CHAPTER III

RESEARCH METHOD

In this chapter the researcher describes the research method. It consist of research design, population and sample, research instrument, validity and reliability tasting, data collecting method, and data analysis.

A. Research Design

To understand the meaning of research is truly necessary, because it is impossible to come to the point of research without it. According to Homby (1995:996) research is carefully study on investigation, especially in order to discover new facts or information such as scientific historical research. It means that a study is done carefully and accurately on investigation of an event, problem, and phenomenon about scientific to find out new information. In conducting this research needs a plane some step her or she will take. Consequently, the design of the research should be suitable for the research condition. For these reason, a researcher has to follow the research design, if her or she want their research will be successful.

The data of this research in the form of quantitative research. Ary (2002:22) states the quantitative research uses objective measurement and statistical analysis of numeric data to understand and explain phenomena. In quantitative research there are experimental and non-experimental research design. Experimental research involves a study of the effect of the systematic manipulation of one variable on another variable and non experimental

research, the researcher identifies variables and may look for relationship among them, but does not manipulate the variable (Ary, 2002:24).

The design of this research in conducted an experimental research design. According to Ary (2002:276) an experimental is a scientific investigation in which the researcher manipulates on e or more independent variable, control any other relevant variable, and observes the effect of the manipulation on the dependent variable. An experimental design serves two function:

1. It establishes the condition for the comparisons required to test the hypothesis of before and after being taught using *Think aloud strategy.* Then both of the score were computed by using t-test to find out if there is significant influence of teaching reading comprehension by using *Think aloud strategy.* The design of this research can be seen at the table below: the experiment.

2. It enables the experimenter through statistical analysis of the data to make a meaningful interpretation of the result of the study.

This experimental design used pre- experimental research design (*one-group pretest-posttest design*) that consist of pre-test, treatment and post-test. The pre-test and post-test are given to take the score of the student's achievement

Table 3.1 Randomized group, pre-test and post-test

Pre test	Independent variable	Post test
Y1	X	Y2

Notes :

Y1 = pre-test

X   = Treatment

Y2 = post-test

This research intended to investigation the effectiveness of using *Think aloud strategy* in the teaching reading comprehension at SMP Islam Durenan Trenggalek in academic years 2013/2014. The uses of the treatment is aimed at proving whether the increase scores possibly got by the researcher. Thus, the effectiveness of that treatment will be known the significant score when the students taught using *Think aloud strategy.*

B. Population, Sampling and Sample

1. Population

According to Ary (2002:163) population is all members of any well defined class of people, events, or objects. In encyclopedia of educational evaluation, written "a population is a set (or collection) of all elements processing one or more attributes of interest". According to the Arikunto (2006:108) "a population is a set (or collection) of all elements possessing one or more attributes of interest." According to the explanation above a population is the whole of subject used by the researcher. In this research, the researcher was conducted at SMP Islam Durenan Trenggalek. The researcher chooses SMP Islam Durenan Trenggalek as the researcher object because the school has good enough quality and the researcher has conduct. PPL there.

And the researcher took the population of the class eight. In the 8th there are five classes that are class A, B, C, and D. In this research is eight class that consists of 147 students at SMP Islam Durenan Trenggalek in academic year 2013/2014

2. **Sampling**

Sampling is the process of selecting a group of subjects for a study in such a way that the individual represents the large group from which they were selected. According to Ary, Donald et. Al (2010: 149), sampling is indispensible to researcher. In this research the researcher take for class D because the material in eight class is suitable is will be test in this researcher. There are four classes in 8th, in here the researcher use random sampling to choose one of the classes to conduct the research. The researcher use piece of paper, then the researcher writes the class of the paper, after that the paper fold and the researcher choose one of the papers randomly.

3. **Sample**

Selected of the sample is very important step in conducting a research study. According to Arikunto (2006:109), a sample is part of population of representative of it. Based on Ary (22002:163) a sample is a person of a population. It mean that a good sample must be representative of the entire as possible, so that the generalization of the sample as true as population. According the explanation the explanation above the sample of this research is D class that consists of 36 students at SMP Islam Durenan Trenggalek in academic year 2013/2014.

C. Instrument

Research instrument is tool of collecting data that should be valid and reliable. According to Arikunto (2006:126) the device the researcher uses to collect data is called instrument. The instrument in this research is test.

Arikunto (2006:127) states that "test is a series question, exercise or other means which are used to measure the skill, knowledge, intelligent, ability or talent that have by individual or group". Thus a test is a method to gain the data by giving some question to the respondent.

In this research the writer used achievement test, Isnawati (2011:14) "achievement test is test that is used to measure the process that students making after learn something". This test used to measure the students achievement in reading comprehension before and after they taught by using *Think aloud strategy* in SMP Islam Durenan.

D. Validity and Reliability

1. Validity

Heaton (1989:159) defines the validity of a test as extent to which it measures what it is supposed measure and nothing else. To measure whether the test has a good validity, the researcher analyzed the researcher analyzed the test from content validity and construct validity.

a). Content validity

A test is said to have content validity if its contents constitutes a representative sample of the 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 the basis for judgment for content validity. The researcher made this test based on the course objectives in the syllabus of second years of SMP Islam Durenan Trenggalek. Therefore, this is valid in term of content validity.

b). Construct validity

The construct validity of test is test which is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning. Based on the theory above, in the test, the researcher asked the students to answer the multiple choice based narrative text to measure the students' comprehension in reading and this fulfill the construct of reading test and therefore valid in term of construct validity.

Besides, the researcher tried to check the empirical validity by using SPSS 16.0 after trying out the instrument (pre-test and post-test). In this research, the researcher used SPSS 16.0 for windows to know the validity of test instruments. It can use corrected item-total correlation formulation. According to riduwan (2004:110), the criteria of validity of the instrument can be divided into 5 classes as follows:

1. If the *item-total correlation* score 0.00-0.20: less valid

2. If the *item-total correlation* score 0.21-0.40: rather valid

3. If the *item-total correlation* score 0.41-0.60: enough valid

4. If the *item-total correlation* score 0.61-0.80: valid

5. If the *item-total correlation* score 0.81-1.00 very valid

From the calculation, it was found that most items have validity in pre-test and post-test. In pre test there are 17 items less valid and post test there are 11 items less valid too. So the researcher revised those items.

2. Reliability

Based on Horizon (1983:10) says that the reliability of the test is its consistency. Thus, reliability is a measure of accuracy, consistency, dependability or fairness of scores resulting from administration of particular examination. According to Heaton (1989:162) reliability is a necessary characteristic of any good test: for it to be valid all, a test must first be reliable as a measuring instrument. Ary (2002:250) states that reliability is concerned with the effect of such random errors of measurement on the consistency of scores.

Actually, the ideal test should be both reliable and valid. In this research, the researcher also used SPSS 16.0 for window to know the reliability of test instruments.

According to riduwan (2004:118), the criteria of reliability instrument can be divided into 5 classes as follows:

1. If the *alpha cronbach* score 0.00-0.20: less reliable

2. If the *alpha cronbach* score 0.211-0.40: rather reliable

3. If the *alpha cronbach* score 0.41-0.60: enough reliable

4. If the *alpha cronbach* score 0.61-0.8: reliable

5. If the *alpha cronbach* score 0.81-1.00: very reliable

From the analysis, the researches got the pre-test scores. The value of pre-test score is 0.233 and the value o post-test score is 0.653. from the above evidence, it was found that pre-test is rather reliable and post test is reliable. So the researcher revised the questions of pre-test and post-test, grammar and diction to reach the reliability.

E. Data Collection Method

When we talk about the kind of methods and data, actually it is quite same when we talk about doing evaluation. It has the purpose to get data and then it can be measured by the researcher. The data collecting method is the method to obtain the data in the research. The aim of the data collecting in conducting scientific research was to get material that needed by the research the technique of collecting data was clarified as follow:

1. Pre-test

A pre-test provides a measure on some attribute or characteristic that you assess for participant in an experimental before they receive a treatment, Creswell (2008:301). At the first meeting, the researcher gave a pre-test to the students. It was conducted to know how far the students score in reading. This test is given in order to know how far the students ability in reading comprehension of narrative text. The pre-test comprised 20 items, in the form of multiple choices items.

2. Treatment

After conducting the pre-test, the researcher gave the treatment to the students. The researcher applied the technique or treatment using *think aloud strategy*. Here the steps of the treatment.

Table 3.2. Steps in *Think Aloud Strategy*

No	Steps	Teacher Activities	Students Activities
1	Opening	Greeting	• Answer greeting • Brain storming
2	Main Strategy	Introducing the material about narrative text	• Play attention
		Giving explanation about the Think Aloud Strategy • Give text to students • Read the text and look for the important information, such as who, when, where, what etc. • Give the conclusion of Think Aloud Strategy	• Listening the explanation from the teacher
		Giving explanation about narrative text	• Listening explanation from the teacher
		Giving question related the topic of narrative text	• Answering the question from the teacher
3	Closing	Asking the students about narrative text	• Giving the explanation about the narrative text
		Giving evaluation (homework) as the exercise	• Doing the exercise

3. Post-test

The post-test is a measure on some attribute or characteristic that is assessed for participants after a treatment, Creswell (2008:301). The researcher conducted post-test after conducting the teaching through *Think Alou Strategy*. The post-test comprised also 20 items, in the form of multiple choice items.

F. Data Analysis

In this research, the researcher used statistical data analysis technique to know the different score between the students' achievement in reading ability before and after being taught by using *think aloud strategy*. This technique of data analysis belonged to quantitative data analysis and the data were analyzed statistically by using T-test. According to Arikunto (2010:349) the formula of T-test is:

$$ t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}} $$

Notes:

Md   = Mean of the different between pretest and posttest

Xd   = Deviation of every subject (d- Md)

$\sum x^2 d$ = Total of quadrate deviation

N   = Subject of sample

d.b   = Decide by N-1