

## **CHAPTER III**

### **RESERACH METHOD**

This chapter present the description of the research method used in the study. It consists of (1) Research Design, (2) Research Variables, (3) Population, sample, and Sampling, (4) Instrument of The Research, (5) Validity and Reliability Testing, (6) Normality Testing, (7) Data Collecting Method, and (7) Data Analysis

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

Research design is defined as the strategy or the way how the researcher gets the valid data, analyze them, and finally come to the answers of the research problem. The researcher used quantitative approach. According to Aliaga and Gunderson (2002:81), quantitative research is explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics). In another definition according to Muijs (2004:2) quantitative research is essentially about collecting numerical data to explain a particular phenomenon.

The research design used in this research was correlational research design. Creswell (2012:619) said correlational research design are quantitative designs in which investigators use a correlation statistical technique to describe and measure the degree of association (or

relationship) between two or more variables or sets of scores. The resulting data is numeric.

The researcher conducted this research by using correlational design in order to determine the correlation between students' attitude and students' English achievement in MTs Sultan Agung Jabalsari.

## **B. Research Variables**

A variable is a construct or a characteristic that can take on different values or scores (Ary et al., 2010:37). There are two kinds of variables in this research, independent variable and dependent variable.

### **1. Independent variable**

Ary et al. (2010:266) stated that the independent variable is manipulated (changed) by the researcher. It means that the independent variable can give effect to dependent variable. The independent variable of this research was the students' attitude at MTs Sultan Agung Jabalsari.

### **2. Dependent variable**

The dependent variable is an outcome from the effect of the independent variable. In this research, the dependent variable was the students' English achievement at MTs Sultan Agung Jabalsari.

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

### **1. Population**

Population is defined as all members of any well or the larger group which the generalization is made, Ary (2010:148).

Chojimah (2019) also said that population is all subjects (students, sentences, animals, and many other) being studied. The population in this research was students of first grade in the second semester at MTs Sultan Agung Jabalsari. The total numbers of population is 22 students.

## 2. Sampling

Sampling is a way to take representative sample of the population Riduwan (2010:11). This research used the total population sampling technique. According to sugiyono (2014:68), total population sampling is a sampling technique where the whole members of population are treated as sample. The total population sampling technique is used when the population members are less than 30 people.

## 3. Sample

According to Sugiyono (2014:62), sample is part of population that represent the characteristic of it. Another definitio is from Nurul Chijimah (2019) that sample is part of population that is being studied. Because the total population of this research was less than 30 students, so the researcher took all first grade students of MTs Sultan Agung Jabalsari as the sample of this research.

#### **D. Instrument of the Research**

In order to collect the data for research, the researcher used some instruments. In this case, the instruments were questionnaire. Questionnaire is either based on a set of structured item (in which the respondent choose from a limited number of responses) or unstructured (in which open-ended question are given that a respondent can answer as he or she chooses) (Richards, 2001:60). Through questionnaire, the researcher gets all information that she wants to know. The researcher uses questionnaire in order to know the students' opinion related to their attitude.

The questionnaire used in this study was closed questionnaire. This means that both of questions and answers were provided by the researcher to the students as research subject. The researcher only used an attitude questionnaire shown in appendix 1 to collect the data using Likert scale questionnaire.

The questionnaire was adapted from the Attitude Questionnaire Test employed by Boonrangsri, Chuaymankhong, Remyindee, and Vongchittipinyo (2004), the Attitude and Motivation Test Battery (AMTB) designed by Gardner (1985). On the whole questionnaire used in this study contains 30 item concerning language attitudes in term of behavioral, affective or emotional and cognitive aspects of attitude. The participants responded from a range of strongly disagree to strongly agree responses on a scale of 1 to 5.

To make this questionnaire easier to distribute to the students the researcher used Google Forms. Google Forms is a service from Google that allows you to create surveys, questions and answers with online form features that can be tailored to your needs.

## **E. Validity and Reliability**

There are two important characteristics that every measuring instruments should go through a process of validi

### **1. Validity**

Validity is a measurement that shows the validity levels of an instrument. According to Brown (2000:387) by far the most complex criterion of a good test is validity. A valid instrument has a high validity. In this study, the researcher used *Cronbach's Alpha* and count it by using SPSS 23 for windows to measure the validity of the research instrument.

The researcher conducted a try out to test the research instrument. The try out conducted to 10 first grade students at MTs Sultan Agung Randomly through online form, then the result was analyzed for its validity by using SPSS 23 for windows.

### **2. Reliability**

An instrument that has reliability will also produce reliable data. The reliability show the consistency and stability of the measurement score (Sarwono, 2006:219). In reliability testing, if the cronbach's alpha  $> 0,60$  then the instrument is reliable, if the

cronbach's alpha  $< 0,60$  then the instrument isn't reliable or inconsistent.

#### **F. Normality Testing**

Normality test is used to test whether a variable is normal or not. Normal here means if the data has a normal distribution. To test the normality of the data, the One Sample Kolmogorov-Smirnov test can be used with the provision that if Asymp. Sig.  $> 0.05$ , the data are normally distributed (Asmarani, 2008:234) in this case the normality test was measured by using SPSS 23 for Windows.

#### **G. Data Collecting Method**

Data collecting method is the technique used by the researcher to obtain data. This data collecting took place in MTs Sultan Agung Jabalsari. The data in this research were obtained through:

##### 1. Questionnaire

Questionnaire is either based on a set of structured item (in which the respondent choose from a limited number of responses) or unstructured (in which open-ended question are given that a respondent can answer as he or she chooses) (Richards, 2001:60). Through questionnaire, the researcher gets all information that she wants to know. The researcher uses questionnaire in order to know the students' opinion related to their attitude.

## 2. Document Analysis

To obtain data about students' English achievement the researcher used the document analysis method. The researcher obtained the data about students' English achievement from the students' report.

### **H. Data Analysis**

Data analysis is the process of arranging the order of the data, organizing it into a pattern, category and description of the basic unit. Data analysis is a review of a series of activities, grouping, systematization, interpretation and verification of the data so that the phenomenon has social, academic and scientific value. (Tanzeh,2011:69).

Hasan (2006: 30) stated that analysis quantitative is analysis that use statistic instruments, the instrument that use models like mathematic model. The result is given in numerical form then is explained and interpreted descriptively. The researcher used these following steps to analyze the obtained data:

#### **1. Research Instrument Testing**

##### **a. Validity Testing**

The researched conducted a try out to test the research instrument. The try out conducted to 10 first grade students at MTs Sultan Agung Randomly, then the result was analyzed for its validity by using SPSS 23 for windows and the result was:

**Table 3.1**  
**Result of validity test toward the research instrument tested using SPSS 23**

Item Number	T-test Score	Description
1	0.884	Valid
2	0.751	Valid
3	0.710	Valid
4	0.712	Valid
5	0.640	Valid
6	0.553	Valid
7	0.724	Valid
8	0.497	Valid
9	0.371	Valid
10	0.733	Valid
11	0.661	Valid
12	0.671	Valid
13	0.701	Valid
14	0.636	Valid
15	0.578	Valid
16	0.788	Valid
17	0.476	Valid
18	0.647	Valid
19	0.758	Valid
20	0,541	Valid
21	0.585	Valid
22	0.601	Valid
23	0.707	Valid
24	0.623	Valid
25	0.442	Valid
26	0.383	Valid
27	0.645	Valid
28	0.472	Valid
29	0.418	Valid
30	0.611	Valid

b. Reliability Testing

The result of reliability testing toward the research instrument by using SPSS 23 was:

**Table 3.2**  
**Result of Reliability Testing toward Research Instrument Tested Using SPSS**

23

		N	%
Cases	Valid	22	100,0
	Excluded <sup>a</sup>	0	,0
	Total	22	100,0

a. Listwise deletion based on all variables in the procedure.

Cronbach's Alpha	N of Items
M ,941	30

From the table above, the value of cronbach's alpha was 0,941 and it was bigger than 0,60. So it can be concluded that the research instrument is reliable.

c. Normality Testing

To test the normality of the data distribution, the researcher used One Sample Kolmogrov-Smirnov test with the provision that if Asymp. Sig. > 0.05, the data are normally distributed. The normality testing was tested on the data about students' attitude and students' English achievement. The normality test was measured by using SPSS 23 for Windows, and the result of normality testing on data about students' attitude was as follows:

**Table 3.3****Result of normality test computed using SPSS 23 for windows**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Predicted Value
N		22
Normal Parameters <sup>a,b</sup>	Mean	80,4090909
	Std. Deviation	9,70133460
Most Extreme Differences	Absolute	,168
	Positive	,157
	Negative	-,168
Test Statistic		,168
Asymp. Sig. (2-tailed)		,109 <sup>c</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

From the table 4.6 it can be seen that the sig. Value was 0,109 and it was higher than 0,05 ( $0,109 > 0,05$ ). So it can be concluded that the data of students attitude was distributed normally.

## 2. Hypothesis Testing

To test the hypothesis of this research, the researcher used the *Pearson's Product Moment* formula. This formula was used in order to know whether there is a correlation between variable X (Students' Attitude) and variable Y (Students' English achievement). This test was conducted using SPSS 23 for windows. The hypothesis was as follows:

Ho : There is no correlation between Students' attitude and their English achievement at MTs Sultan Agung Jabalsari.

Ha : There is a correlation between Students' attitude and their English achievement at MTs Sultan Agung Jabalsari.

The test came with a provision that if the significance value is smaller than 0,05 then Ha is accepted and Ho is rejected, and if the significance value is bigger than 0,05 then Ho is accepted and Ha is rejected. The result of the test using SPSS 23 for windows will be shown in the following table:

**Table 3.4**  
**Calculation of Pearson's product Moment using SPSS 23.**

		Correlations	
		attitude	score
attitude	Pearson Correlation	1	,726**
	Sig. (2-tailed)		,000
	N	22	22
score	Pearson Correlation	,726**	1
	Sig. (2-tailed)	,000	
	N	22	22

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From the table above, it can be seen that the significance value of *Pearson's Product Moment* test toward students' attitude and students' English achievement was 0,000 and it was smaller than 0,05 ( $0,000 < 0,05$ ) so Ha was accepted and Ho was rejected.

To determine how big the correlation was, it can be seen from the  $r$  value. The following table will show the classification of the amount of correlation between two variables, the classification is as follows:

**Table 3.5**

**Interpretation Corellation**

<b><i>R</i></b>	<b>Interpretation Corellation</b>
0,00 – 0,20	Very low
0,20 – 0,40	Low
0,40 – 0,70	Moderate
0,70 – 0,90	High
0,90 – 1,00	Very high

Based on the table 3.4 above, the  $r$  value of this research was 0,726 and be classified as high. So we can conclude that there was a significant correlation between students' attitude and their English achievement at MTs Sultan Agung Jabalsari.