CHAPTER III
RESEARCH METHOD

A. Research Approach

Correlation research aims at investigating the existence and the degree of a relationship between two or more quantitative variables. If two variables are highly related, scores on one variable could be used to predict scores on the other variable.[1]

Correlation studies are appropriate when the variables cannot easily be distinguished or the existing situation does not yield to the application of an experimental method of study. In a correlation design, two different methods can be applied. The most commonly known is seen in relationship studies. In these studies, scores obtained from two variables are correlated to determine the relationship. The second method applied in the prediction studies; however, use the scores of one variable to predict the outcome of the other variable.

B. Population and Sample

1. Population

Population is all of the research subjects[2]. In this research, the researcher would take population of eight

[1] Sugiyono, *Metode Penelitian Pendidikan : Pendekatan Kuantitatif, Kualitatif dan R&D,* (Bandung : Alfabeta, 2008).

[2] Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktek*, (Jakarta: Rineka Cipta, 2006), p. 130.

students of SMP 18 Semarang in the academic year of 2013/2014 which has eight classes and bilingual class consist of 32 students.

2. Sample

However, sample is a part of population to be researched[3] . Sample is a subset of individuals from a given population[4]. Sample must be reflective with the true example in the field. In this case, the researcher took sample bilingual class from eight grade students of SMP 18 Semarang in the academic year of 2013/2014 which had eight classes and bilingual class consists of 32 students.

C. Variable and Indicator

To answer the research problems, there are some variables that the researcher wants to investigate. The variables include independent variable (X), dependent variable (Y).

Independent variables are the conditions or characteristics that are manipulated by the researcher in order to explain the relation with the observed phenomena[5]. The independent variable of this study, according to the definition

[3] Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktek*, (Jakarta: Rineka Cipta, 2006), p. 131.

[4] David Nunan, *Research Methods in Language Learning*, (New York: Cambridge University Press, 1992), p. 27.

[5] Narbuko and Achmadi, *Metodologi Penelitian*, (Jakarta: Bumi Aksara, 2004), p. 119.

above is study is students' writing ability. The indicators are as follow: 1) students are able to write effective complex construction, few errors of agreement, tense, number, word order function, articles, pronoun, and preposition; 2) students are able to write advanced text, effective word/ idiom choice and usage, word form mastery, appropriate register.

Dependent variables are the conditions or characteristics that appear, disappear, or change as the researcher introduces, removes, or changes independent variables[6]. Referring to the definition, the dependent variable of the research is the students' reading ability. The indicators are as follow: 1) students are able to obtain an overview -- surveying or skimming; 2) students are able to read carefully and thoughtfully; 3) students are able to organize the ideas and supporting paragraph.

D. Technique of Data Collection

The decisive thing to get the accuracy of data in this research lies on instrument. The instrument can indicate whether the research is successful or not. To reach the goal of research, the instrument should be made as valid as possible. In this research the writer used instruments as below:

[6] J. W. Best, *Research in Education*, (New Jersey: Prentice Hell, 1981), p. 60.

1. Documentation

The documentation will be used to get data about what is bilingual program and how is the implementation of it, name of the students of eight grade students and all information that related with this research.

Documentation means the researcher collects data from English teacher or any courses in this study including students' name list, students' writing score. Documentation study may refer to the technique of collecting data by gathering and analyzing documents. While document is any communicative material (such as text, video, audio, etc) used to explain some attribute of an object, system or procedure.

E. Technique of Data Analysis

To find out the correlation between students' writing ability and their reading ability, the writer uses a Pearson product moment correlations. The correlation technique is an analysis technique to evaluate hypothesis concerning correlation between two variables that are examined statistically. In the correlation technique, the variables are considered whether the correlation is very significant or it only happen by chance. The formula of product moment correlation is:

1. Hypothesis Analysis

To know the correlation between students' writing ability and their reading ability, the writer uses regression one predictor analysis whiles the formula as follow:

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

$$r_{XY} = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{\{N\Sigma x^2 - (\Sigma x)^2\}\{N\Sigma y^2 - (\Sigma y)^2\}}}$$

In which,

r_{XY} = coefficient of correlation between x and y variable or validity of each item

N = the number of students / subject participating in the test

Σ_X = the sum of score in each item

Σ_{X^2} = the sum of square score in each item

Σ_y = the sum of the total score from each student

Σ_{y^2} = the sum of the square score from each student

Σ_{XY} = the sum of multiple score from each students with the total score in each item

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

2. Final Analysis

The result of correlation between X and Y variables will be compared with the value (r_{table}). The table value is 5 % or 1 %.

a. If sig < α 5% is significant or there is a correlation between writing and reading ability of eight grade students of bilingual class at SMPN 18 Semarang in the academic year of 2013/2014.

b. If sig > α 5% is not significant. It means that there is no correlation between writing and reading ability of eight grade students of bilingual class at SMPN 18 Semarang in the academic year of 2013/2014.