**CHAPTER III**

**RESEARCH METHOD**

 This chapter presents the research method which was applied in this present study. It covers research design, population and sampling, variable, source of data, instruments and techniques of collecting data, techniques of data analysis, and hypothesis testing.

1. **Research Design**

It is better to know the definition of research, before going to point of the research design. According to Sugiyono (2011, 1) research is the scientific way to get the data with a specific purpose. Research is the sequences of the science activities in order to solve a certain problem (Azwar, 2001:1). Meanwhile, Hadi states that research is an effort to discover, develop, and to assess the truth of the knowledge which is done through science method (Hadi, 1993:3). Then, research is one of alternative ways that is done to investigate and to improve knowledge.

This research was a 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 concomitant 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.

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 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 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 used 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 before applying strategy with a purpose of measuring speaking achievement of eleventh grade students at MAN Tulungagung1.
2. Applying the experimental treatment teaching speaking by using strip stories as a media to the subjects (eleventh grade students at MAN Tulungagung1)
3. Administering a posttest after applying strategy with a purpose of measuring speaking achievement of eleventh grade students at MAN Tulungagung1.

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

In this study, the researcher used pre-experimental research with quantitative approach. The researcher wants to know the effectiveness of using strip stories in teaching speaking to the students’ speaking achievement 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 strip stories and those are taught after using strip stories.

1. **Population and Sampling**

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 populations are all of eleventh grade students of MAN Tulungagung 1 which consist of nine classes. The researcher took the XI Science 4th Excellent class as sample of this research which consist of 356 students of eleventh grade at MAN Tulungagung 1.

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, sampling was selected randomly. The researcher took XI Science 4th Excellent class. In XI Science 4th Excellent class, there are 31 students consist of 9 boys and 22 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 speaking by using “Strip Stories” 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 ability.
3. **Data and Source of Data**

Data in this study only uses primary data. Ary (1985) stated that the primary data is data which are collected directly from the sample.

Arikunto (1998: 114) states that, sources of data are subjects where data comes from. Those can be;

* 1. Person

Person is man who gives the data or information orally, it can be done by interviewing or by giving questionnaire for the subject. In this research the person who will give information to the writer is the teacher, the head master and the student.

* 1. Place

Place is the Resources of data that deals with place or moving, some place can be the room. The location of the resources of material the place of this research was in MAN Tulungagung 1

* + 1. Paper

Paper is resources of data that deals with symbol, picture the document, book number, the paper of this research is document about structure of MAN Tulungagung 1

Primary data source of this study is students XI Science 4th Excellent class of MAN Tulungagung 1. The data was get from the result of pre-test and post test conducted by the students.

1. **Instruments and Techniques of Collecting Data**

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

To reach the goal of the study, the researcher has to construct the test as good as possible. She has to select the type of test and arrangement of the test.

“A test of speaking measures not only the student’s knowledge of the meaning of certain words and words group but also understanding the common expression that is used in daily. Such a test may examine the student’s active vocabulary (the words he should be able to use in speaking) or his passive vocabulary (the words he should be able to recognize and understand when he is listening to someone) and some expressions that is able to be covered by the student in their speaking”. (Heaton, 1975: 5)

Harris (1969: 13) states that all good tests possessed two qualities, i.e. validity and reliability. That was to say, any test that we use has to be appropriate in terms of our objectives, dependable in the evidence it provides, and applicable to our particular situation. Those characteristics of a good test would be explained further below.

1. Validity

Heaton (1988: 159) says that the validity of a test is the extent to which it measures what it is supposed to measure and nothing else. Every test, whatever it be short, informal classroom test or a public examination should be as valid as the constructor can make it. There are three kinds of validity, i.e. content validity, empirical validity, and face validity (Harris, 1969: 18).

Harris (1969: 18 – 2) explained: content validity meant the test reflected an analysis according to the views of recognized authorities in the skill area. Empirical validity depended in large part on the reliability of the test and criterion measure. Face validity was the way the test look whether it was irrelevant, silly, inappropriate, etc.

In this research, content validity was used. This kind of validity depends on careful analysis of the language being tested and of the particular treatment activity. The test should be so constructed as to contain representative sample. The relevancy of the objective of the test and the content of the test items are show the content validity of the test. The question constructed and represented the formulation of the objective and syllabus of the test as like in Appendix 1. Moreover, from the scores achieved by the students in the test retest, it shows that the student had performed the ability that is being measured. Thus it can be concluded that the test of speaking has met the criteria of content validity.

1. Reliability

 Reliability is a general quality of stability of scores regardless of what the test measured and Anastasari states that reliability refers to the consistency of scores obtained by same persons when reexamined with the same test on different occasions, or with different sets of equivalent items or under other variables examining condition of the error measurement of a single score whereby we can predict the range of fluctuation likely to occur in a single individual’s score as a result of irrelevant, chance factor. While Frankle (1990) states that reliability refers to the consistency of scores obtained. How the consistency of each individual student from one administration to the other and the administration of set of items to the other set.

 To measure the reliability of the instrument, the researcher can use some methods. One of the methods to measure the reliability of instrument is by using test/retest. In this study, the researcher was tending to use test/retest method. The research instrument which is tested by the test-retest is done by trying out that instrument few times to the respondents. So, in this case the instrument is same, the respondents are same but the time is different (Sugiyono, 2011: 354). The first test is done on 17th March 2012 and the retest was done on 24th March 2012.

 By using The Pearson Product Moment Correlation Coefficient the researcher correlated the test and retest value. To help the researcher in measuring the correlation between test and retest, she used SPSS 17.0. The computation can be seen in Appendix 2. The result showed that *r* value is 0,910 and the *r* table is 0,367. Because 0,910 > 0,367 and *r* value is between 0, 80 and 1, 000, it can conclude that these instruments are very reliable and can be used for research.

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 an oral test to measure the students’ speaking ability. There are two kinds of test, namely: Pre-test and Post-test.

Pre-test was done for about 2 meetings. It was conducted on March, 19th and 22nd 2012. Pre-test was done by using the group discussion technique. The researcher asked the students to make a discussion with the giving topic. Then the researcher gave some questions to the students. The questions are arranged as follow:

1. Telling the characters of the story.
2. Describing the characteristics for each character.
3. Deciding the setting of the story.
4. Retelling the complete story.
5. Mentioning the moral values from the story.

The result of pre-test was elaborated by using rubric. The speaking rubric which used by the researcher is by Theisent. The rubric can be seen in Appendix 3. There are limitations of total score here to categories student’s achievement, the maximum total score of speaking is 24 and the minimum total score is 0. Only students who get score more than 12 can pass the test. Passing score is scores that have to be reached by students in order to pass the test.

While post test was conducted on April, 9th and 12th 2012. The post test was given after the researcher gave treatment to the students. In the post-test, the researcher used the strip stories technique. The strip stories technique was conducted in a group by spread out the strip of stories to the each student. In these activities the students forced to work individually but still in group. Some questions which were arranged by the researcher as follows:

1. Reading and comprehending the strip of story you got.
2. Retelling the part of story you got by your own word to your friends in your group.
3. Rearranging the story into the complete story.
4. Retelling the whole story.
5. Deciding the moral value from the story.

To get the data from pre-test, the researcher used the same rubric with the rubric used in pre-test.

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’ achievement after taught by using strip stories as technique.

The researcher in this research uses T-Test stated by Arikunto (2006:86) 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 : decide by N-1

1. **Statistic Hypothesis**

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 different score to the eleventh grade before using strip stories and after using strip stories. The difference is significant. The strategy is effective to be applied.
	2. If T-Test score is smaller than T-table, the Null Hypothesis (Ho) is rejected. It means that there is no different score to the eleventh grade before using strip stories and after using strip stories. The difference is not significant. The strategy is not effective to be applied.