# **CHAPTER III**

# **RESEARCH METHOD**

#### A. Research Design

Based on research question and objective of the study, this research is designed in quantitative research. The data analyzes statistically. Quantitative research is numerical research which analyzed statistically.<sup>1</sup> Quantitative usually used in research which focuses on descriptive (survey), correlation, experiment and causal comparative study.<sup>2</sup> This research is included in correlation research where the researcher will observe about students' learning approach, how many students use deep approach, surface approach and strategic approach, then percentage it to find which learning approach most used by 4<sup>th</sup> semester students in their reading comprehension, also correlate it with students' reading achievement.

Statement by Gay which quoted by Sukardi stated that correlation research is a research study which collect the data in order to determine relationship between two or more quantifiable variables. In this correlation above there are two variables, first is students' learning approach in reading comprehension as X variable, and second is students' reading achievement as Y variables. This

<sup>&</sup>lt;sup>1</sup> Sugiyono, *Metode Penelitian Pendidikan* (Bandung : Alfabeta, 2012), 13.

<sup>&</sup>lt;sup>2</sup> HMA Prawoto, *Metode penelitian Kuantitatif dan Kualitatif* (Blitar, 2002), 3.

research is stated as correlation one tail which variable X affect variable Y, the diagram is drawn as follows:

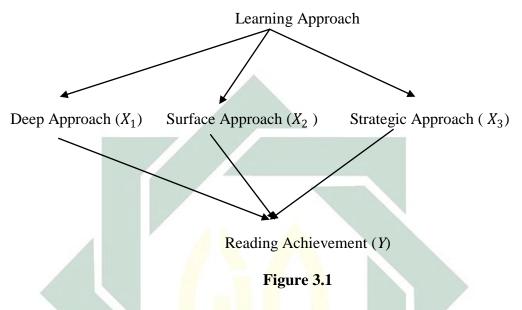


Diagram Correlation of Variable X and Variable Y

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

The research takes place in English Teacher Education Department faculty of Education and Teacher Training State Islamic University Sunan Ampel Surabaya which located at jl.Ahmad Yani 117 Surabaya. It is done on Wednesday, 11<sup>th</sup> and Saturday, 14<sup>th</sup> June 2014.

This research focuses on in reading 4 class because the material in reading 4 is about journal article which is related to learning approach measurement. The population was 4<sup>th</sup> semester of English Teacher Education Department students academic year 2013-2014. In reading 4 itself consist of 3 classes by total of students are 80 students. Total sampling is used as the technique of

sampling which takes all the population as sample. It is done by researcher in order to get accurate result with very small error scale. So, the population which is used is 80 students and the sample is all the population number or total sampling.

# C. Data and Source of Data

Data is fact and number which become resources to organize the information. The subject where the data are obtained be explained by the source of data.<sup>3</sup> In this research, the data is included in quantitative data which taken from questionnaire to classify students into each learning approach that they used, class observation to make sure that learning approach is happened in this reading class activity and documentation to get students' reading cumulative score.

## **D.** Data Collection Technique

To collect the data, this research is conducted by class observation and gives questionnaire to the students. The researcher observes in two meetings, first meeting to class observation, second meeting to give questionnaire.

#### **1.** Investigate Students' Learning Approach (variable X)

To answer the first research question, researcher does:

a. Class Observation

<sup>&</sup>lt;sup>3</sup> Atma Kharisma Khamdani, Skripsi Thesis: "A Study on the Implementation of Storytelling in Teaching Listening of English Narrative Text at MAN Rejosari (Surabaya: UIN Sunan Ampel Surabaya,2012), 5

In order to know learning approach in plan view used by the students in reading class activities, class observation is done in classroom when teaching learning process is going on. In observation class the researcher uses observation checklist and field note to get the data.

Class observation did on Wednesday, 11<sup>th</sup> june 2014. Co-observer is needed to help in observing the class which consist of more than 30 students. Before doing observation, co-observer is trained about how to measure students using the checklist.

b. Questionnaire

Questionnaire is given outside the teaching learning process. After teaching-learning process finished, a questionnaire is given to the students to measure learning approach which they used, then instruction and brief information about questionnaire is also explained before asking students to answer the questionnaire. Students are given time 5 minutes to answer the question then collect it when they are finished.

The questionnaire consists of 52 items, which 16 items is about deep approach, 20 items analyze strategic approach and 16 items analyze surface approach, There are four options to be chosen one of them. The level of the chosen answer are 1 for strongly disagree, 2 for disagree, 3 for agree and 4 for strongly agree.

#### 2. Investigate Students' Reading Achievement (variable Y)

To answer second research question, researcher asks the teacher to get information about students' reading achievement through the semester from their score in daily exercises, midterm test and final test.

## **E. Data Collection Instrument**

To support this research, the researcher uses some instruments to get the data. Those instruments are :

- 1. Observation checklist adapted from ASSIST questionnaire and be validated by expert lecturer. This instrument is modified by the researcher based on learning approach theory by JB.Biggs and Malton&Saljo.
- 2. Learning approach questionnaire from ASSIST (Approach and Study Skill Inventory for Students) which was developed by Martin & Saljo. The Questionnaire form is included in closed questionnaire which the chosen answer is using Likert scale. This questionnaire had been validated by Hesham.F.Gadelrab from Department of educational and Psychology Mansora University in his journal entitle Factorial structure and Predictive Validity of ASSIST in Egypt : A Confirmatory Factor Analysis Approach<sup>4</sup>, and the result is ASSIST main scales and subscales appropriate predictive validity to academic achievement.

<sup>&</sup>lt;sup>4</sup> Hesham.F.Gadelrab, "Factorial Structure and Predictive Validity of ASSIST in Egypt : A Confirmatory Factor Analysis Approach". *Electronic Journal of Research in Educational Psychology*, vol .9, no.3 2011. ISSN: 1696-2095. 2011

In order to help students in understanding the questions well and to maintain the accuracy of the result, the questionnaire is translated from English into Indonesian. It surely validated by the expert lecturer.

3. Documentation is teacher information about students' cumulative score in their daily exercises, midterm test and final test in their reading 4 which the teacher measured by identifying, analyzing, understanding the text content, summarizing and criticising. The materials is reading academic journal article which taken from 3 reading classes of 4<sup>th</sup> semester students English Teacher Education Department UINSA.

#### F. Data Analysis Technique

There are three steps in analyzing the data, those are :

## 1. Analysis Independent Variable (X)

To answer the first research question, first step is analyzing independent variable (X). Independent variable is variable which able to influence another variable (dependent variable)<sup>5</sup>. Independent variables in this research are deep approach ( $X_1$ ), strategic approach ( $X_2$ ) and surface approach ( $X_3$ ).

The analysis of this variable is done by scoring students' responses in class observation and questionnaire. The questionnaire is processed manually by count up every subscale, and the result of class observation is

<sup>&</sup>lt;sup>5</sup> Duwi Priyanto, *Belajar Praktis Analisis Parametrik dengan SPSS* (Yogyakarta: Gava media, 2012), 34

just to make sure the questionnaire answer. Those all are calculated to find the mean, median, modus, variation, standard deviation, frequency, and percentage of each learning approach, then determining classification of each students' learning approach. Analysis of data which gotten from questionnaire and observation was presented as follows:

a. Class Observation

The result data from observation checklist is analyzed in table and description, all situations in teaching-learning process during observation are described in details.

b. Questionnaire

Students respond to items on a 1-4 scale (4high). Sub scale scores are formed by adding together the responses on the items in that subscale. Scores on the three main approaches are created by adding together the subscales scores which contribute to each approach. Scoring can be carried out by SPSS for windows version 18 computer programme. Each item is set as a variable by summing the items. Researcher decided using SPSS 18 as technique to analyze the questionnaire because it is more limited time, easier, efficient, effective and have keep certain accuracy.

#### 2. Analysis Dependent Variable (Y)

To answer the second research question is done by analyzing the dependent variable (Y). Dependent variable is researcher's centre of interest. In other word, variable which the value is influenced by independent variable<sup>6</sup>. Dependent variable in this research is students' reading achievement (Y).

It is done by analyzing the documentation. Data from documentation which consist of students' cumulative score in daily exercises, midterm test and final test are analyzed to find out the mean, median, modus, variation, and standard deviation by using SPSS 18. After analyzed by statistic pattern it is interpreted detailed.

# 3. Correlation Analysis of Independent Variable (X) and Dependent Variable (Y)

To answer the third research question in order to find the correlation between both variables, it uses multiple regression analysis. Multiple regression analysis is quantitative analysis which intended in testing the effect of two or more independent variables to dependent variable<sup>7</sup>. The data which processed is combination the result of dependent variable analysis and independent variables analysis. Before analyze the multiple regression,

<sup>&</sup>lt;sup>6</sup> Duwi Priyanto, *Belajar Praktis Analisis Parametrik dengan SPSS* (Yogyakarta: Gava media, 2012), 34

<sup>&</sup>lt;sup>7</sup> Diyah Nirmala, *Statistik Deskriptive dan Regresi Linier Berganda dengan SPSS* (Semarang: Semarang University Press, 2012), 13

classic assumption test is needed. Classic assumption test is important to test the hypothesis value of parameter model. If one of classic assumption test was accepted, then multiple regression can be used. It In this research there are two classic assumption test. Those are:

a. Normality Test

The purpose of normality test is testing regression model between dependent variable and independent variable, they have normal distribution or not. Normality test in this research can be seen from "normal probability plot" in diagram form. The interpretation are:

- 1). If the data distributes around diagonal line and follows its histogram graphic, it means the data is normal.
- If the data distributes far from diagonal line and unfollows histogram graphic, it means the data is abnormal.
- b. Multikolinierity Test

The purpose of multikolinierity test is testing there is correlation between independent variables or not. Good regression model should have correlation between independent variables.

Multikolinierity test in this research can be seen from the value of tolerance. If tolerance value is around 1 not more than 10 it shows there is no multikolinierity between independent variables in regression model.

The multiple regression is analyze in two terms, first is analyze based on table data and second is analyze based on statistical quantification.

a. Analyze the Table

Table is served to analyze dependent variable and independent variable. In this part, which researcher does are:

- 1). Draws table and diagram to serve the data
- 2). Describes the data about how is the class observation result and how is achievement each of students based on their learning approach classification. How deep students' score is, how surface students' score is and how strategic students' score is, which one is better and which one is not.
- b. Analyze the Statistical Quantification

In this part, multiple regression is analyzed. To determine the correlation between students' learning approach in reading comprehension and their reading achievement, correlation coefficient is conducted using "Multiple Regression". Multiple regression is study about relevance of dependent variable to one or more independent variable in order to predict the average of dependent values based on independent value which has known<sup>8</sup>. Where the formula is:

<sup>&</sup>lt;sup>8</sup> Sutrisni, S1 Thesis : "Analisis Pengaruh Kualitas Produk pada Loyalitas pelanggan" (Semarang : Universitas Diponegoro, 2010), 88

#### $\mathbf{Y} = \mathbf{a} + \mathbf{b}\mathbf{1}\mathbf{X}\mathbf{1} + \mathbf{b}\mathbf{2}\mathbf{X}\mathbf{2} + \mathbf{b}\mathbf{3}\mathbf{X}\mathbf{3}$

Where :

- Y = Students' reading achievement
- a = Constanta
- $b_1$  = Coefficient regression between deep approach and students' reading achievement
- $b_2$  = Coefficient regression between strategic approach and students' reading achievement
- $b_3$  = Coefficient regression between surface approach and students' reading achievement
- $x_1 =$  Deep approach variable
- $x_2 =$ Strategic approach variable
- $x_{3=}$  Surface approach variable

In this analysis, the outputs include:

- 1). Goodness of fit test, it includes f-test and t-test.
- Statistic descriptive, it includes mean, median, modus, standard deviation, variance, range, minimum and maximum value of the data.
- 3). The correlation.

To make sure both of variables have correlation, the following table is used to determine the strength of a relationship:

	R	Interpretation
0 0,01-0,20		No correlation Very weak
0,21-0,40 0,41-0,60		Weak Rather weak
0,61-0,80 0,81-0,99		Enough Strong
1		Very strong

4). Entered and removed variables

5).R square

- 6). Coefficient regression
- 7) Kolmogorove smernove test
- c. Developing hypothesis
  - Ho: There is no positive correlation between deep approach, strategic approach, surface approach and students' reading achievement.
  - Ha: There is positive correlation between deep approach, strategic approach, surface approach and students' reading achievement
- d. Data interpretation

The outputs of statistical quantification from SPSS 18 are interpreted in this part. The result of classic assumption test includes normality test and multikolinierity test and all multiple regression analysis are explained detailed. Research findings in statistical number, table, graphic hypothesis test are also described. All of them are served in chapter IV.

e. Drawing conclusion

Conclusion is taken from the analysis result to answer the research questions. From the conclusion, the research questions' answer is founded. It is served in chapter V.

