CHAPTER III

RESEARCH METHODOLOGY

Introduction

This chapter is concerned with the methodology of the research. It includes further description of method of the study, population and sample, instrument, data collection and data analysis.

3.1 Research Design

The method used in this study was descriptive with an ex-post facto design, as Gay (1987:189) stated that descriptive study involved collecting data in order to test hypothesis or to answer question related to the subject of the study. Descriptive method was employed and was also considered appropriate because the research described the phenomena or, in this case, the two variables and other required information attained from the questionnaire. This is in line with Key (1997) stated:

> The descriptive research is used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. The methods involved range from the survey which describes the status quo, the correlation study which investigates the relationship between variables, to developmental studies which seek to determine changes over time (Key, 1997).

From the statement above, the descriptive analysis was applied to find any information which involves the measurement and description of past and present variables and the investigation of the correlation between them as well, without

attempting to manipulate the variables being studied. Meanwhile, Hatch and farhady (1982:26) stated that ex post facto design is used when the researcher does not have control over the selection and manipulation of the independent variable.

Correlational study focused on the relationship among variables that exist naturally. It did not involve the manipulation of independent variables. Yet, it involved collecting data in order to determine whether and what degree a relationship exists between two or more variables rather than the cause-effect relationship (Hatch and Farhady, 1982:27).

In line with the title "The Frequency of Listening to English Songs and Listening Achievement", hence, two variables were employed in the study; participants' listening frequency as independent variable (X) and their listening achievement as dependent variable (Y).

3.2 Population and Samples

The population of the study was the third year students of English Education Department of UPI Bandung, which were approximately 100 students. From the population, the writer chose thirty students as participants for sampling. Gay (1987) recommended that for correlation study, the sample should be minimally 30 subjects. So the study involved 30 participants who were selected randomly. The technique of the sampling chosen in this study was simple random sampling where all samples were of the same category i.e. they were English students, which finally lead to the assumption that they were alike and therefore all of them had the same right to be chosen as samples (Arikunto, 1998).

3.3 Data Collection Techniques

Two kinds of instruments were used in this research; questionnaire and participants' listening score.

3.3.1   Questionnaire

A questionnaire was distributed to all participants to attain information of their frequency of listening to English songs and other required information. A questionnaire, according to Alwasilah (2002, p. 151), is commonly used to measure the existence and distribution of any behaviors or characteristics that naturally happen, the frequency of events and the relationship between characteristics, behaviors, events or phenomena, observed by the researcher.

The questionnaire, in this study, consisted of three types of question; close, open and mixed-questions (for more detailed information, please read the Appendix III). There were eleven questions which were written in Bahasa Indonesia. It was purposed to make the questionnaires easy to understand to the participants since Bahasa Indonesia was their first language. The close questions were arranged to offer the participants all available answers, so they only to choose one of the answers or even more (Arikunto, 2007, p. 28). In this study, those questions were intended to identify the participants' frequency of listening to English songs in a day, kinds of English songs they liked to listen, the difficulty of listening to English songs, the factors that influenced the participants to have a good skill in listening, etc.

The open questions were arranged to give the participants a bunch of alternative answers (Arikunto, 2007, p. 29). In this study, those questions were

intended to identify participants' opinion about the connection between listening to English songs and their listening achievement.

The mixed- or structured-questions were arranged to give the participants other possibilities of choosing and filling the answers, besides what are available (Sukmadinata, 2007, p. 219). In this study, those questions were intended to identify other answers that are not mentioned on the questionnaire (for more detailed information, please read the Appendix III).

3.3.2 Participants' Listening Score

The listening score was collected to determine the participants' achievement in the subject, and also to provide data for the Y variable, in this study that was listening score (for more detailed information, please read the Appendix II); while the X variable was the participants' frequency of listening to English songs. Their scores were obtained from their latest listening test (the exit level test) held by the English Department of Indonesia University of Education at the end of May 2010. The test was aimed to identify students' proficiency in all Basic English courses; speaking, listening, reading and writing, completed in their last semesters.

The participants' listening scores used in this study were in the form of raw scores, aimed at getting the real scores, which would not be affected by several factors such as attendance, attitude, participation in class, etc.

3.4 Data Analysis

All data and information from questionnaire were separated into two; data of listening frequency to English songs that were analyzed along with participants' listening score and other data that were used to support the writer's findings and discussions of the correlation between students' frequency of listening to English songs and their listening achievement.

In this study, participants' frequency of listening to English songs was classified into the criteria of listening frequency (high, average, low) depending on their frequency in listening to English songs in a day. The reason of applying this calculation was that there was a difference in both rates and times they spent in their listening to English songs that might biasing the frequency itself. For example, student A who listened two hours in a day seemed to have higher frequency than student B who listened one hour in a day.

Table 3.1
The Classification of Students' Listening Frequency

Participants' Listening Frequency	Classification
+ 3 hours / day	High
2 – 3 hours / day	Average
0.5 – 1.5 hour / day	Low

The participants' frequency of listening to English songs was then analyzed, through data distribution, to investigate the minimum and maximum score, the mean, the standard deviation, and the tendency of each frequency amongst the mean and the standard deviation.

The supporting data and information, such as the purpose of listening to English songs, kinds of songs, etc. were presented and described along with other aspects, to give additional information that might be needed in presenting and discussing a main data of this study; the participants' frequency of listening to English songs and their listening achievements.

The participants' listening score was analyzed, through data distribution, to investigate the minimum and maximum score, the mean, the standard deviation, and the tendency of each score amongst the mean and the standard deviation.

The participants' frequency of listening to English songs was further calculated along with their listening scores using the Pearson Product Moment Correlation Coefficient, through SPSS, to determine whether there was correlation between two variables or not. If there was a correlation, it was significant or not. The determination whether or not the correlation was significant was by comparing the value r (correlation coefficient) with the level of significance in Pearson correlation. The level of significance would be .05. In Pearson correlation, N is subtracted by 2 to find out df (df= N-2), which stands for freedom.

In other words, when entering the table of level of significance in column of .05, the value of r had to be located in line with df. After that, it could be known whether it was equal or higher than the value of r in column .05. If it was so, it meant that the correlation coefficient was statistically significant and the alternative hypothesis could be accepted.

The Formula of the Pearson Product Moment Correlation Coefficient is as follow:

$$r_{xy} = \frac{n\sum XY - \left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left(n\sum Xi^2 - \left(\sum Xi\right)^2\right)\left(n\sum Yi^2 - \left(\sum Yi\right)^2\right)}}$$

Figure 3.1 The Pearson Product Moment formula

In the formula, r symbolized the Pearson Product Moment Correlation Coefficient, X symbolized the variable of the participants' frequency of listening to English songs, Y symbolized the variable of the participants' listening scores, N symbolized the number of participants in the research, and $\sum$ symbolized the sum of variables (X or Y) or the product of variables (XY).

The result of correlation coefficient is then being interpreted to find out its strength to follow Sugiyono (2010, p.231). The interpretations are presented in Table 3.2.

Table 3.2
Correlation Coefficient Interpretation

Coefficient Interval	Correlation
0,00 - 0,199	Very Weak
0,20 – 0,399	Weak
0,40 – 0,599	Moderate
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

Sugiyono (2010, p.231)

After finding out the correlation coefficient, it is necessary to find out whether it is significant or not by using *t* formula (Coolidge, 2000, p.118), as follows:

$$t = \frac{r}{\sqrt{\frac{1 - r^2}{N - 2}}}$$

Where:

t   : significance of correlation coefficient

r   : correlation coefficient

N   : number of participants

<div align="right">(Coolidge, 2000, p.118)</div>

The result from *t* formula, which is called *t obtained*, then being applied to the critical value, or *t table*, in distribution table. Several steps are taken in determining the *t table*. First, it is necessary to decide whether using a one-tailed or two-tailed test of significance. Because the alternative hypothesis is non-directional, then a *two-tailed* test of significant was required (Coolidge, 2000; Sugiyono, 2008). Second, it is also necessary to determine the level of significance and degree of freedom. As stated in previous sections, this study used *p = 0.05* and *df = N – 2*. Then, the *t table* can be determined in distribution table. After determining the *t table*, the next step is to find out whether the *t obtained* exceeds the *t table* or not. If the *t obtained* exceeds the *t table* then the correlation coefficient is statistically significant, and vice versa.

After determining the correlation coefficient, it is necessary to find out whether the hypothesis is accepted or not. The null and alternative hypotheses for

Pearson Product Moment Correlation are as follows:

$$H_o \quad : \rho = 0$$

$$H_a \quad : \rho \neq 0$$

(Coolidge, 2000, p.118; Sugiyono, 2008, p.258)

In conclusion, this chapter has discussed the research method, which consisted of research design, procedure of the research, instruments, population and sample, and data analysis. In the next chapter, the findings of the study in investigating the correlation between students' frequency of listening to English songs and their listening achievements, with any required information and description attained from the questionnaire, would be presented, analyzed, discussed and concluded, in accordance with theoretical overview above.