

## **CHAPTER III**

### **RESEARCH METHOD**

This chapter presents the research method. It focuses on research design, population and sampling, research instrument, validity, and reliability testing, research procedure, data collecting method, and data analysis.

#### **A. Research Design**

Research design is an attempt or a plan to answer the research problems by using systematic ways to collecting the data. Research design is process of collecting data for truth the research. The most important criteria that design be appropriate for testing the particular hyphotesis of the study (Ary 1985:260). In a study, a good plan is needed to get maximum results. In this study, researcher will present the research based on quantitative approach. A quantitative approach is one which investigatory primarily uses postpositive claim for developing knowledge (cause and effect thinking, reduction to specific variables and hyphotesis and question, use of measurement and observation, and the test of theories) employs strategies of inquiry such as experiment, survey and collect data on predetermined instrument that yield statistic data (Creswell 2008:21). It will determine the one thing (independent variable) and another thing (dependent variable). Quantitative approach that method dealing with numbers and anything is measurable in a systematic way from investigation form of phenomena and relationships. Quantitative used to answer questions on relationships within

measurable variables with intention to explain, predict, and control a phenomena (Leedy 1993;45).

This research conducted in pre-experimental design by research design in the field with one group inside pre-test and post-test design. Pre-experimental design are called often happen before a true experiment conducted in a research. Researcher want to see if there is intervention will have some effect on a small group of people before they seek funding and dedicate time to conduct a true experiment. Pre-experimental design usually conducted as a first step towards establishing the evidence for against an intervention. However, this type of design comes with some unique advantages which we will apply pre-experimental design in the classroom. This study was classified as pre-experimental research design with form pre-test and post-test using quantitative approach without control groups. It take one class to apply pre-test and post-test and seen the result by data analysis on chapter IV. The one-group pretest-posttest design involves three steps: (1) administering a pre-test measuring the dependent variable; (2) applying the experimental treatment X to subjects; (3) administering a posttest, again measuring the dependent variable (Ary 2010:303).

Based on explanation above, so the researcher applied the procedure of pre-experimental research were:

1. The researcher administering a pre-test for class VIII F to measure speaking skill of eight grade students at SMPN 1 Tanggunggunung before a researcher give treatment by using Flashcard into the class.
2. Give treatment using Flashcard as a media for subjects from a research.

3. The researcher manage the class to give the post test after the treatment finished for measuring speaking skill from eight grade students.

The effectiveness using flashcard into the class can be designed by table 3.1 as follows:

**Table 3.1 The research design one group pre and post test design**

Pre-test and post-test pre-experimental research design Sample	Pre-test	Treatment	Post-test
Experimental group	Y1	X	Y2

Y1 : The students speaking ability based on pre test

X : Treatment

Y2 : The student speaking ability based on post test

Differences will be known by comparing the pre-test results given before treatment do in classroom and post-test results given after treatment. After knowing difference from pre-test and post-test result, it can be concluded that the effectiveness of this media was known after significant difference counted by SPSS 16 and researcher can be taken conclusion if there is any significant or not who taught before using flashcard and after using flashcard.

## **B. Population, Sample and Sampling**

Population is a region in general consisting of objects / subjects that have a certain quantity and characteristics applied by researcher to be studied and drawn conclusion. Population of this study took from eight grade student of SMPN 1

Tanggunggunung in the academic year 2018/2019. Population in this research for eight grade is 210 students there are 6 classes.

Some of the population numbers selected for data sources are called samples. The type of sample taken must reflect the population. Sample is taken from a population because in a population too large and need a part of the reference to know a result of a study that represent from population. Sample is very important in a research conducting. The “goodness” of the sample determines the generalizability of the results (Gay 1992: 125-126). Sample of the research were the student of the VIII F class, which are consist 31 students and this research conducted one class. More detail information of that class, the VIII F class there were 31 students consisting of 19 males and 12 females.

Sampling is a taking sample technique. Sampling is taking from a portion of the population. Sampling is the process of obtaining a sample of selecting a number of individuals for a study in such a way that the individuals represent the large group from which they were selected (Gay, 1992: 123). Purposive sampling provides non-probability samples which receive selection based on the characteristics which are present within a specific population group and the overall study. It is a process that is sometimes referred as a selective, subjective, or jugmental sampling, but the actual structure involved remains the same. The researcher use simple purposive sampling that in this case which taken the researcher acceptable suggestion and trust sufficient information from english teacher and vice student institution thus researcher choose VIII F because in this class had good for taught it and appropriateness in research.

### **C. Research Variable**

Variable as key term of research, every research involve variables to be measured. It is difficult for researcher to conduct while the research variables are not clear. Variable as the characteristic attribute form of an individual, group and educational system or other invorenment of the research. variable is characteristics that tend to differ from individual to individual, though any two or more individuals may have the same variable trait or measure (Charles C.M 1995:29). This research have two variables, they were independent variable and dependent variable.

#### **1. Independent variable**

Independent variable is a variable that influences or causes changes in the dependent variable. In this study, researcher provide a treatment in teaching speaking by using flashcard as independent variable. In the implementation, the researcher give a pre-test and post test to the eight grade in the class.

After that know scores of test then do a treatment for student. In this treatment give several times until the specified time. After the students given treatments, researcher did a post test to determine whether there are increase or not in posttest scores. In this final test assessment can be seen that the treatment is successful or not to support students on' speaking skill.

#### **2. Dependent variable**

Dependent variable is a variable that is influenced by the result of free variable. a dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable (Creswell 2008:126). It said that

dependent variable is influenced by independent variable. The dependent variable in this study is the students' speaking skill that shows by student's score.

#### **D. Research Instrument**

Instrument is needed to collect a data, the instrument was used to achieve accuracy of the data and indicate that researcher was successfully in a research. Testing hypotheses or seeking answers to questions, you should have a valid, reliable instrument for collecting your data Gay (1992: 147). Tests are used to determine the response of students and determine whether they can pass the test with satisfactory value. Test is means of measuring the knowledge, skill, feeling, intelligence, or aptitude of an individual or group (Gay, 1992: 154). The researcher used achievement test to collected data. Achievement test measures what a person has learnt (achieved) during a course of instruction (Allison, 1999: 80).

The researcher used an oral test to get students' speaking score. The researcher conducted pre-test with the topic a real money without try out instrument. The researcher give test to the students twice, those are pre-test and posttest. Pretest was gave in 45 minutes before researcher giving treatments. Then researcher gave student treatments. Treatments gave for students three times and It finished before did a post-test.

The pre-test instrument researcher provided giving topic was a real money then researcher to be order students for says what they look at the pictures based on their own word. In post-test researcher gave students a topic was The Elephant. Then to assess students' speaking, the researcher set up analytic scoring rubric

which include the criteria such as pronunciation vocabulary, grammar, fluency, and comprehension. The scoring of speaking test can be seen at table below:

**Table 3.2 The scoring procedure of oral**

Rated Qualities	Behavioral statements	Points
Pronunciation	✓ Has few traces of foreign accent.	5
	✓ Always intelligible though one is conscious of definite accent.	4
	✓ Pronunciation problems necessitate concentrated listening and occasionally lead to misunderstanding.	3
	✓ Very hard to understand because of pronunciation problems. Must frequently be asked to repeat.	2
	✓ Pronunciation problems to severe as to make speech virtually unintelligible.	1
Grammar	✓ Makes few (if any) noticeable errors of grammar or word order.	5
	✓ Occasionally makes grammatical; and/or word order errors which do not, however, obscure meaning.	4
	✓ Makes frequent error of grammar and word order which occasionally obscure meaning.	3
	✓ Grammar and word order error make comprehension difficult. Must often rephrase sentences and/or restrict him to basic patterns.	2
	✓ Errors in grammar and word order to severe as to make speech virtually unintelligible.	1
Vocabulary	✓ Use vocabulary and idioms is virtually that of native speaker.	5
	✓ Sometimes uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.	4
	✓ Frequently uses the wrong words; conversation somewhat limited because of inadequacies vocabulary.	3
	✓ Misuse of word and very limited vocabulary make comprehension quite difficult.	2
	✓ Vocabulary limitations so extreme as to make conversation virtually impossible.	1

Fluently	✓ Speech as fluent and effortless as that of native speaker.	5
	✓ Speech of speaker seems to be slightly affected by language problems.	4
	✓ Speed and fluency are rather than strongly affected by language problems.	3
	✓ Usually hesitant; often forced into silence by language limitations.	2
	✓ Speech is so halting and fragmentary as to make conversation virtually impossible.	1
Comprehension	✓ Appears to understand everything without difficulty	5
	✓ Understands nearly everything at normal speed, although occasional repetition may be necessary.	4
	✓ Understands most of what is said at slower than normal speed with repetition.	3
	✓ Has great difficulty following what is said. Can comprehend only "social conversation" spoken slowly and with frequent repetitions.	2
	✓ Cannot be said to understand even simple conversational English.	1

David P. Harris (1997:84)

### **E. Validity, Reliability Testing and Normality Testing**

Quantitative research measurements are validity and reliability of instrument of the research. Reliability and validity are two important concepts deal with the psychological characteristics of measurement and its precision (Singh, 2007: 76-77).

#### **1. Validity**

Validity is something such as a result or a piece of information whether it can be trusted or believed. It is the degree to which a test measures what it is supposed to measure (Gay, 1992: 155). Researcher has been doing test validity to



English language teaching. That validity to measure whether the test has a good validity, researcher analyzed tests from content validity and construct validity.

Content validity is relevant. It means that items or tasks in test match as a whole is supposed to assess validity. The objectives of content validity are set out in detail, for example in a syllabus that lists skills or functions, then the content validity can be assessed by comparing the kind of language generated in the test against the syllabus (Underhill, 2006 : 106). A test had content validity if the contents represented from sample language skill, structures would be tested. The researcher adjusted the test with the learning syllabus that contains of standard competence and basic competence in syllabus Curriculum of 2013 since the school implements the Curriculum of 2013 in the time the researcher conducted this research. The ways in which test specialists have defined content validity are reviewed and evaluated in order to determine the manner in which this validity might best be viewed. The main and basic competence in the curriculum 2013 are follows:

**Table 3.3 Main and Basic Competence**

Main Competence	Basic Competence
Processing, reasoning, and presenting in concrete and abstract realms related to development of those studied in the school independently and able to use methods that are in accordance with scientific rules.	Composing oral descriptive text is very short and simple about person and animal by paying attention to social functions, text structures, and linguistic elements correctly and context.

Construct validation is involved whenever a test is to be interpreted as a measure of some attribute or quality which is not operationally defined. For speaking test it should have such knowledge of speaking such as

pronunciation, fluency, vocabulary, comprehension, and grammar. Construct validity is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perception (Brown 2004:25). The pre-test and the post-test used oral test which students were asked to tell their imagination or experience based on the picture.

## **2. Reliability**

Reliability is necessary characteristic of any good test for it to be valid at all. Reliability means the stability of test score, a test cannot measure anything well unless it measure consistently. According to Brown (2004:20) a reliable test is consistent and dependable. It can be said also that reliability is the consistency of the results of the acquisition during the study in the classroom. The result of a language skill assessment has high reliability if the result precisely represents the true level of the skill being assessed. To know reliability of this test researcher should analyze the result of tryout by using *Pearson Product Moment* on SPSS 16.0 windows to find the reliability.

The researcher using Inter Rater Reliability to assess the students which different judges give based on the same criteria. Measuring inter rater reliability, the researcher using analyzed of the result pre-test and post-test that used scoring rubric used for measure students' speaking objectively. Then, researcher calculated of two scores to get the correlation between them. The formula to find the correlation was *Pearson Product Moment* in SPSS Statistic 16.0 version. The result of the correlation were the pretest has correlation 0.78 and the posttest has correlation 0.73. It is good correlation in this research.

### 3. Normality Testing

Normality testing is very important testing that was conducted by the researcher before analyzing the data. The both test was conducted to fulfill the criteria of parametric statistic whether the researcher can use t-test, z-test, or f-test to analysis the data. While the meaning of parametric is significance test which assume a certain distribution of the data (usually the normal distribution). In order to be able to decide the formula used for analysis, the normality testing was done in this study. Normality is one of the testing data that assumes the data is parametric or non-parametric test; the researcher should determine the normality of the data. The researcher using formula Kolmogorov-Smirnow test of SPSS IBM 16.0. It is point out that normality testing of distribution data was conducted by using kolmogorov smirnov statistical which the tool has been available in spss. The ways that can be used to test whether the residual variable has a normal distribution as follow:

1. If the significance value or probability  $> 0.05$ , so residual has normal distribution.
2. While the significance value or probability  $< 0.05$ , so residual hasn't normal distribution.

While, to fulfill the provision of normal distribution is if the significance value or probability  $> 0.05$ . It is supported point out that since the normality assumption is satisfy from a research.

## **F. Data Collection Method**

The data collection method need for obtain a research data. The data collected pre-test and post-test. In this research, the researcher used oral test to know the students score of speaking skill.

Pre-test purpose to get speaking score before doing the treatment. Pre-test was designed for the purpose of measuring pre-existing students' achievement in speaking skill; furthermore, it was administered before the treatment was given to the students. The researcher conducted pre-test in the beginning of study. researcher are going to give flashcard, then students talk about what they look before at flashcard many times repeated. Students are given time by researcher for analysis the picture in flashcard. They will arrange a sentence correctly based on the picture.

Below is explained the treatment stage using flachcard media in eight class. The steps of flashcard media usage in the implementation of learning is as follows:

1. Teacher explained the descriptive text, structures and its linguistic elements
2. The teacher shows a flashcard many times repeated for a guide activities.
3. Students are asked to express their opinions about the pictures. Then teacher shares an example of descriptive text based on pictures displayed.

4. Students are asked to analyze that structure, type of sentence and linguistic characteristics contained in the text.
5. Students practice saying a sentences that matches the content of the pictures. Students pair with each other its two students then teacher shared the flashcard.
6. Students do peer editing
7. Students and teacher conduct evaluations and reflections on the learning that has been carried out.

Post-test is to get speaking score after doing the treatment. Post-test was one kind of test which given after gaining the score in pre-test and conducting treatments. It was purpose to known the result of the new strategy given is there effective or not. Post-test it was conducted within once meeting. The teacher gives flashcard many times repeated to the students. Then the students tell their experience based on the picture with their own words. Before starting practice speaking in front class, identify clues and think about possible vocabulary used to describe the clue was also conducted in classroom to help the students in expressing their ideas when speaking testing.

### **G. Data Analysis**

The data analysis in this study used quantitative data analysis technique to know the students' ability in speaking. It will use statistic method. Researcher conducted test for the students before and after they were taught by using flashcard. The quantitative data of this research collected from the tests

conducting. The researcher conducted test to the students before and after they were taught by using Flashcard practices.

Researcher will be analyzed a statistical analysis by using SPSS statistic 16 program to ensure the effectiveness and to get stronger conclusion. The t-test was taken from pretest and posttest scores, test-result which has conducted before and after being taught using Flashcard practices. After the data known, then it will take a conclusion from research.

#### **H. Hypothesis Testing**

In the hypothesis testing to know about the effectiveness of flashcard toward students speaking skill, the researcher will use data analysis as measuring data and a result from data analysis can be answer of hypothesis testing. Researcher will analyze collection data by using statistic calculation. If the result form point out at level significance more than 0.05 so that indicating a data for hypothesis testing is null hypothesis accepted it explain flashcard not effective for students' speaking skill at eight grade from SMPN 1 Tanggunggunung. On the contrary, while a data result point out less than 0.05 as level of significance, so researcher will take conclusion that null hypothesis rejected and flashcard effective for students' speaking skill at eight grade from SMPN 1 Tanggunggunung.