
Vocabulary	5 (Excellent)	Very effective choice of words and use of idioms and word forms
	4 (Good)	Effective choice of words and use of idioms and word forms
	3 (Average)	Adequate choice of words but some misuse of vocabulary, idioms and word forms
	2 (Poor)	Limited range, confused use of words, idioms, and word forms
	1 (Very Poor)	Very limited range, very poor knowledge of words, idioms, and word forms
Grammar	5 (Excellent)	No errors, full control of complex structure
	4 (Good)	Almost no errors, good control of structure
	3 (Average)	Some errors, fair control of structure
	2 (Poor)	Many errors, poor control of structure
	1 (Very Poor)	Dominated by errors, no control of structure
Mechanics	5 (Excellent)	Mastery of spelling and punctuation
	4 (Good)	Few errors in spelling and punctuation
	3 (Average)	Fair number of spelling and punctuation errors
	2 (Poor)	Frequent errors in spelling and punctuation
	1 (Very Poor)	No control over spelling and punctuation

Score:

$$\underline{\text{The total number gotten}} \times 100 = n$$
$$\text{The maximal score}$$

E. Validity and Reliability of the Instrument

1. Validity

Validity is one of characteristic of a good test. The concept refers to the appropriateness, meaningfulness, and usefulness of the specific inferences from the test scores. Test validation is the process of accumulating evidence to support such inferences.

There are four types of validity that provide evidence to achieve the validity of the test (Isnawati 2012:27), they are content validity, criterion-related validity, construct validity and face validity. In this research, the researcher used content validity and construct validity.

a. Content Validity

A test said to have content validity if it contents constitutes a representative sample of the language skills, structures, etc. being tasted. The researcher made a test based on the objectives of syllabus so that it was not out of contents. The researcher also discussed with the teacher to make the test appropriate with the students.

b. **Construct Validity**

A test is said to have construct validity if it can be demonstrated that is measures just the ability which is supposed to measures. The word "construct" refers to any underlying ability which is hypothesize in a theory of language ability. Brown in Isnawati (2012:29) stated that a construct is any theory, hypothesis or model that attempts to explain observed phenomena in our universe of perception.

testing about procedural text, it should be based on all items presented to the students in writing procedural text. In this research, researcher give instruction to students and give two topic but the students just choose one topic and then write it.

2. **Reliability**

Based on the Harrison in Johnson (2001) says that the reliability of a test is its consistency. Thus, reliability is a measure of accuracy, consistency, dependability or fairness of scores resulting from administration of particular examination. Ary et al (2006:236) also defines reliability as the degree of consistency with which an instrument measures whatever it is measuring. Thus, it can be said that a reliable test is consistent and dependable.

Before giving posttest, the researcher made test to be tried out to the students to know how far the reliability of the instrument. Then, the researcher analyzed

each item of instrument and computed it by using in SPSS Statistics 16.0 version.

Then the result of computing can be seen below:

Table 3.5   : Result of Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.657	2

Based on the table above, it showed that the reliability of cronbach's alpha is

0,657. According to Triton in Sujianto (2009:97) the value of cronbach's alpha can

be interpreted as follow:

Table 3.6   : Cronbach's Alpha Interpretation Based on Triton

Cronbach's Alpha	Interpretation
0,00 – 0.20	Less Reliable
0,21 – 0,40	Rather Reliable
0,41 – 0,60	Quite Reliable
0,61 – 0,80	Reliable
0,81 – 1,00	Very Reliable

Based on the table above, it can be concluded that the instrument of this research

was in the category reliable because 0,61<0,657>1,00.

F. Normality and Homogeneity Testing

a. Normality Testing

Normality test is used to test whether a variable is normal or not. Normal

here means if the data have a normal distribution. The main reason of

conducting normality testing in a research is that it is necessary for the

researcher to know that the population or data involved in the research is in normal distribution. To test the normality of the data can use the *One Sample Kolmogorov-Smirnov* test with the provision that if Asymp. Sig > 0,05 the data were normally distributed (Asmarani, 2008:234). In this case the normality using *SPSS* (Statistical Product and Service Solutions) *16.0 for Windows*. The hypotheses for testing normality are:

a. H_0 : Data is in normal distribution

b. H_1: Data is not in normal distribution

In testing the hypotheses, the data is in normal distribution if Ho is accepted. In this case, Ho is rejected if significance value is lower than 0.05 (α = 5%) while Ho is accepted if the significance value is higher than 0.05.

b. **Homogeneity Testing**

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. The computation of homogeneity testing using SPSS Statistics 16 is One-Sample Kolmogrov-Smirnov test by the value of significance (α) = 0.050. Before doing homogeneity testing, the researcher decides hypothesis in this homogeneity as follow:

H_0 : 1 variance (Experimental group) are same.

H_a : 1 variance (Experimental group) are different.

There is also certainty in taking decision of homogeneity testing, as follow

The value of significance > 0.050, so H_0 is accepted means that the data of sample has same Varian

G. **Data Analysis**

In managing and analyzing the data collected, the researcher use quantitative data analysis by using statistical technique. The analysis is used to find the significant difference of the students' writing achievement before and after using Video.

Analyzing data is a process of analyzing the acquired from the result of the research. The data which is needed in this research is students' achievement about procedure text of the ninth grade students of SMP Darur Roja' Selokajang Srengat Blitar in the academic year 2016-2017 before and after using Video. To analyze the data, the researcher used statistically calculation of the test to determine the final calculation which it will be done to measure the last score of the research test. The data in this research obtained from the result of the student's test that were analyzed quantitatively. Quantitative analysis was done using statistics which is called statistical analysis or inferential statistics. The quantitative data of this research in analyzed using statistical computation. This technique was used to find the significant difference on the students' achievement in writing procedure text after being taught by using Video.