**CHAPTER III**

**RESEARCH METHOD**

 This chapter presents the research method. It focuses the method used in conducting this study. The decision covers research design, population, sampling and sample, variable data, data source, data collecting method and instruments and technique of data analysis.

1. **Research Design**

This study will be conducted in an pre-experimental design using quantitative approach with One-Group Pretest-Posttest design. Experimental research is a scientific investigation in which an investigator manipulates and controls one or more independent variables and observes the dependent variable or variables for variation concominant to the manipulation of the independent variables (Ary,1985:26). Experimental research can be done in the laboratory, in the class and in the field. In this study the experimental research will be done in the class with taking students as population

Experimental research is unique in two very important respects : It is the only type of research that directly attempts to influence a particular variable, and when properly applied, it is one or more dependent variables. An experimental usually involves two groups of subjects, an experimental group and a comparison group, although it is possible to conduct an experiment with one group (by providing all treatments to the same subjects) or with three or more groups (Frankle and Wallen, 1996:264).

This study uses pre-experimental with One Group Pretest-Posttest design. According to Arikunto (2006: 85) there are three kind of Pre-experimental design, those are: one shot case study, pre test and post test group and static group comparison. In pre test and post test group the observation do two times, those are: before experiment call pre test and after experiment call post test.

This study is classified as pre-experimental design because it is little or no control of extraneous variables. In the One-Group pretest-posttest design, a single group is measured or observed not only after being exposed to a treatment of some sort, but also before.

A diagram of One-Group Pretest-Posttest design :

|  |  |  |
| --- | --- | --- |
| Y1 | X | Y2 |
| Pretest | Treatment | Posttest |
|  | (Independent variable) | (Depend variable) |

The procedures of experimental research that use One-Group Pretest-Posttest design:

1. Administering a pretest with a purpose of measuring reading achievement of fifth grade of SDN Slemanan 02 Udanawu kab. Blitar.
2. Applying the experimental treatment teaching reading by using reading jigsaw as a technique (see appendix I, II) to the subjects (fifth grade students at SDN Slemanan 02 Udanawu kab. Blitar)
3. Administering a posttest with a purpose of measuring reading achievement of fifth grade students at SDN Slemanan 02 Udanawu kab. Blitar.

Differences attributed to application of the experimental treatment are determined by comparing the pretest and posttest scores.

In this study, the researcher uses experimental research with quantitative approach. The researcher wants to know the effectiveness of using jigsaw in teaching reading to the students’ reading achievement by experimental research. The impact is assessed by providing a specific treatment. The effectiveness will be known after knowing the significant differences between the students who are taught before using jigsaw and those are taught after using jigsaw.

1. **Population and Sample**

 Population is the group to which the researcher would like the results of a study to be generalizable; it includes all individuals with certain specified characteristics stated by(R. Fraenkel 1996:587)

 In this study, the researcher took the population that are all of fifth grade which consist of one class, the researcher took the V class as sample of this research which consist of 21 students of fifth grade at SDN Slemanan 02 Udanawu kab. Blitar.

Sampling is a technique to taking the sample according to Sugiyono (2007). Sampling is also as a way the researcher select number of individuals as a sample which represents the population. In this research, the researcher used purposive sampling technique. The researcher took one class of class V of SDN Slemanan 02 Udanawu kab. Blitar because the students of the fifth grade has heterogeneous than other classes. In fifth grade, there are 21 students consist of 10 boys and 11 girls.

1. **Variable**

A variable is a concept- a noun that stands for variation within a class of objects. Variables can be classified in several ways. The most important classification is on the bass of their use within the research under consideration, when they are classified as independent variables or dependent variables (Ary,1985:30).

1. Independent variable: is variable that consequence of or upon antecedent variables. One independent variable must be the treatment variable. One or more groups receive the experimental manipulation or treatment. In this study the teaching reading by using jigsaw is independent variable.
2. Dependent variable: is the response or the criterion variable that is presumed to be caused by or influenced by the independent treatment conditions and any other independent variables. In this study the dependent variable is students’ achievement in reading ability.
3. **Data and Source of Data**

Data is a rough material researcher collects from the world he is studying (Bogdan, 106:1998). While, source of data is a source in which data is taken.

Data in this study only uses primary data. Ary (1985) stated that the primary data is data which are collected directly from the sample. Primary data of this study was taken from the students’ score of the pre-test and post-test. Then, the source of data of this study was all of students of the fifth grade students of SDN Slemanan 02 Udanawu kab. Blitar.

1. **Technique of Collecting Data**

Data of this study is collected by administering test. Test in simple terms, a method of measuring a person’s ability, knowledge, or performance in a given domain. Brown (2004): 3)Researcher uses two kinds of tests those are Pre-test and post-test.

In this research, the researcher used test by giving reading test to measure the students’ reading skill. There were two test; pre-test and post-test. The former was given before students were being taught by jigsaw technique. And the latter was given after the students were being given a treatment that was teaching reading by using jigsaw technique. The test was in the form of essay and true-false questions.

The procedure of the treatment given to the students was started by preparing a story to be given for all of the groups. Then, the teacher grouped the students into some groups. The next was distributing the story to all of the members of the groups. Each of the students in a group was being given a different task to do. After all of the students knew what they should do, the teacher asked the students with the same task to make a new group. Teacher instructed the new group to discuss their task collaboratively. When the new group has finished their discussion, the teacher then asked them to move back to their original group. Each of the students must explain to all of the members about the information that he/she should explain. The last activity was giving the students some questions or problems related to the text to be answered collaboratively by all of the members of the groups.

1. **Instrument**

According to Fraenkel (1996) the device the researcher uses to collect data is called instrument. The instrument in this study was test. According to Subagiyo (2007), there are two kinds of instrument, those are: Test instrument is to measure students’ achievement and Non Test instrument used to measure attitude. The researcher used only test to measure the students’ reading achievement.

In this study, the researcher used only test to measure the students’ reading achievement. Therefore, the researcher applied pre-test and post-test test. Pre-test was given before doing an experimental research study or before teaching by using jigsaw technique at May, 10th 2012. Post test which was given after doing the experimental research study or after teaching by jigsw tachnique at May, 30th 2011.

1. **Technique of Data Analysis**

In this research, the researcher used a quantitative data analysis technique. The quantitative data of this research is analyzed by using statistical method that was T-test. This technique is used to find the significant difference on the students’ achievement after taught by using jigsaw as a technique to teach reading.

The researcher in this study used T-test with the formula, as taken from Butler (1985:91), below:

$$t\_{0= \frac{\sum\_{}^{}d}{\sqrt{\frac{N\sum\_{}^{}d^{2}- \left(\sum\_{}^{}d\right)^{2}}{N-1}}} }$$

 With,

to : the value of T count

$\sum\_{}^{}d$: the score of post-test – score of pre-test (Y-X)

 N : the number of the students