

CHAPTER III

RESEARCH METHOD

In this chapter the researcher presents research method. It focuses on the method used in conducting study. This decision covers research design, population, sample, and sampling, variable of the study, data and data source, validity and reliability testing, and technique of data analysis.

A. Research Design

The design of this research is an experimental research. According to Ary (2002:276) an experimental is a scientific investigation in which the researcher manipulates one or more independent variables, control any relevant variables, and observe the effect of the manipulation on the dependent variables.

This experimental used pre – experimental research design (one – group pretest – posttest design, which researcher only uses one class as the subject of study without control group or comparison group and in this research study consist of pre – test instrument and posttest. The pretest and posttest are given to take the score of the student's achievement before and after being taught using self - assessment. The both of the score are computed by using t-test to find out if there is significant influence of student's writing achievement by self-assessment.

The research design can be illustrated by Ary et al (2006:327-328) as follow

Table 3.1 The Design Of One-Group Pretest Post Test

Pre - test	Independent Variable	Post – test
<i>Y1</i>	<i>X (the strategy)</i>	<i>Y2</i>

This research intends to investigate the effectiveness of self assessment toward student's writing achievement at the eight grade of MtsN 3 Tulungagung in academic year 2017/2018. The use of the treatment is aimed at whether the increase score possibly got by the e researcher. Thus, the effectiveness of that treatment will know the significant score when the student taught using self – assessment.

A. Population and Sample

This section discusses the population of the study, the sample which was drawn from the population, the sampling technique applied and the variables of the study.

a. Population

According to Ary, et al (2010: 148) states that population is defined as all members of any well-defined of people, events or object. Arikunto (2006:130) said that population is the whole research object.

Therefore, the population of this research is the eight grade of MtsN 3 Tulungagung in academic year of 2017/2018 which consist of two classes, and the total member of student is 56 students.

b. Sample

Sample is sub group of target population that the researcher plans to study for generalizing about the target population (Creswell, 2008: 152). According to Arikunto (2002:109) sample is small group in population being observed. Actually sample is part of population that is taken to represent the population in research.

Sampling is the process of taking sample. The researcher uses purposive sampling to take sample from population and it represents the entire population. Ary (2002:169) states “Purposive sampling-also referred to as judgement sampling-sample elements judged to be typical, or representative, are chosen from the population”

In purposive sampling, the researcher uses expert judgement to take some representatives or typical cases from population. First, identify important variation sources og population. Then, choose the class that are suitable with the variation sources. According to an English teacher, all students have similar characteristics; their mastery on English is average. Furthermore, Self – Assessment has never used in teaching writing to the classes. Based on this condition, the researcher chooses class VIII-B which consist of 28 students, 17 male and 11 female.

B. Variable of The Study

Suharismi (2006:118) said that variable is object of research or that become point of research, Ary (2002:15) stated that a variable is construct or a characteristic that can take on different values or score.

They are independent variable and dependent variable.

1. Independent variable (X)

Arikunto (2010:162), independent variable is a variable that has function to cause the other variable that will be researched / observed. Independent variable is variable has the influence of the cause of change or make the existences of dependent variable. So, the independent variable in this research is the treatments (self-assessment). In this research, Self – assessment has the influence or the cause of change or make the existence of student’s achievement in writing descriptive text.

2. Dependent variable

Creswell (1994:129) state that dependent variable is the response or the criterion variable presumed to be “caused” of influenced by the independent treatment condition. In this research the dependent variable is the student’s achievement in writing descriptive text is variable which is influenced or became effect of using self-assessment.

C. Data and Data Source

The data in this research is quantitative data with numeric form. The kind of data in this study is interval data because the data will be taken from the students score from the result of the student's pre-test and post-test. Thus, the data can be ranked with precise different. In order to know whether there are significant differences between students who are taught by using Self-assessment and those who are not. The researcher uses the data sources from primary data that are collected directly from the sample. In conclusion, the primary data sources of this research are taken from students test during pre-test and post-test both from experimental group.

D. Research Instrument and Method of Collecting Data

Instrument of the research is a tools which be used by the researcher in collecting data. It means any research needs instrument for gathering data. The instrument that is used in this research is a test. According to Ary et al (2010:201) test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned.

Method of collecting data refers to how the way the researcher collect the data. According to Tanzeh (2011:57) Data collecting method is a systematical and standard procedure used to collect data). In this research, the data collecting method is administering test that consist of pre – test and post – test. In this study, the researcher will use a teacher-made test. The test is constructed by the teacher itself to assess the students' writing skill in overall. The test is essay test type.

The reason why the researcher construct a teacher-made test because the researcher want to test the overall ability of the second grade students in mastering writing a descriptive text through self-assessment. This kind of test is also easier for the researcher in collecting the student's score. This kind of test used to measure the student's achievement in writing descriptive text by using self-assessment . Thus, the researcher will conduct pre-test and post-test. The descriptions are clarify as follows:

1. Pre – test

At the first meeting, the writer gives a pre – test to the students. There is instruction to write a descriptive text. It is conducted to know the scores of the students reading before being taught the treatment.

2. Post – test

The post – test is given to the students after conducting the treatment of using self – assessment toward student's writing achievement. Similar to pre -test, the writer asks student to write a descriptive text.

E. Validity and Reliability Testing

As mentioned above, the writer's instrument is test. Test good instrument should be valid and reliable, the more explanation about it will be discussed as follows:

1. Validity

The most simplistic definition of validity is that is degree to which a test measures what is supposed to measure (Gay, 1992: 155). To measure whether the test has good validity, the researcher analyzed the test from content validity.

Test validity is discrimination index of question which is determined from the difference of answering proportion in each group. This test was used to check whether the instrument is valid or not if the instrument was applied in a subject of the research. The instrument is said to have validity if the test actually involves the tested in a simple of the behavior that is being measured (Brown, 1987:222). In this study, the researcher construct the test form based on the students writing skill in overall. Thus, the researcher use content validity and face validity to measure whether the test is valid.

a. Content validity

According to Ary (2010:226) Evidence based on test content involves the test's content and its relationship to the construct it is intended to measure. Content validity is when you create a test or questionnaire for a particular subject, you want the tets to actually measure what you want them to. It means that the test form is measured based on the content involved. The writing achievement test uses in this study employs the content validity. In this study, the writing achievement test developed in reference to the materials which are based on the core competence and basic competence of the school based curriculum of the

eight grade of MtsN 3 Tulungagung. The detail is illustrated in the following table.

Table 3.2 The Core Competence And Basic Competence Of The School Based Curriculum Of The Eight Grade

Core competence	Basic competence	Competence Indicator
4. Processing, presenting, and reasoning in a concrete realm (using, parsing, composing, modifying, and making) and abstract realm (writing, reading, computing, drawing and composing) as learned in school and other sources in the same viewpoint /theory	4.4 Prepare descriptive oral and written text, very short and simple, about people / animals / objects, taking into account the objectives, structure of the text, and the linguistic elements, correctly and in context.	4.4.1. Students are able to make oral and written descriptive text, very short and simple, about people / animals / objects, taking into account the purpose, structure of the text, and linguistic elements, correctly and in accordance with the context.

b. Face Validity

Face validity occurs where something appears to be valid. This depends very much on the judgment of the validator/ the expert. In this study, the researcher use the face validity from an expert that is a teacher from the school where the

research will be held. The researcher use the test-blueprint to get the validation judgments. If the test there is a mistake, the researcher revise it until the test is valid based on the expert's assessment. The evidence of the validation is shown in appendixs.

2. Reliability

Reliability is the stability of the test score. Mujis (2004:71) says reliability is a second element that determines the quality of measurement instruments. Ary et al (2010:236) 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.

To know how far the reliability of the instrument, the researcher made test to be tried out to students before giving pretest and posttest. In this research, the writer uses inter rater reliability where the result of the test was scored by two scorers or two raters to get reliability coefficient. Then, the two sets of scores gotten from the two raters are calculated to get the correlation coefficient. Finally, SPSS 16.0 for windows program is used to compute the reliability of instruments. Here the result of try out test

**Table 3.3 The Statistical Correlation of *Person Product Moment*
from IBM SPSS Statistical 16.0**

Correlations

		rater1	rater2
rater1	Pearson	1	.836**
	Correlation		
	Sig. (2-tailed)		
	N		
rater2	Pearson	.836**	1
	Correlation		
	Sig. (2-tailed)		
	N		

** . Correlation is significant at the 0.01 level

(2-tailed).

Table 3.3 shows that Pearson Correlation of both rater 1 and 2 were 0.836. In this case, if the Pearson Correlation was closer to +1, it can be said has strong correlation. Based on table above, the result is closer to +1, so the data has strong reliability. It can be concluded that it is reliable.

F. Technique of Data Analysis

The researcher uses a quantitative analysis technique using statistical method. The researcher uses the application SPSS statistics 16 for windows to analyzed Paired-Sample T-test, why researcher use Paired-Sample T-test because researcher use one group pre-test post-test. There are some steps in analyzing data in SPSS 18. Firstly, the researcher input the data in SPSS statistics to know the frequency of pretest and posttest score. After that, by using this application the researcher know the mean, median, mode and standard deviation. Then, from the compare of data the researcher know the pair sample statistics and finally the researcher find pair sample correlation from two kinds of test. The researcher can be analysis about the result of significant one tails.

After the researcher knows the result of significant one tails from SPSS statistics, the researcher can give the conclusion about the effectiveness or not about using self assessment toward student's writing achievement in descriptive text. This technique is used to find the significant different on the students writing descriptive text using self assessment. If the significant one tails is bigger that the level of significant (0,05), the alternative hypothesis (H_a) is accepted. It means that, there is different score of student's achievement before and after taught using self assessment. On the other hand, if the significant one tails is smaller than the level of significant (0,05) the null hypothesis is rejected. Indicating that, there is no different score of student's achievement before and after taught ,using self assessment .