**CHAPTER III**

**RESEARCH METHOD**

This chapter presents the research method. It focuses on the use of method conducting this study. It covers research design, population, variable, source of data, techniques of collecting data, instrument, technique of data analysis, hypothesis testing.

1. **Research Design**

This study will be conducted in a experimental design using quantitative approach with One-Group Pretest-Posttest design. Experimental research is a study of the effect of the systematic manipulation of one variable on another variable (Ary, 2006:28). So, the Experimental research is design which used the quantitative approach, it is controlled one or more independent variables and dependent variables. 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 by 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 can apply 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. (Ary et al, 1985:26). So, Experimental research contributes more to be conducted to the groups in experimental research. It also provides all treatments to influence a particular variable. Experimental research has been given treatment by using one or more dependent variables.

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Experimental research has a typical task sequence which includes using quantitative research;

1. Tasks those form the main body of the lesson and can involve a number of steps, For example, learners work in pairs or groups may first complete the task, then prepare a report on the task, and finally present the report to the class.
2. In pre tasks these are activities which prepare learners to complete a task, for example, by guiding learners through an example of the task they will have to do. There can be a number of pre-tasks in one lesson.
3. In post tasks these move away from activities designed to promote fluency to those designed to promote accuracy. (Lindsay and Knight, 2006; 24). So, by including task in using quantitative research, the teacher can know the students skill before and after using the certain method. It can be conducted to do the pre tasks and post tasks successfully and extends the students’ speaking skill.

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 conducting pre-task

According to (Ary, 2006: 328), 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 speaking ability of the second grade students at MTs Sunan Ampel Ringinrejo.
2. Applying the experimental treatment teaching speaking by using inquiry method of the second grade students at MTs Sunan Ampel Ringinrejo.
3. Administering a posttest with a purpose of measuring speaking ability of the second grade students at MTs Sunan Ampel Ringinrejo.

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

1. **Population and Sampling**

Population is the larger group to which the generalization is made. A Population is defined as all members of any well defined class of people, events, or objects (Ary, 2006; 167). So, Population includes all individuals with certain specified characteristics stated, the researcher would like the results of a study to be generalizable. Based on some of these opinions can be concluded that the population is whole the object that have certain characteristics and it becomes the source data that is used by researcher in the study.

In this study, the researcher took the population that are all of the second grade which as sample of this research which consists of 38 students of second grade at MTs Sunan Ampel Ringinrejo.

Sampling is the small group is observed. According to Ary (2006: 167). Sampling is also as a way the researcher selects 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 three classes from the second students of MTs Sunan Ampel Ringinrejo. It is which a group uses experimental with one group pretest – posttest design. The researcher uses population sampling. Inferential statistics can be used to test hypotheses about populations on the basis of observations of a sample drawn from the population.

1. **Variable**

A variable is a characteristic that takes on different values or conditions for different individual. The researchers study variables and the relationship exiting among variables, when they are classified as independent variables or dependent variables (Wiersma, 1995:34).

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 speaking by using inquiry method 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 speaking skill.

From the explanation above, they must be classified as independent and dependent variables are use to conduct quantitative research.

1. **Data and Data Source**
2. **Primary Data**

According Ary (1985: 30) that the primary data is data which are collected directly from the sample. Primary data of this study is students VIII class of MTs Sunan Ampel Ringinrejo. Here, the primary data resource of this study is achievement test result in speaking skill by using Inquiry Method.

1. **Procedure of collecting data**

After the researched had got permission from headmaster, the research was conducted on 01 June 2012 at MTs Sunan Ampel Ringinrejo.

The procedures were:

1. The researcher gives the pre – test to the students.
2. The researcher gives treatment to the students.
3. The researcher gives the post – test to the students.
4. The researcher gives scores of test speaking.
5. **Teqnique of Collecting Data**

Data of this study is collected by administering test. Test in simple terms, is a method of measuring a person’s skill, knowledge, or performance in a given domain Brown (2004: 3) .Theresearcher uses two kinds of tests. They were pre-test and post-test. Pre-test was given before doing an experimental research study or before teaching by using Inquiry Method and post-test which was given after doing the experimental research study or after teaching by using Inquiry Method.

In this research, the researcher used test by conducting inquiry method to measure the students’ speaking skill. The test is given through an activity in speaking skill. Test is giving based on the inquiry method. Here, the researcher uses list of word in order to measure the students’ speaking skill. The test asks the students to find the real things based on the list of sentences.

1. **Instrument**

According to Franked (1996) the device which is used by the researcher to collect data is called instrument. The instrument in this study is standardized test. According to Ary (2006, 218), standardized tests are published tests that have resulted from careful and skillful preparation by experts and cover boards academic objectives common to the majority of school systems. These are tests for which comparative norms have been derived, their validity, and reliability established, and directions for administering and scoring prescribed.

In this study the researcher uses standardized test as instrument, therefore, the researcher applied pre-test and post-test. Pre-test was given before conducting an experimental research study or before teaching by using inquiry method. Post test which was given after conducting the experimental research by using inquiry method, in this post test the students are given speaking test. From this explanation above by using standardized test as instrument, the researcher applied two tests. They are pre test and post test, Pre test is giving before using the inquiry method and the Post test is conduct after teaching by using inquiry method.

In this research the researcher uses two kinds of test. They were pre-test and post test. Pre-test was taken before doing an experimental study or before teaching speaking by using inquiry method. The pre-test have been done on May, 29st 2012. The second was Post test; it was taken after conducting an experimental study or after teaching speaking by using inquiry method. The post-test have been done on June, 02nd 2012.

In getting the data, in class VIII A that becomes an experiment group the writer as teacher in this study teaches the students for three weeks. In teaching learning process for the first the teacher gives pre-test in speaking. The next teacher teaches speaking by using inquiry method. In the end, the teacher gives post-test to the students. The post-test in this case is speaking test in form of inquiry method was given by using their own words. The score was taken from the pronunciation or accent, grammatical structure, vocabulary, fluency and the comprehension.

Form of assessing speaking test.

Table 3.1 of Proficiency Descriptions By (Hughes, 2003:131)

|  |  |  |
| --- | --- | --- |
| Aspect | Score | Proficiency Description |
| Pronunciation | 1 | Pronunciation frequently unintelligible. |
|  | 2 | Frequent gross errors and a very heavy accent make understanding difficult, require frequent repetition. |
|  | 3 | “Foreign accent” requires concentrated listening, and mispronunciations lead to occasional misunderstanding and apparent errors in grammar or vocabulary. |
|  | 4 | Marked “foreign accent” and occasional mispronunciations which do not interfere with understanding. |
|  | 5 | No conspicuous mispronunciations, but would not be taken for a native speaker.  |
|  | 6 | Native pronunciation, with no trace of “foreign accent.” |
| Grammar | 1 | Grammar almost entirely inaccurate except in stock phrase. |
|  | 2 | Constant errors showing control of very few major patterns and frequently preventing communication. |
|  | 3 | Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding. |
|  | 4 | Occasional errors showing imperfect control of some patterns but no weakness that causes misunderstanding. |
|  | 5 | Few errors, with no patterns of failure. |
|  | 6 | No more than two errors during the interview. |
| Vocabulary | 1 | Vocabulary inadequate for even the simplest conversation. |
|  | 2 | Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc) |
|  | 3 | Choice of words sometimes inaccurate, limitations of vocabulary prevent discussion of some common professional and social topics. |
|  | 4 | Professional vocabulary adequate to discuss special interest; general vocabulary permits discussion of any non-technical subject with some circumlocutions. |
|  | 5 | Professional vocabulary broad and precise; general vocabulary adequate to cope with complex practical problems and varied social situations. |
|  | 6 | Vocabulary apparently as accurate and extensive as that of an educated native speaker. |
| Fluency | 1 | Speech is so halting and fragmentary that conversation is virtually impossible. |
|  | 2 | Speech is very slow and uneven except for short or routine sentences. |
|  | 3 | Speech is frequently hesitant and jerky; sentences may be left uncompleted. |
|  | 4 | Speech is occasionally hesitant, with some unevenness caused by rephrasing and groping for word.  |
|  | 5 | Speech is effortless and smooth, but perceptively non-native in speed and evenness.  |
|  | 6 | Speech on all professional topics as effortless and smooth as a native speaker’s. |
| Comprehension | 1 | Understands too little for the simplest type of conversation. |
|  | 2 | Understands only show, very simple speech on common social and touristic; requires constant repetition and rephrasing. |
|  | 3 | Understands careful, somewhat simplified speech when engaged in a dialogue, but may require considerable repetition and rephrasing. |
|  | 4 | Understands quite well normal educated speech when engaged in a dialogue, but requires occasional repetition or rephrasing. |
|  | 5 | Understands everything in normal educated conversation except for very colloquial or low-frequency items, or exceptionally rapid or slurred speech. |
|  | 6 | Understands everything in both formal and colloquial speech to be expected of an educated native speaker. |

From this table above, it can be taken to give the speaking skill scores. Some aspect are by proficiency descriptions which done the students skill before and after using inquiry method.

TABLE 3.2 WEIGHTING TABLE

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Aspect | 1 | 2 | 3 | 4 | 5 | 6 | (A) |
| Pronunciation | 0 | 1 | 2 | 2 | 3 | 4 |  |
| Grammar | 6 | 12 | 18 | 24 | 30 | 36 |  |
| Vocabulary | 4 | 8 | 12 | 16 | 20 | 24 |  |
| Fluency | 2 | 4 | 6 | 8 | 10 | 12 |  |
| Comprehension | 4 | 8 | 12 | 15 | 19 | 23 |  |
|  |  |  |  |  |  | Total |  |

From the table above, it can be taken to measure the students weighting and it also easy to get result of scoring test. Some aspects are by student’s skill before and after using inquiry method.

1. **Technique of Data Analysis**

In this research, the writer uses a quantitative data analysis technique. The quantitative data of this research is analyzed by using statistical method. This technique is used to find the significant difference on the students’ speaking skill after being taught by using inquiry method.

The researcher in this research uses T-Test stated by Arikunto (2002:275) as formulated below:

t : 

Notes:

Md : means of different pre-test and post-test

Xd : deviation in every subject (d – Md)

∑x2d : total of quadrate deviation

N : subject of sample

d.b : decided by N-1

1. **HYPOTHESIS TESTING**

The hypothesis of this studies as follows:

* 1. If T-Test score is bigger than T-table, the alternative hypothesis (Ha) is accepted. It means that there is significant difference score to the second grade before using inquiry method and after using inquiry method.
	2. If T-Test score is smaller than T-table, the Null Hypothesis (Ho) is rejected. It means that there is no significant difference score to the second grade before using inquiry method and after using inquiry method.