CHAPTER III

RESEARCH METHOD

In this chapter, the writer writes the research method that is applied in this research, includes research design, population and sample of the research, research instrument, treatment, validity and reliability testing, normality testing, method of collecting data, data analysis, and hypothesis testing.

A.   Research Design

The design used in this research is pre-experimental design by using the one-group pretest–posttest research design. According to Ary *et al* (2010; 303) The one-group pretest–posttest research design usually involves three steps: (1) administering a pretest measuring the dependent variable; (2) applying the experimental treatment X to the subjects; and (3) administering a posttest, again measuring the dependent variable.

The diagram of One-Group Pretest–Posttest Design:

Y1	X	Y1
Pretest	Treatment	Posttest
	(independent variable)	(dependent variable)
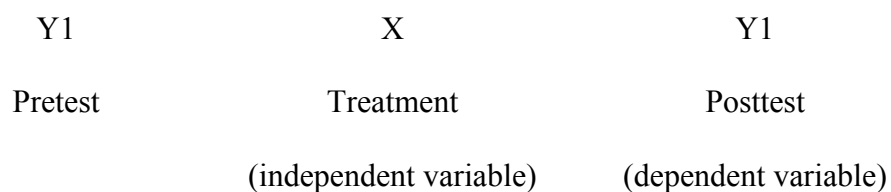
Variable is object or something that becomes point of view in the research. According to Kumar (2011; 50) Variable is An image, perception or concept that is capable of measurement – hence capable of taking on different values. There are two variable in this research, there were:

1. Independent variable is variable selected by the researcher to their effect on or influenced with dependent variable. Independent variable in this research was foursquare writing method.

2. Dependent variable is presumed to be influenced by independent treatment condition and any other independent variable. Dependent variable in this research was students writing ability.

This research used quantitative approach. The researcher determines that the design is quantitative research; because the data was taken from the sample. In this research, the researcher identifies the students scores and compares the score of writing without using foursquare writing method and using foursquare writing method.

In this research, the procedures of experimental research that used one group pretest – posttest design are:

1) Administered a pretest to measuring writing achievement of second grade of SMPN 1 Ngantru.

2) Applied the experimental treatment in four meeting, the teaching writing narrative text by using Foursquare Writing Method to eight grade of SMPN 1 Ngantru.

3) Administered a posttest to measuring writing narrative text by using Foursquare Writing Method to second grade of SMPN 1 Ngantru.

In this research, the researcher compared the students score from pretest and posttest score. By compared scores from first and second test to determine what difference the exposure to the method has done. In this research, the significant

differences between writing achievement before and after the students were taught by using foursquare writing method.

B.   Population and Sample of the Research

Population refers to the whole of the research subject (Arikunto, 2002: 115). It covers everybody who can be included to be a target of the research. The population in this research were all second grade of SMPN 1 Ngantru in academic year 2015/2016. In which the total of class VIII were 12 class with total 346 students.

Due to it is impossible to involve all of individual or population. The researcher takes Sample as the subject of the research, which sample is a part of population. Cohen (2007:100):

> "Therefore they often need to be able to obtain data from a smaller group or subset of the total population in such a way that the knowledge gained is representative of the total population (however defined) under study. This smaller group or subset is the *sample*".

Of course, it explains that Sample is defined as a small group of people selected to observed. Therefore the researcher determines the sample in this research is the VIII C students of SMPN 1 Ngantru, there were 31 students consist of 9 male ang 22 female students, then this research was conducted in one class. Besides, there were few methods to get the sample from population, which is called technique sampling. In this research, the researcher used purposive sampling as a technique sampling. According to Ary *at al* (2010:156) stated that Purposive sampling also referred to as judgment sampling. It means sample elements judged to be typical, or representative, are chosen from the population. The purposive sampling is more

considering the researcher wants who to be representative sample. It explains that the researcher does not choose individual; but she choose one group directly that takes in one place as a sample of population.

C. Research Instrument

The researcher used one kind of instrument to do the research, it was writing test. The purpose of using test is to know the students are sucsessful or unsucsessful in teaching writing by using foursquare writing method. The researcher applied the pre-test and post-test. Pre-test is taken before the students gave treatment writing by using foursquare writing method. The researcher gave test for students to write Indonesian legend. The researcher gave four title Indonesian legend. The students choose one title to write. They can choose the title that interest and they can write in four paragraph. The researcher give 80 minutes for doing the test. After pre-test, the researcher doing treatment. Then, post-test was taken after the students gave treatment. For post-test, the researcher given four title Indonesian legend. The students choose one title to write. They can choose the title that interest. The students can write their idea in foursquare sheet, and they can evolving their idea become a paragraph. The researcher give 80 minutes for doing the test. Then, the results of pre-test and post-test were compared. If there are differences score, it showed that treatment was successful and if there was no different score, it showed that treatment was unsuccessful.

D. Treatment

After the students doing pretest, they doing treatment. In first treatment, the researcher open the class by saying greeting, and then ask pray together. After that

checked attendance. The researcher gave warming up to the students related with material that has been learn.

In treatment one the topic of narrative text was the legend of Crying Stone. The researcher ask to the students, what they know about the legend of Crying stone. For example, who was character in the story, where did live, etc. after that, the researcher explain about the purpose of the learning, and then explain about definition of narrative text, the generic stucture of narrative text and the language feature in narrative text. The students listen carefully the researcher explanation. After all of the students understand the researcher explanation, the researcher going to explained about foursquare writing method. The students was curious, because they heard first time. But in first treatment, the students could join in the class carefully.

In treatment two, the researcher ask the students related narrative text, the structure of narrative text and the language feature in narrative text. after that, the researcher ask the students about foursquare writing method. The researcher ask the students about legend of Golden Cucumber. The students mention all of they know about the Legend of Golden Cucumber. After that the researcher write the brainstorming in whiteboard, and put the brainstorming into foursquare graphic. And then the researcher ask the students to write first draft in students assignment book. The students was enjoy with the treatment. They can follow the treatment.

In treatment three, the topic of narrative text was the legend of Banyuwangi. In this treatment, the researcher divided the class become six group. Each group asked to make brainstorming related legend of Banyuwangi. After that, each

group put the brainstorming into foursquare. And then each group write the draft from foursquare sheet. After finished, the researcher review and revising with the students. Then, each group rewriting the draft.

In last treatment, the topic of narrative text was the legend of Toba Lake. After the researcher explained the material, the researcher ask the students to write the generic structure of Toba Lake legend. After finished, the researcher review with the the students. The researcher gave confirmation and gave feedback toward students comprehension.

E. Validity and Reliability Testing

The most important characteristics in every measuring instrument is validity and reliability.

1. Validity

Validity is a standart measurement which indicate the accuracy and propriety a testing instrument. Validity is the most complex criterion of an effective test and the most important principle of language testing. It is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose the assessment (Gronlund in Brown, 2004:22). Validity constitutes a situation if a testing instrument to measures actually have measured precisely. The researcher used content validity and construct validity.

a. Content validity

This form of validity the instrument must show that it fairly and comprehensively covers the domain or items that it purports to cover

(Cohen et al, 2007:137). The test will have content validity if the structure or content of test relevant with the purpose of the test.

The researcher made writing test consist of writing narrative text by using foursquare writing method. The content validity is:

Table 3.1 **Content validity**

Standart Competence	Basic Competence	Learning Objectives	Item
Presenting the purpose of functional text and short essay in narrative text to interact with around area.	Presenting the purpose and rhetoric step in short essay using writing language accuracy, fluently, and acceptance to interaction with around area with narrative text form.	1. Students are able to write narrative text. 2. Students are able to identification the structure of narrative text. 3. Students are able to identification the using of simple pat tense in students writing. 4. Students are able to chooses vocabulary and using punctuation in students writing.	1 item

The researcher gives score for students writing narrative text by using scoring guide of writing, developed by Cohen (1994: 328-329) as cited in Ida Isnawati (2014:75)

Table 3.2 **Scoring rubric**

Aspect	Explanation	Score
Content	- Main ideas stated clearly and accurately, change of opinion clear.	5
	- Main ideas stated fairly clearly and accurately, change of opinion relatively clear	4
	- Main ideas somewhat unclear and inaccurate, change of opinion somewhat weak	3
	- Main ideas not clear or accurate, change of opinion weak	2
	- Main ideas not at all clear or accurate, change of opinion very weak	1
Organization	- Well organized and perfectly coherent	5
	- Fairly well organized and generally coherent	4
	- Loosely organized but main idea clear, logical but incomplete sequencing	3
	- Ideas disconnected, lacks logical sequencing	2
	- No organization, incoherent	1
Vocabulary	- Very effective choice of words and use of idioms and word form	5
	- Effective choice of words and use of idioms and word form	4
	- Adequate choice of words but some miss use of vocabulary, idioms and word form	3
	- Limited range, confused use of words, idioms, and word form	2

		- Very limited range, very poor language of words, idioms, and word form.	1
Grammar		- No errors, full control of complex structure	5
		- Almost no errors, good control of structure	4
		- Some errors, fair control of structure	3
		- Many errors, poor control of structure	2
		- Dominated by errors, no control of structure	1
Mechanic		- Mastery of spelling and punctuation	5
		- Few errors in spelling and punctuation	4
		- Fair number of spelling and punctuation errors	3
		- Frequent errors in spelling and punctuation	2
		- No control over spelling and punctuation	1

Adapted from Cohen (1994: 328-329) in Ida Isnawati (2014:75)

SCORE

Content + Organization + vocabulary + Grammar + Mechanic = (Total)

$$\text{final score}: \frac{??? ?????? ???? ??????}{??? ? ???? ??????} \text{ X } 100 = \text{N}$$

b. Construct validity

A construct validity is any theory, hypothesis, or model that attemps to explain observed phenomena in our universe of perception (Brown, 2004:25). The test will have Construct validity if the ability to build up the skill gain from language theory.

2. Reliability

Reliability in quantitative research is essentially a synonym for dependability, consistency and replicability overtime, over instruments and over groups of respondents (Cohen, 2007:146). If the result of test from two rater the student get same or similar scores in two different occasions, it means the test was reliable.

To find out the reliability, the researcher calculated two score to get correlation. The formula to find correlation the researcher using Pearson-Product Moment in IBM SPSS statistic 20. Table 3.3 show the result of try out from two raters.

Table 3.3 **Statistical correlation of Pearson-Product Moment from IBM SPSS Statistic 20**

Correlations

		Rater1	Rater2
Rater1	Pearson Correlation	1	,754[**]
	Sig. (2-tailed)		,000
	N	29	29
Rater2	Pearson Correlation	,754[**]	1
	Sig. (2-tailed)	,000	
	N	29	29

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

From the correlation analyzing, the researcher got the correlation of two score. Based on computation the result of reliability testing by using SPSS program 20.0 version shows the Pearson-Product Moment score in try out is

0.754. From the result of try out, indicating that the correlation was reliability. In this case, the instrument was reliable.

F. Normality Testing

Normality is an important concept in statistic. A normality test used to determine if a sample or any group of data fits a standard normal distribution. To find normality of the instrument, the researcher used one sample Kolmogorov Smirnov with SPSS 20.

The instrument can be called as has normality if Asymp sig > 0.05 so that Ho (null hypothesis) is accepted and Ha (alternative hypothesis) is rejected. It was also can be concluded as follow:

1. Ho   : The data is in normal distribution.
2. Ha   : The data is not in normal distribution.

Here, the result of normality instrument computed by using SPSS 20,0 version. It can be seen as follow:

Table 3.4 **Normality using one sample Kolmogorov Smirnov**

One-Sample Kolmogorov-Smirnov Test

		pretest	posttest
N		31	31
Normal Parameters[a,b]	Mean	70,97	77,03
	Std. Deviation	7,301	5,654
Most Extreme Differences	Absolute	,137	,185
	Positive	,121	,185
	Negative	-,137	-,170
Kolmogorov-Smirnov Z		,762	1,032
Asymp. Sig. (2-tailed)		,607	,237

a. Test distribution is Normal.

b. Calculated from data.

Based on table above, it showed the value of Asymp. Sig. (2-tailed) in pre-test is 0.607 and the value of Asymp. Sig. (2-tailed) in post-test is 0.237. the value of them was higher than 0.05. In pre-test is 0.607 > 0.05 and in post-test is 0.237 > 0.05. So, the conclusion is the Ho (Null Hypothesis) was accepted and Ha (Alternative Hypothesis) was rejected, and this test has normal distribution.

G.   Method of Collecting Data

The data in this research were collected by using such method and instruments. The section on data collection methods describes the methods used to gather the data and explains why these methods were chosen (Ary, 2010:492). This subsection explains in detail how the information is collected for the purpose of a research study (Perry, 2005:52).

The method to collect the data is test was administering test. The researcher applied pretest and posttest. The pretest was administered before doing the

treatment, teaching writing narrative text by using foursquare method, and posttest was administered after the treatment. Then, the results of the test were compared to find out if there was significant different between the two mean scores. If there are differences score, it showed that treatment was successful and if there was no different score, it showed that treatment was unsuccessful.

1.   Pre-Test

Pre-test was given before the students got the treatment writing by using foursquare writing method. Pre-test was used to know the basic writing ability. The researcher was given writing test for the students at first meeting on April 14th 2016. The researcher gave test for students to write Indonesian legend. The researcher given four title Indonesian legend. The students choose one title to write. They could choose the title that interest and they could write in four paragraph. The researcher gave 80 minutes for doing the test. The numbers of students who took the pre-test there was 31 students. The researcher took the score from pre-test. The score from pre-test used to determine the pre-test and post-test.

2.   Post-Test

Post test was given after the students gave the treatment on 2nd May 2016. The test item in post-test almost same with pre-test. From post-test, the researcher know the difference writing ability before and after treatment. The goal of this test is to measure the students writing ability after taught by using foursquare writing method. The researcher gave four title Indonesian legend. The students choose one title to write. They could choose the title that interest. The students could write their idea in foursquare sheet, and

they ould evolving their idea become a paragraph. The researcher gave 80 minutes for doing the test. The numbers of students who took the post-test there was 31 students.

H. Data Analysis

Data analysis is the process of ordered the date, organizing into a pola, category or based explanation. In this research, the data analysis used inferential statistic. Inferential statistic is a statistic that related with conclusion that have general character from the data after the data was ordered and tabulated (Subana, 2005:12). In this research, inferential statistic used to know there are any different achievement between the students taught before using foursquare writing method and after taught by using foursquare writing method.

In this research, to calculate the data by using SPSS 20.0 version and the researcher using t-test to analysis the data. The formula is:

$$?? \; \frac{??}{? \sum ??^? \; \frac{\sum ??^?}{?}} $$

Notes:

t   : t-score

MD   : average difference

$\sum D^2$: different scores squared, the summed

$(\sum D)$: different scores summed then squared

N   : total samples

I.   Hypothesis Testing

The hypothesis of this research was as follow:

1.   If T-test score is bigger than T-table, null hypothesis (Ho) is rejected. It means that there is any difference score in writing narrative text before using foursquare writing method and after using foursquare writing method. The difference is significant.

2.   If T-test score is smaller than T-table, null hypothesis (Ho) is accepted. It means that there is any difference score in writing narrative text before using foursquare writing method and after using foursquare writing method. The difference is not significant.