

## **CHAPTER III**

### **RESEARCH METHOD**

Method of investigation is one of important factors in the research activity. It refers to the strategy in collecting and analyzing the data. In this chapter, the writer explains the research method that is used. It presents research design, Setting and subject of the study, research variables and indicator, instrument for collecting data and analysis technique.

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

This research used correlation regression analysis. The Correlation and Regression are related in the sense that both deal with relationships among variables. The correlation coefficient is a measure of linear association between two variables.

According Nunan 1992:3 Research methodology plays an important role in the research. It is because to get a good result, research needs an appropriate research method. Research means a systematic process of inquiry consisting of three components: (1) question, (2) data, and (3) analysis and interpretation of data. This study uses quantitative approach. It is because the analysis of the study stressed on the numerical data that processed with statistically.

This research focus on parents' education level background and student's achievement in English learning. The writer uses statistical analysis to calculate the numeral data that are gathered and to analyze them by using regression one predictor analysis. The result of the analysis is then interpreted to find out the influence of parent's education level background to the student's English learning ach 36

## **B. Setting of the Study**

The writer conducted the research at MTs Darul Huda. MTs Darul Huda is located at Jl. Soekarno Hatta No. 29 Gambar Wonodadi Blitar. The students come from different region and they also have different intelligent, social background and characteristic. The program of learning activity is designed based on national curriculum. The researcher had collected the data on April 2016, for a week and needed a week to collect the questionnaires. Thus, the total time that the researcher needs around two weeks.

## **C. Subject of the Study**

### **1. Population**

According to Sugiono, population is generally areas which consists of object/subject which has certain qualify and characteristic which decided by the researcher to study and than collect the summary. The population of the study are parents and the students of MTs Darul Huda, especially the 7<sup>th</sup> grade of students in the academic year of 2015/2016. There are five classes in this school; each class has at least 40 students.

## **2. Sampling**

Sampling is the method or manner that is conducted to determine the quantity and number of the sample. According Sugiono non probability sampling is a technique do not give opportunities/ same opportunities for each element or member of population to be selected in to the sample.

Purposive sampling according Sugiono (2001:61) is a technique of determining the sample with a particular consideration. According Margono (2004:128) is the selection a group of the subjects in purposive sampling based on certain feature that looked to have relevance of closely with population features that are ready before known. for Example the researcher will be doing research about discipline of the employee, so the sample that chosen have fulfill criteria of the employee.

The researchers in this study using purposive sampling method. In this research the writer taken sample from sevent grade of student of MTs Darul Huda.

## **3. Sample**

Arikunto said that sample is representative of population which is observed. It means the subject of population. Sample can be taken between 10%-15%-25% if the number of population is more than 100. According to Nunan, sample is taking a part population using certain procedure. So, that can be expected to represent its population. Sample is a part of population to be researched. In this research, the writer use purposive sampling and takes sample from seventh grade of students of MTs Darul Huda in the academic year of 2015/2016 especially class VII E that consists of 40 students.

#### **D. Research Variables and Indicator**

In this research, there are two variables namely independent variable and dependent variable. According to Nunan, independent variable is the variable that the experimenter expects to influence to others. The independent variable (X) in this study is parent's education level background. Then, dependent variable is acting. In this study, student's English learning achievement will be dependent variable (Y).

1. Independent variable in this research is parent's education background as variable (X).

The indicators of this variable are:

- a. Parent's formal education level
  - b. Parent's non-formal education
  - c. Parent's consciousness toward the important of education
2. Dependent variable is student's English learning achievement as variable (Y). The indicator is the value of student's testin semester two.

#### **E. Instrument for Collecting Data**

This study uses questionnaire and Test to collect the data.

##### **1. Questionnaire**

Arikunto states a questionnaire is a number of written questions which are used to gain information from respondents about the respondents themselves or their knowledge, believe, etc. There are two types of questionnaire:

- a. Opened questionnaire: the respondent can answer the questions using their own sentences.

- b. Closed questionnaire: the respondent can directly choose the appropriate answer.

In this research, the writer used the close questionnaire to know the parent's education level background in MTs Darul Huda. The questionnaire itself was actually written in Indonesia. The writer thought it would be easier for the respondents to understand the questions or statements stated in the questionnaire. The questionnaire consists of 16 questions. 8 questions are the questions about father's education background and 8 questions again are about mother's education background. Both of them are same.

## **2. Test**

Achievement test method is a test of developed skill of knowledge. The most common type of achievement test is standardized test developed to measure skills and knowledge learned in a given grade level and usually through planned intruction. The achievement test consists of 50 questions multiple choicesto get the data about student's English learning achievement.

## **F. Validity and Reliability Testing**

It is necessary to test the validity and reliability of the instrument used to conduct the research. It is aimed to ensure that the result can be valid and reliable. Both concepts of validity and relibility are important to consider when it comes to select instruments a researcher intends to use.

Instrument of the research that standart, cause validity and reliability tested, so wasn't need doing the validity and reliability tested without instrument was not standart need background to validity and reliability. (Suparyanto: 2010).

## **1. Validity**

Historically, validity was defined as the extent to which an instrument measured what it claimed to measured. The focus of recent views of validity is not on the instrument itself but on the interpretation and meaning of the scores derived from the instrument Ary, et.al (2010:225) in recent years, validity has been definedas refering to the appropriateness, correctness, meaningfulness, and usefulness of the spesific inferences researchers make based on the data. They collect Fraenkel and Wallent (2009:148).

Validity is the most important consideration in developing and evaluating measuring instrument Ary, et.al (2010:225) Fraenkel and Wallen (2009:147) give addition that validity is the most important ideato consider when preparing or selecting an instrument for use. More than anything else, researchers wanth the information they obtain through the use of an instrument to serve their purposes. The drawing correct conclusions based on the data obtained from anassessment is what validity is all about.

According Umar (2003), validity indicated the extent to which a measuring device that is able to measure that you want measured. According to Muijs (2004:66) validity has three distinct aspects, all of which are important. In this case, the researcher analized the tests using content validity and contruct validity.

The result of Validity and Reliability of the instrument Parent's Education Level Background used Questionnaire that has been standard or validated and used the previous researchers. Shokhifatun (2011), Zuhriyah (2011)

a. Content Validity

In order to judge whether the test has content validity or not. It need to test spesification for instrument Students's English Learning Achievement multiple choices test. The test consists of 50 question. The researchers explain standart or validated for the questions because the question refer to the syllabus MTs at VII grade ass attached.

**Table I Validy of multiple choices**

Basic Competence	Indicator of Achieving Basic Competence		
<p>Give respond to the meaning in the short functional simple, accurate, and to interact with the immediial environment.</p>	<ul style="list-style-type: none"> <li>• Asking for and giving services,</li> </ul>	1	4
	<ul style="list-style-type: none"> <li>• Asking for and giving goods,</li> </ul>	6	
	<ul style="list-style-type: none"> <li>• Asking for and giving fact</li> </ul>	2	4



	<ul style="list-style-type: none"> <li>• Asking for and giving opinion</li> </ul>	5	
	<ul style="list-style-type: none"> <li>• Clarify like and dislike</li> </ul>	4	
	<ul style="list-style-type: none"> <li>• Asking for clarification</li> </ul>	2	
	<ul style="list-style-type: none"> <li>• Expression of warning</li> </ul>	1	
<p>To Reveal the meaning and rhetoric in a short essay that very simple with use of language diversity, write accurately, smoothly and to interact with immediate environment in the descriptive text and procedure text.</p>	<ul style="list-style-type: none"> <li>• Identify ideas in descriptive text</li> <li>• Identify various information contained in descriptive text</li> </ul>	7	

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	<ul style="list-style-type: none"> <li>• Identify ideas in procedure text</li> <li>• Identify various information contained in procedure text</li> </ul>		1
<b>Total Questions</b>			

b. Construct Validity

In the case of validation using construct, the researcher used expert judgment to test the validity of instrument the researcher intends to use, After the instrument was constructed from aspects that were measured based on certain theory, then the instrument consulted to the expert. The construct the validity was proposed to two lecturers and english teacher.

Beside of that the researcher tried to the test. In the test the researcher ask the student to answer the tests in form of multiple choices test.

## 2. Reliability

Reliability refer to the consistency of the score obtained –How consistent they are for each individual from the administration of an instrument to another and one set of items to another Fraenkel and Wallen (2009:154). Score should be nearly the same when researcher administer the instrument multiple time at different times. Also score need to be consistent.

The aims of Reliability were measure the stability and consistency of the measurement scale. “ instruments that can be trusted if the data is reliable and produce the data can be trusted too. How many taken the data will be remain the same data (Arikunto : 2002)

In this research reliability testing used a formula from Kuder Richardson 20 (KR 20) while the formula is :

$$r_{KR-20} = \frac{k}{K-1} \frac{[1 - \sum p(1-p)]}{S^2_x}$$

Where : K = many item

P = difficult item indeks

$S^2_x$  = skor of varian (x)

To speed up the calculations, the researchers used the program Ms. Excel 2013. The criteria of reliability coefficient is (A Team of High School Mathematic Instructor PKG, 1999:86)

$$0,80 < r_{KR-20} \leq 10,00 \text{ ( Very High Reliability)}$$

$$0,60 < r_{KR-20} \leq 8,00 \text{ (High Reliability)}$$

$$0,40 < r_{KR-20} \leq 6,00 \text{ ( Enough Reliability)}$$

$$0,20 < r_{KR-20} \leq 4,00 \text{ ( Low Reliability)}$$

$$0,00 < r_{KR-20} \leq 2,00 \text{ ( Very Low Reliability)}$$

The result of Reliability of the instrument Student's English Learning Achievement shows high reliability of 0,659 and the result of the count are

$$\begin{aligned} r_{KR-20} &= \frac{50}{50-1} \frac{[1-7,70562]}{21,774375} \\ &= 0,6593010062 / 0,659 \end{aligned}$$

### **G. Data Analysis Technique**

Sugiono pointed out Data analysis is the activity that is done after all of the data are collected. The activities in this analysis are: grouping the data based on the variable and respondent, tabulating the data based on the variable, serving the data, doing the calculation of data to answer the research question and testing the hypothesis. The analysis steps are as follow:

## 1. Introduction Analysis

Introduction analysis is used to know the influence of parent's education level background to the student's English learning achievement in seventh grade of students of MTs Darul Huda. The writer gets the data through questionnaire and Test then analyzes it uses statistic analysis. In this analysis, the writer enters data in distribution table of frequency to make accounting easy in analyzing data.

In measuring the data of questionnaire, the writer makes measuring rod. According to Arikunto, there are some benefits of measuring rod:

1. To compare the measurement for the researcher in order to don't affected by subjective factor.
2. To keep the stability of data that is collected in different time.
3. To make easy the researcher in processing data.

The measuring rod of this research is as follow:

- a. Father's formal education level
  - S1/S2 is given value 6
  - S1 is given value 5
  - Diploma is given value 4
  - SMA is given value 3
  - SMP is given value 2
  - SD is given value 1
  - Un graduated of SD is given value 0
- b. Time of studying
  - 2 years for S2/S3 is given value 5

- 4 years for S1 is given value 4
  - 3 or 2 years for Diploma is given value 3
  - 3 years for SMP and SMA is given value 2
  - 6 years for SD is given value 1
  - Over limited time is given value 0
- c. Father's non-formal education
- Yes is given value 1
  - No is given value 0
- d. Kind of father's informal education
- Madrasah Diniyah is given value 1
  - Training is given value 2
  - Course is given value 3
  - Pesantren is given value 4
  - All is given value 5
- e. Time of studying non-formal education
- 4 years is given value 5
  - 3 years is given value 4
  - 2 years is given value 3
  - 1 year is given value 2
  - Less than 1 year is given value 1

f. Father's motivation

- Looking the knowledge is given value 5
- A foothold in life is given value 4
- Job demand is given value 3
- Parent demand is given value 2
- Following trend is given value 1

g. The important of education

- Very important is given value 4
- Important is given value 3
- Less important is given value 2
- Not important is given value 1

h. The influence of education

- Very influence is given value 4
- Influence is given value 3
- Less influence is given value 2
- Not influence is given value 1

The scoring of mother's education background is same with father's education background.

## 2. Hypothesis Analysis

The examination uses regression one predictor analysis, while the steps are as follow:



- a. Looking for the correlation between predictor and criterion by using technique of correlation product moment. The formula is as follow:

$$r_{xy} = \frac{(\sum xy)}{\sqrt{(\sum x^2)(\sum y^2)}}$$

$$\sum xy = \sum XY - \frac{(\sum X)(\sum Y)}{N}$$

$$\sum X = \sum X^2 - \frac{(\sum X)^2}{N} \text{ and}$$

$$\sum Y = \sum Y^2 - \frac{(\sum Y)^2}{N}$$

Where:

$r_{xy}$  : the coefficient of correlation between parent's education level background and student's English learning achievement.

$\sum xy$  : Sum of score X and Y

$\sum X$  : Sum of parent's education level background

$\sum y$  : Sum of student's English learning achievement

- b. Examining whether there is significant correlation or not by consulting the result of  $r_{xy}$  on r table.

0, 90 – 1, 00 means very high correlation

0, 70 – 0, 90 means high correlation

0, 40 – 0, 70 means enough correlation

0, 20 – 0, 40 means low correlation

- c. Looking for the regression similarity

$$Y = aX + K$$

Where:

Y = Criterion

X = Predictor

a = the numeral of predictor coefficient

K = the numeral of constant

To look for the value of a and K, the writer uses deviation score method. The formula is as follows:

$$y = ax \text{ or } Y - \bar{Y} = a(X - \bar{X})$$

Where  $y = Y - \bar{Y}$ ,  $x = X - \bar{X}$  and  $a = \frac{\sum xy}{\sum x^2}$

d. Variant analysis of regression line

$$F_{reg} = \frac{RK_{reg}}{RK_{res}}$$

$$RK_{reg} = \frac{JK_{reg}}{db_{reg}}$$

$$RK_{res} = \frac{JK_{res}}{db_{res}}$$

$$RK_{reg} = \frac{(\sum xy)^2}{\sum x^2}$$

$$RK_{res} = \sum y^2 - \frac{(\sum xy)^2}{\sum x^2}$$

Where:

$F_{reg}$  = price of F numeral for regression line

$RK_{reg}$  = mean of regression line quadrate

$RK_{res}$  = mean of residu quadrate

$db_{reg}$  = degree of residue freedom

### 3. Final Analysis

After getting  $F_{reg}$ , the next step is comparing the price of  $F_{reg}$  with the F value on table value. The table value is 5%.

- c. It is significant if  $F_{reg} > F_t$  5%. There is positive influence of parent's education level background to the student's English learning achievement.
- d. It is not significant if  $F_{reg} < F_t$  5%. There is no positive influence of parent's education level background to the student's English learning achievement .