CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the procedures of the study including research design, participants of the research, research instruments, data collection, and data analysis.

3.1 Research Design

To reach the aims of this study in the previous chapter, the correlational study with a descriptive method was utilized in this research. A descriptive study involves collecting data in order to test hypothesis and answer research questions concerning the present existing condition of the participants (Gay, cited in Escalona, 2005). It reaches factual issues of the participants of the study. A descriptive study is referred to as "correlation" or "observational" studies (Nebeker, 2006). It might employ methods of analyzing correlation between multiple variables by using tests such as Pearson correlation. "The correlational study indeed deals with numerical scores, however, is sometimes referred to as a form of descriptive research because it describes an existing relationship between variables without any manipulation of variables" (Fraenkel et al., 2011).

In this study, descriptive method was used to describe the degree of students' self – esteem and the level of students' speaking competencies in English based on the data collection done by the researcher. The correlational study was applied to investigate the hypothesis and the degree of correlation between students' self-esteem and their speaking English competencies.

Therefore, the descriptive method in the correlational study was considered appropriate to be applied in this study.

The two variables were employed in this research; the score of questionnaire of measuring students' self-esteem as independent variable (X) and students' speaking competencies, which are divided into four criteria, as dependent variables (Y). The relation between variables is presented as follow.

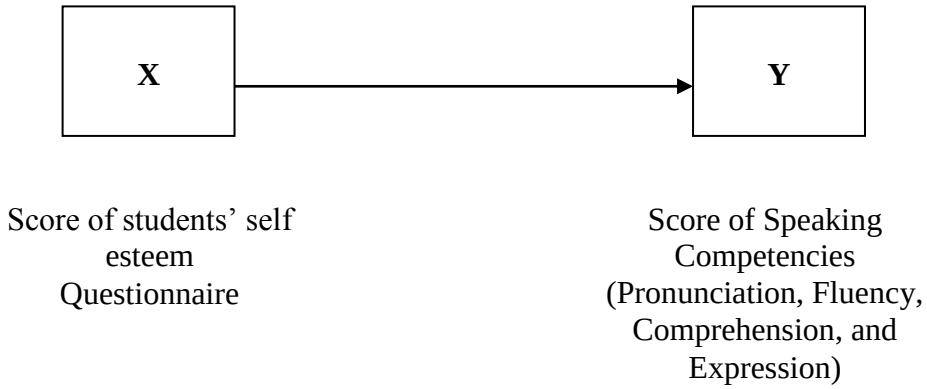

Figure 3.1 The Relationship between Variable X and Variable Y

3.2 Participants of the Research

The researcher selected the eleventh graders at one of middle schools in Cimahi as the participant of the research.

3.2.1 Population

According to Fraenkel et.al (2011), population is the large group to which one hopes to apply the results. The population of interest is usually a group of persons such as students, teachers, or other individuals who posses certain characteristics to be examined and then the conclusion drawn (Fraenkel et.al, 2011 and Sugiyono, 2011).

The population in this study was eleventh graders of Senior High School in Cimahi. The number of eleventh students is about 360 which are divided into 9 classes.

3.2.2 Sample

In accordance with Cohen et.al (2007) sample is a smaller group or subset of the total population in such a way that the knowledge gained is representative of the total population under study.

This study employed random sampling, as it has been stated by Usman and Akbar (2006) that sampling used a certain technique. Fraenkel et.al (2011) defines stratified random sampling is a process in which certain subgroups, or strata, are selected for the same proportion as they exist in the population. The sample for a correlational study should be selected carefully. Fraenkel et.al (2011) mentions the minimum acceptable sample size for a correlational study is considered to be no less than 30 data, samples larger than 30 are much more likely to provide meaningful results.

There were two classes selected as the subject of this research, which were XI IPS 2 and XI IPS 3. The participants in this study were 62 students. The selection was based on the characteristics of the two classes; the active and less-active classes and the number of hours of English taught in XI IPS per week is more than other major classes.

3.3 Data Collection

In collecting data, some instruments employed in this research were listed as below in sequence: observation, questionnaire, the speaking test, and interview. The instruments were conducted for three days, on September 15, 2014 until September, 18th 2014.

3.3.1 Observation

Observing the class before conducting the instruments were considered important to know how the respondents behave during class discussion. The researcher did not participate in the situation being observed but rather watched, that is called as an onlooker (Fraenkel et.al, 2011).

The observation process was held on September 15 to 16, 2014 by watching the teacher's task on how she asked to the students some questions spontaneously relating to their daily activities and the material they were learning. In addition, the researcher also monitored students' behavior during English lesson especially in a conversation activity; which students were active and keep silent.

3.3.2 The Self – Esteem Questionnaire

Questionnaire is useful instrument for collecting the information needed by the research. In line with Fraenkel et.al (2011), in a questionnaire, the subjects respond to the questions more commonly, by marking an answer sheet.

This study utilized the Likert scale which asks individuals to respond to a series of statements of preference and numbers placed on a continuum (Fraenkel et.al, 2011). The questionnaire belongs to aptitude test, Fraenkel et.al (2011) states that aptitude tests are intended to measure an individual's potential to achieve; in actually, they measure present skills or abilities.

The questionnaire applied in this research was adapted from many experts (Al-Hattab, 2006; Aregu, 2013; Brown, 2000; Harmer, 1998; Liu, 2005; Rosenberg, 1995; Törnqvist, 2008). There were 20 questions to measure students' self-esteem towards the speaking skill (see in Appendix 1). There were a half of

total statements, however, to be considered as reversed items. The reserved items were: 2, 4, 7, 9, 13, 14, 16, 17, 18, and 19. The students put a checklist on one response (highly agree, agree, disagree, or highly disagree) to each statement in the questionnaire. Rating scales are from 1 to 4 as presented below:

Statement	Highly Agree	Agree	Disagree	Highly Disagree
Positive	4	3	2	1
Negative	1	2	3	4

The selection of this scoring is to remove the distinction between different strengths of agreement of disagreement because most teenage students tend to circle neutral response as the alternative answer.

The results gained from measuring students' self-esteem classified students into two levels; high and low self-esteem. The steps to find out the self – esteem levels of students were presented as follows.

The ideal maximum score = total questions x the highest score

The ideal maximum score = total questions x the highest score

The ideal of score range =
the ideal maximum score – the ideal minimum score

$$\text{The score interval} = \frac{\text{the ideal score range}}{4}$$

The classification of self – esteem level would be presented below.

1. Score range of very low self – esteem = 20 – 35
2. Score range of low self – esteem = 36 – 50

3. Score range of high self – esteem (normal) = 51 – 65

4. Score range of very high self – esteem = 66 – 80

3.3.3 The Speaking Test

The speaking test as the instrument was also constructed to measure the students' speaking skill. In the third day, the speaking test was held. The researcher had the students perform role plays in pairs based on the context. The context was about *How to Make an Appointment and a Reservation.* The role play is one of the best ways of accurately measuring speaking proficiency. In a role play, the students are placed in a familiar social situation where they have to interact naturally and spontaneously with peers (Kuehn, 2013).

The English teacher was as assessor to score the students' performances based on the four criteria: pronunciation, fluency, comprehension, and expression. The teacher is professional because she has been teaching English for decades. The criteria of assessing speaking skills were adapted The Standford FLOSEM (See Appendix 4).

3.3.4 The Interview

The interview is an important way for the researcher to check the accuracy of – to verify the impressions he or she has gained through observation and distribution of questionnaire (Fraenkel et.al, 2011). This research employed semi-structured, according to Fraenkel et.al (2011), it belongs to rather formal interview which is designed to elicit specific answer from respondents and later compared and contrasted.

Two respondents from each class were asked to be interviewees. They were as representative of different level of the self-esteem score: high and low.

3.4 The Instrument Testing

The instrument used in research was considered to have a good quality. The questionnaire distributed by the researcher to the respondents should be valid and reliable.

3.4.1 Validity

According to Fraenkle et.al (2011), validity refers to "*the appropriateness, meaningfulness, correctness, and usefulness of the inferences a researcher makes".* Sugiyono (2010) says that the instrument is considered valid; it has to fulfill the requirement of internal and external validity.

- Internal validity is rational or theoretical validity. It reflects and represents what criteria are going to be measured.
- External validity compares between the criteria in the instrument and some facts in the field.

In this research, the value of $r_{critical}$ in α 0.05 with the df = N-2 was 0.27. The questionnaire is considered valid if $r_{obtained}$ is higher than $r_{critical.}$

If $r_{obtained} > r_{critical}$ = valid

If $r_{obtained} < r_{critical}$ = invalid

The validity of the questionnaire was computed by using Pearson Product Moment Correlation in IBM SPSS 22.

3.4.2 Reliability

Reliability in a quantitative research is essentially a synonym for dependability and consistency of scores or answers from one administration of an instrument to another, and from one set of items to another (Cohen et.al, 2006 and Freankle, 2011). The questionnaire is considered reliable if it can be used for several times under and will produce the same result to the same respondents.

This research used IBM SPSS 22 with Cronbach's Alfa to calculate the reliability of the instrument. The formula is as follows.

This research employed the level of significant was 0.05 which is commonly used for testing the reliability. The questionnaire is considered reliable if $r_{obtained}$ is higher than $r_{critical.}$ Meanwhile, if the result shows that $r_{obtained}$ is lower than $r_{critical}$, and then the questionnaire is not reliable.

3.5 Data Analysis

Before analyzing the correlation between the variables to reach the goal of this research, test the normality and linearity of the data are needed to confirm the data are normally distributed and have linearity between the variables.

3.5.1 Test of Normality

The normality testing is conducted to find out whether the data distribution from each group is normal or not. The computation of normality was tested by using IBM SPSS 22 with Kolmogorov – Smirnov with the significance of value used was 0.05. The probability (*P)* will be as follows.

H_a : Normally distributed

H_o : Not distributed

With the following testing criteria:

$P > 0.05$ = H_a accepted, and

$P < 0.05$ = H_o accepted.

3.5.2 Test of Linearity

The linearity testing is purposed to look at the significance of the relationship between two variables in this research. Since independent and dependent variables in this study belonged to functional relationship, simple regression analysis was employed where the dependent variable could be predicted through the independent variable. This study applied Annova in IBM SPSS 22 to test the linearity.

3.5.3 Investigating Correlation

After the requirements had been completed, the main step for this research's goal was to investigate the strength of correlation between students' self-esteem and their English speaking competencies score. The computation process used IBM SPSS 22 for Windows. The formula is below:

$$r = \frac{n\sum X\ Y - (\sum X)(\sum Y)}{\sqrt{[n\ \sum X^2 - (\sum X)^2]\ [\ n\ \sum Y^2 - \ (\sum Y)^2\ ]}}$$

Where:

r = correlation coefficient X = the score of item

n = the number of respondents Y = the score of item

(Sugiyono, 2011)

After determining the correlation coefficient, the researcher also tried to find out whether the null hypothesis was rejected or not. The interpretation is as follows:

H_o : there is no significant correlation between students' self – esteem and their speaking English competencies.

H_a : there is a significant correlation between students' self – esteem and their speaking English competencies.

If Ho is accepted, the correlation could be positive or negative. When two variables increase in the same direction, the correlation is positive. Meanwhile, one variable increases but another decreases, the correlation is negative.