

CHAPTER III

RESEARCH METHOD

In this chapter, the writer presents the research method. It focuses on the method used in conducting this research. This chapter covers research design, population and sample, research instrument, validity and reliability testing, data collecting method, data analysis.

A. Research Design

This research is classified into pre-experimental research using one group pre test and post test design. In one group pre-test and post-test design, that is a single group is measured or observed not only after being exposed to a treatment of some sort, but also before a treatment. A pre-test provides a measure on some attribute or characteristic that is assessed in an experiment before the group get a treatment, while a post-test measure on some attribute or characteristics that is assessed for participants in an experiment after a treatment.

Creswell (2004:20) states as follows; “An experimental design is used in which attitude are assessed both before and after an experimental treatment. The data are collected on an instrument that measure attitude, and the information collected is analyzed using statistical procedures and hypothesis testing”.

In addition, Creswell (2003: 18) stated as “A quantitative approach is one in which the investigator primarily uses postpositivist claims for

developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and question, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data”.

The illustration of the research design in this study is as a table below:

Table 3.1 The illustration of research design

Pre-test	Independent variable (treatment)	Post-test
Y1	X	Y2

X : teaching english by using bulletin board media treatment

Y1 : students' ability on writing descriptive text before taught by using bulletin board media

Y2 : students' ability on writing descriptive text after taught by using bulletin board media

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

1. Administering pre-test (Y1) with a purpose of measuring students' writing descriptive text ability before applying treatment.
2. Applying experimental treatment teaching writing descriptive text by using bulletin board media (X).

3. Administering post-test (Y2) with a purpose of measuring students' writing descriptive text ability after applying treatment.

In this study the researcher wanted to know the effectiveness of teaching english by using bulletin board media towards students' ability in writing descriptive text of first grade students of MTsN 4 Tulungagung. The effectiveness was known after finding out the significant difference between the students' ability before being taught by bulletin board media and those are taught after using bulletin board media by comparing pre-test and post-test score. And this design used quantitative approach because involved complex experiment with many variables and treatments.

B. Population, Sample and Sampling Research

1. Population

The researcher needs to define the population before collecting the sample, including the description of the member to be included. Population is all members of well defined class of people, events, or objects (Ary et al, 2010:148). According to Dabbie (1983) population is living research elements together and stay together and theoretically become the target of research result. Meanwhile Gay (1992:124) states population is the group to which the researcher would like the result of a study to be generalize able.

In this study the population was all of first grade students of MTsN 4 Tulungagung in academic year 2017-2018. It consisted of 315 students and

divided into nine classes. The researcher took the D class as sample of this research. There were 35 students.

2. Samples

Sample is a portion of the population selected for the data source. Sukardi (2003:54). Sampling is also as a way the researcher select number of individuals as a sample which represents the population. The sample in this study 35 of the students the first grade of MTsN 4 Tulungagung. The researcher took the D class as sample of this research.

3. Sampling Technique

Ary et al (2006:167) sampling is the small group that is observed. Sampling is also as a way the researcher select number of individuals as a sample which present the population. Ary et al (2010:149) classifies two major types of sampling procedures in to probability sampling and non-probability sampling.

The researcher used non-probability sampling type purposive sampling technique. In purposive sampling, also referred to as judgment sampling, sample elements judged to be typical or representative are chosen from the population (Ary et al, 2010:156). 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 in case of the design and the agreement of the school. As the process of sampling, the researcher finally

decided to choose VII D class that consists of 35 students by considering some factor:

1. VII D class was assumed to be homogeneous based on the recommendation of an English teacher that handles first grade students' of MTsN 4 Tulungagung.
2. In order to the apply the experimental stage, the samples must not be too good and too bad in their English achievement, especially writing descriptive text.

C. Research Variable

According to Ary Donald (2010: 37) variable is a construct or a characteristic that can take on different values or score. There are classified as independent variables and dependent variables.

1. Independent variable (X)

Independent variable is variable which is manipulated by researcher deliberately. In this research independent variable was teaching writing descriptive text by using bulletin board media. The independent variable is the variable that cause of the emergence of the bound variable.

Description of using bulletin board media in teaching writing. Firstly, the researcher gave the pre- test to the students in VII D class. Pretest here was to measure how far the students' understanding about the course and how far they know about writing paragraph as like descriptive. Secondly, the researcher gave the treatment to the students in writing descriptive text using bulletin board media with to find formulate the

problem. The students could formulate the problems of their writing descriptive text by how the way to write descriptive text by using bulletin board media correctly and the researcher analyze and present the result in the written descriptive text. In the end, the researcher gave the post- test to the students in VII D given task to make about the writing descriptive text by using bulletin board as a media.

2. Dependent variable (Y)

Dependent variable is a variable that enrage in function relationship influence by independent variable. In this research, dependent variable was students' ability in writing descriptive text. The dependent variable is the variable that affected or variables to be due because of the independent variable.

D. Description of Treatment

The researcher gave the treatment to the students in three times. That are on 22nd May, 25th May, and 28th May 2018. In the first meeting on 22nd May 2018, the reseacher taught the topic about person. Firstly, the researcher showed the bulletin board media that contain some pictures, simple present formula, some question to make a descriptive text and a descriptive text. Secondly, the researcher asked the students to write some adjectives based on the pictures on a piece of paper. Afterthat the researcher explained the formula of simple present tense and the reseacher asked the students to make a sentence by using simple present tense individually.

After making the sentence, the researcher divided the students into five group that consist of seven students in each group and the researcher chose a leader in each group. Then, the researcher showed the picture about the favorite teacher and the descriptive text about it. The reseacher explained about text stucture that is identification and description. After explaining the text structure, the researcher asked the students to discuss about the answer of some questions that written in the bulletin board media about the favorite teacher with their group. There were nine questions to help in making descriptive text. Then, the group should arrange their answer in a descriptive text. In the end, the leader of each group presented their result in front of the class.

The researcher also explained two topics again, that was about animal and thing. The way or the steps to give treatment was same with the first meeting. In the second meeting on 25th May 2018, the researcher showed the bulletin board media and asked the students to write some adjectives about animal in a piece of paper again. Afterthat the researcher explained the formula of simple present tense and the reseacher asked the students to make a sentence by using simple present tense individually.

Then, the researcher showed the picture about the pet and the descriptive text about it. The reseacher explained about text stucture that is identification and description. After explaining the text structure, the researcher asked the students to discuss about the answer of some questions that written in the bulletin board media about the pet with their group. There were nine questions to help in making descriptive text. Then, the group should arrange their answer

in a descriptive text. In the end, the leader of each group presented their result in front of the class.

The third meeting was about thing on 28th May 2018. The researcher showed the bulletin board media and asked the students to write some adjectives about thing in a piece of paper again. Afterthat the researcher explained the formula of simple present tense and the reseacher asked the students to make a sentence by using simple present tense individually.

Then, the researcher showed the picture about the favorite thing and the descriptive text about it. The reseacher explained about text stucture that is identification and description. After explaining the text structure, the researcher asked the students to discuss about the answer of some questions that written in the bulletin board media about the pet with their group. There were nine questions to help in making descriptive text. Then, the group should arrange their answer in a descriptive text. In the end, the leader of each group presented their result in front of the class. The reseacher also gave the feedback to make their text to be better.

E. Method of Collecting Data

Data of this study is collected by admistering test. Test in simple terms, a method of measuring a person's ability, knowledge, or performance in a given domain. Donald Ary (2010: 210). The researcher uses two kinds of test those are pre-test and post-test.

In this research, the researcher used test by using bulletin board media to measure the students writing skill. The test was given through an activity in writing text. The test with gave task to the students to make a descriptive text based on the picture in the bulletin board.

Research instrument is the tool of collecting data that should be valid and reliable. A research instrument can valid if the instrument can measure what will be measured. In this research, the instrument used in writing test. It was to know the students' ability in writing before and after taught by using bulletin board media. Furthermore, there were two writing tests admistered here, namely Pretest and Posttest. They were Pretest and Posttest:

1. Pre-test

Pre-test was test that was given to one of the first grade students at MTsN 4 Tulungagung. To measure their ability before treatment process, this test was given to know the basic competence for 35 students and to know their earlier knowledge before they got treatment. Before treatment was a test which had done to measure the student achievement in the first time. Pre-test was done before treatment process. Pretest was given to the experimental group; it was to know the writing achievement of the students. The score were analyzes to determine the students' scores between pre-test and post-test.

2. Post-test

Post test was test that wes given to one of the first grade students at MTsN 4 Tulungagung. To measure their ability after treatment process, this test

was given to know the basic competence for 35 students and to know their earlier knowledge after they got treatment. It was done to know the final score and to know the students, difference competence before and after they get treatment. Treaaatment here means that the researcher applied bulletin board media in teaching writing. This test gave after teaching process was done. The researcher only used one class to got one post-test. A post-test was gave in order to know the scores of the students after they were taught by using bulletin board media. This test was used to measure the students' achievement after they were given treatment. The post test conducted on June 5th. To know the good test is all good tests process the researcher is always dependent upon measurement. There are two important characteristic that every measuring instrument should process validity and reliability.

F. Data Collection Instrument

In this study, the researcher used test as instrument. A test is a set off stimulate presented to individual in order to elicit responses on the basis of which a numerical score can be assigned, Donald Ary (2010: 210). The researcher applied pre-test and post-test. The test is writing test in the form of essay about descriptive text. Pre-test was given before doing an experimental research study or before teaching by using bulletin board media at way, in this pretest student given task to make about writing descriptive text during 30 minutes on June, 05, 2018. Post test which was given after doing the

experimental research study or after teaching by bulletin board media at way. In this posttest the students had given task to make about writing descriptive text by using bulletin board media during 30 minutes on June, 05, 2018.

To get the data, which is VII D class that becomes an experimental group the researcher as a teacher teaches the students during one week. Firstly, in the teaching learning process the teacher gave pre test in writing descriptive text. Secondly, the teacher taught writing descriptive text by using bulletin board media. In the end, the teacher gave post test in writing descriptive text to the students.

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 3.2 The Scoring Rubric

Aspect	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
Organiozation	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:

The total number gotten x 100 = n

The maximal score

G. Validity and Reliability

In this study, the researcher used a test as the research instruments. Both pre-test and post-test were intended to measure students' writing ability. The tests should fulfill some factors to get the data as well. The factors tested here are validity and reliability of the tests. By using a valid and reliable instrument to collect data, it was expected that the data and the result of the research itself also valid and reliable. In this research, the researcher built up the validity and reliability by using try out.

a. Validity

Validity is measuring what it is designed to measure. The most complex criterion of an effective test and the most important principle of language testing is validity. According to Brown (2004:22), he stated that validity is the extent to which inferences made from assesment result are appropriate, meaningful, and useful in term of the purpose of the assesment. In addition, Ary (2010:225) validity is the most important consideration in developing and evaluating measuring instruments.

To measure whether the test has a good validity, the researcher analyzed the test from face validity, construct validity, and content validity.

1) Face Validity

A test is said to have face validity if it measures what is supposed to measure. Face validity is hardly a scientific concept that is very important.

A test which does not have face validity may not be accepted by test

takers, teachers, educators, authorities or employers. In this test, there are some aspects that are considered from this test to make a good test based on the validity.

1. The instruction must be clear for the students
2. In this test, the students can construct a paragraph and express their ideas in a piece of paper. The instruction based on syllabus and suitable with their level.
3. Time allocation must be clearly. The teacher give limited about 30 minutes to write a paragraph.

This research was done to know the effectiveness of teaching English by using bulletin board media to increase the students' ability in writing descriptive text, so the test should be in the form of writing test. Related to this research, the researcher asked students about the instruction and the students answer that the instruction was clear. The researcher also asked the students to write a kind of descriptive text. It showed that the test was valid based on face validity.

2) Content Validity

A test is said to have content validity if its contents constitutes a representative sample of language skills, structures, etc being tested. In order to judge whether or not the test has content validity, we need a specification of the skills or structure being tested. A comparison of test specification and test content is basis for judgment for content validity. The researcher made this test based on

the course objectives in the syllabus of seventh grade second semester of MTsN 4 Tulungagung. It represents the material learned in the class. In this case writing test, have represented the material which will be measure. In this school writing descriptive text was taught at second semester seventh grade MTsN 4 Tulungagung and the researcher conducted the research at second semester also. So, this test is valid in term of content validity.

Table 3.3 Content validity

Standard competence	4 Teks Deskriptif
Basic competence	4.7 Menyusun teks deskriptif lisan dan tulis, sangat pendek dan sederhana, terkait orang, binatang, dan benda, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan, secara benar dan sesuai konteks.
Indicators	<p>4.7.1 Menuliskan kata sifat (adjectives) berdasarkan gambar yang sesuai dengan topik.</p> <p>4.7.2 Membuat sebuah kalimat dalam bentuk simple present</p> <p>4.7.3 Membuat teks deskriptif sederhana terkait orang, binatang, dan benda, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan,</p>

	secara benar dan sesuai konteks.
Technique	Writing test
Instrument of test	Pretest Posttest

Table 3.4 Content Validity of Test

Competence indicator	Test Item	
	Pre-test	Post-test
Menuliskan kata sifat (adjectives) berdasarkan gambar yang sesuai dengan topik.		
Membuat sebuah kalimat dalam bentuk simple present		
Membuat teks deskriptif sederhana terkait orang, binatang, dan benda, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan, secara benar dan sesuai konteks.	Writing test	Writing test

Based on Table 3.4 showed that the instrument of the test was valid based on the standard competence, basic competence, and indicator which mentioned in syllabus.

c. Construct Validity

A test is said to have construct validity if it can be demonstrated that it measures just the ability which is supposed to measure. The word “construct” refers to any underlying ability which is hypothesized 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 descriptive text, it should be based on all items presented to the students in writing descriptive text. In this research, researcher give instruction to students to choose one topic and then write it.

Based on the theory that bulletin board can play the important role in the life of the classroom and it can increase the students achievement, reinforcing students' efforts to do a good job (Robert and Michael, 2002), the researcher used the writing test to know the effectiveness of teaching english by using bulletin board. The writing test was about making the descriptive text in form of paragraph which are given by researchers.

2. Reliability Testing

Ary et al (2010:236) defines the reliability as the degree of the consistency with which an instrument measures whatever it is measuring. Thus, it can be

said that a reliable test is consistent and dependable. Reliability of a test can be derived from reliability coefficient. The range of reliability coefficient is 0-1. In this case, 0 means not reliable while 1 means perfectly reliable and the closer reliability coefficient to 1, the more reliable the test is. According Brown (2004:20) a reliable test is consistent and dependable, if the students are given the same test on two different occasions, the test should yield similar result. Reliability is the characteristic of very good test for it to be valid. A test must be reliable as a measuring instrument.

Furthermore, reliability is a necessary characteristic of any good test for it to be valid at all and a test must be reliable as measuring instrument. Frankle (1990) stated that reliability is the consistency of score obtained. A reliable test is consistent and dependable. Thus, if the students are given the same test on two different occasions, the test should yield similar result and the more similar the scores are, the more reliable the test is.

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 : the score obtained from try out

Students	Score 1 Try out (Pre-test)	Score 2 Try out (Post-test)
A	60	72
B	56	80
C	60	72
D	56	76
E	68	84
F	68	80
G	56	72
H	60	76
I	72	88
J	60	76

Table 3.6 result of reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.723	2

Based on the table above, it showed that the reliability of cronbach's alpha is 0,723. According to Triton in Sujianto (2009:97) the value of cronbach's alpha can be interpreted as follow:

Table 3.7 : 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 $0,61 < 0,723 < 1,00$.

H. 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 H_0 is accepted. In this case, H_0 is rejected if significance value is lower than 0.05 ($\alpha = 5\%$) while H_0 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 Kolmogorov-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.

I. 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 bulletin board media.

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 descriptive text of the seventh grade students of MTsN 4 Tulungagung in the academic year 2017-2018 before and after using Bulletin Board. 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 descriptive text after being taught by using Bulletin Board media.

In this study, the researcher used paired sample T-Test through SPSS 16.0 to analyze the data. Indeed, the method in further analysis of the data is as follow:

1. Formulating the hypotheses. The hypotheses are in the form of Null hypothesis (H_0) and Alternative Hypothesis (H_a).
2. Determining the value of Tcount. It can be seen on the output of SPSS 16.0 analysis.
3. Determining the value of Ttable. The value of Ttable can be seen from statistical table in significance level $0.05 : 2 = 0.025$ (two tailed test) with degree of freedom (df) is $n-1$.
4. Determining the significance value based on the output of SPSS 16.0 analysis. In this case, the value of significance should be lower than 5% significance level (< 0.05).

5. Determining hypothesis testing. Simply, the hypotheses testing are:

- a. If $-T_{count} < -T_{table}$ or $T_{count} > T_{table}$ and $Sig < 0.05$, so H_0 is rejected.
- b. If $-T_{table} \leq T_{count} \leq T_{table}$ and $Sig > 0.05$ so H_0 is accepted.

The conclusion is, If H_0 is rejected it means that there is any significant difference of the students' writing ability before and after being taught by using bulletin board media. So the opposite, if H_0 is accepted means that there is no any significant difference of the students' writing ability before and after being taught by bulletin board media.