

CHAPTER III

METHODOLOGY

This chapter discusses the methodology used in conducting the study which is examining the relation between students' reading English text habits and their writing skill. The discussion of the method is employed to reveal how to answer the research questions presented in chapter I. The discussion in this chapter covers research design, nature of data, research setting and participants, data collection instrument, data collection procedure and data analysis.

A. Research Design

In reference to the problem statement of the study, this research deals with finding out the relation between students' reading habits and their writing ability. In order to solve the problem, quantitative approach was served as the strategy of inquiry mostly employed in this research with correlation as its methodology. The reason for selecting quantitative approach as the strategy is that this research is based on the measurement of quantity or amount (Kothari, 2004). Besides, the selection of correlational research was based on the following reasons. Firstly, as stated by Creswell (2012: 21), "Correlational designs are procedures in which investigator measure the degree of association (or relation) between two or more variables using the statistical procedure of correlational analysis". This research aimed at finding out the degree of relation between students' reading habits and their writing ability. Another reason for selecting correlational design was based

on the opinion proposed by Kothari (2004: 130) who said that “Correlation analysis studies the joint variation of two or more variables for determining the amount of correlation between two or more variables”. Based on those experts’ opinions, correlational design was considered appropriate to be used in this research for analyzing the data.

There are several categorizations related to the degree of correlation employed in the scientific research. In this research, the researcher used the categorization of r value according to Dancey & Reidy (2004). This categorization then would be used to determine the degree of the correlation result of this research. Dancey & Reidy’s categorization is presented in the table 3.1 below.

Table 3.1
The Category of the Correlation

| Value of the Correlation Coefficient | Strength of Correlation |
|--------------------------------------|-------------------------|
| 1 | Perfect |
| 0.7 – 0.9 | Strong |
| 0.4 – 0.6 | Moderate |
| 0 – 0.3 | Weak |

B. Nature of Data

A research requires data to be analyzed in order to answer the research questions. As mentioned previously, this research used quantitative data which are expressed in numbers (Creswell, 2012). To answer the first research question, the quantitative data were gathered from the closed-ended questionnaire.

The second research question was answered by analyzing the students’ score using descriptive statistics. The students’ score being analyzed is the score

of the essay production of the Academic Reading and Writing subject. In order to answer the third research question, the researcher analyzed the closed-ended questionnaire result and students' writing score. The closed-ended questionnaire result represents the students reading habits while the students' writing score of Academic Reading and Writing subject represents their writing ability. These data were analyzed to find out the relation between students' reading habits and their writing ability. Finally, the researcher analyzed the data from the open-ended questionnaire to support the statistical findings report of the second research question.

C. Research Setting and Participants

This research was conducted in English Education Department of Universitas Muhammadiyah Yogyakarta. The respondents of this research were chosen from the target population of the second semester students of English Education Department (PBI) academic year 2013/2014. There were five classes included. The ground of choosing this target population was that the students of second semester have already taken the Academic Reading and Writing subject in the first semester. Besides, the accessibility also becomes another consideration since it is located at the same department as the researcher's.

The academic year 2013/2014 students were regarded as the population. Population is "a group of individuals who have the same characteristic" (Creswell, 2012: 142). Considering certain limitation of time, the researcher selected 100 students as a sample for study within the target population. A simple random

sampling was used to determine the sample of this research. There were several reasons as the basic consideration in the selection of the simple random sampling for this research based on Creswell opinions. The significance of simple random sampling is stated by Creswell (2012: 143) who said, "The intent of simple random sampling is to choose individuals to be sampled who will be representative of the population". This technique is also considered as the most popular form of probability sampling from a population. Besides, any individual will have an equal probability of being selected from the population. Moreover, any bias in the population will be equally distributed among the people chosen. Therefore, the simple random sampling was considered to be an appropriate way to choose the respondents in this research.

D. Data Collection Instrument

The quantitative data were gathered from two instruments being employed by the researcher. The first one was a closed-ended questionnaire which was used to gain data about the students' reading habits. The closed-ended questionnaire consisted of thirty items. The questionnaire items pertained to students' reading English text habits which were divided into three sections namely the types of reading materials, frequency of reading and reading techniques. Item 1 to 10 reflected the types of English text the students mostly read, while item 11 to 20 were related to frequency of reading in a given time and item 21 to 30 discussed the techniques of reading the students apply for reading comprehension.

The items of the questionnaire were set in a five-point value Likert scale which required students to respond to each statement by indicating whether they never (1), rare (2), sometimes (3), often (4) or always (5) doing the activities. The researcher used these five factors to determine their degree of correlation with students' writing ability, as showed in the table below.

Table 3.2
Likert Scale

| Likert Scale | Valuation |
|--------------|-----------|
| 1 | Never |
| 2 | Rarely |
| 3 | Sometimes |
| 4 | Often |
| 5 | Always |

Some of the items on the closed-ended questionnaire were modified from the previous research which has been proved valid and reliable. Several questions which were arranged by the researcher also have been tested to see the validity and reliability. While the second research instrument is the open-ended questionnaire which consists of a question about the students' opinions on the advantages of reading toward their writing ability to support the statistical findings report of the second research question.

The quantitative data which were gathered through the questionnaire provided the quantification about the students' reading habits and the lecturer's documents provided the quantification of students' writing ability. Besides, the open-ended question was intended to gather further information from the respondents with regard to their opinions on the benefits of reading toward their writing achievement in order to support the statistical findings of the relation

between students' reading English text habits and their writing ability. The questionnaire of this research is attached in appendix I.

1. Reliability of Research Instrument

Reliability refers the consistency of a measurement. It means that scores from a research instrument are stable and consistent (Creswell, 2014). Field (2009) proposes that to be valid, the instrument must first be reliable. Moreover, Creswell (2014) emphasizes that scores should be practically the same when researcher conducts the instrument several times at different times. Thus, Khotari (2014) suggests that a measuring instrument is said to be reliable if it provides consistent results. Regarding to the statistical measurement, Field (2004) states that an instrument is said to be reliable if the reliability coefficient (α) is higher than 0.70. In conclusion, reliability is the ability of the measurement to provide the same results under the same conditions.

2. Validity of Research Instrument

Another test conducted in this research is test of validity. Khotari (2004: 73) defines that validity is the most important criterion and indicates the degree to which an instrument measures what it is intended to measure. He proposes the three types of validity namely content validity, criterion-related validity and construct validity. Among those types of validity, the researcher used content and construct validity in this research.

A test is said to have content validity if its content represents the topic under study. Besides, the construct validity is the degree to which score on a test can be accounted for by the explanatory constructs of a sound theory (Khotari,

2014: 74). A measure is said to have construct validity if it confirms the predicted correlation is associated with other propositions. After ensuring that the questionnaire was valid and reliable, the researcher distributed it to 100 students of PBI UMY as the respondents.

E. Data Collection Procedure

Since this research was conducted in PBI UMY, the researcher firstly asks for permission to the institution. The letter of permission for conducting the research in PBI UMY was attached in appendix 2. The researcher conducts four stages for gathering the data in this research. The first stage of the study was conducting the piloting to test the reliability and validity of the questionnaire. These instrument tests were done before the researcher distributed the questionnaire as an instrument of this research to gather the data. The questionnaire for piloting was distributed to 30 students on May 16th, 2014.

Then, the second stage was done to answer the first research question by analyzing the students' reading habits through the closed-ended questionnaire. The questionnaire was distributed to the respondents starting from May 19th to June 6th, 2014. Before distributing the questionnaire sheets, the researcher explained the objective of the research and how to answer the questionnaire. The researcher was there when the respondents filled in the questionnaire in order to avoid ambiguous and unfamiliar terms that might be faced by the respondents. As it all has been distributed, the respondents were required to answer both the closed-ended and open-ended questionnaire in around 30 minutes.

Since the data from the closed-ended questionnaire were gathered, the normality and homogeneity of the data were also tested carefully. Those requirement analysis tests employed the closed-ended result as attached in Appendix 3. The normality test was conducted in order to prove whether or not the data of the independent variable are normally distributed before analyzing the statistical result of the research. There are two approaches to test the normality of the data namely graphic analysis and statistical analysis. To begin with, the normality test with graphic was completed by analyzing the distribution of data plots. The data is said to be normally distributed if the result is a straight diagonal line (Field, 2009). It means that the data are normal if the data plots are distributed closed to or fall exactly along the diagonal line. On the contrary, the data are considered not normally distributed if the data plots are distributed far away from the diagonal line.

However, since visual assessment of the distribution is not representative enough for assessing normality, it is necessary to conduct normality test in SPSS as the supplementary to the graphical assessment of normality. The most important test for the assessment of normality is Kolmogorov-Smirnov (K-S) test. The One-Sample Kolmogorov-Smirnov test is used to test a variable to check if it is normally distributed (Bluman, 2012: 325). The statistical analysis using SPSS version 22.0 was done to reveal the normality of the data through the Kolmogorov-Smirnov test. If the result is not significant ($P > 0.05$), the data have normal distribution. Conversely, if P value is less than 0.05 ($P < 0.05$) the distribution is not normal.

In terms of requirement analysis tests, there is also a test namely test of homogeneity. Homogeneity is the statistical assumption which indicates that the variances should be the same throughout the data (Field, 2009). Moreover, Field (2009: 133) explains that in correlational designs, this assumption means that the variance of one variable should be constant at all levels of the other variable. Besides, the test of homogeneity of proportion was used to find out whether the proportions for a variable equal when a number of samples are selected from different population. The ANOVA (F test) is considered as one way to test the possible differences in variance assumption. In this research, the statistical analysis using SPSS was conducted in order to see the homogeneity. In an ANOVA, we assume that reading habits variances are equal. The variances are said as not equal if *Sig* is lower than or the same as 0.05 ($p\text{-value} \leq 0.05$). Otherwise, if *Sig* is higher than 0.05 ($p\text{-value} > 0.05$), it can be concluded that the variances are equal.

The third stage was conducted to reveal the students' writing ability through the respondents' score level. The data gathered from the document of the students' Academic Reading and Writing Score. The students' score was classified into a range scale including *low*, *average*, *good* and *excellent* scale. The low scale pertain the score between 0 – 5, the average scale lays between 6 – 15, the good scale is between 16 – 25 and the excellent scale represents the score between 26 – 30 point. Table 4.9 shows the detailed respondents' score level.

The last stage was completed to answer the third research question on the relation between students' reading habits and their writing ability. In order to find

out the relation, a correlational analysis was done. Therefore, the students' Academic Reading and Writing scores and the statistical result of the closed-ended questionnaire were used to gain the correlational analysis. The result of correlational analysis was used for the hypothesis testing. The result of closed-ended questionnaire analysis and students' Academic Reading and Writing score were investigated to find out the relation between them. The students' score of Academic Reading and Writing subject is presented in Appendix 4. Moreover, the data from open-ended questionnaire which were used to support the statistical finding are presented in narrative form.

F. Data Analysis

In this research, the data were gathered from both closed-ended and open-ended questionnaire and also the lecturer document of students' Academic reading and writing score. The data gathered from closed-ended questionnaire were analyzed using the Statistical Package for Social Science (SPSS) version 22.0. The closed-ended questionnaire was examined to reveal the students' reading habits in terms of the types of reading materials, the frequency of reading and the techniques of reading. The researcher used the bivariate correlation to correlate two variables in this study. In this research, the students reading habit was considered as independent variable (X) while writing ability (Y) was regarded as the dependent variable.

Data analysis was started by processing the data gathered from closed-ended questionnaire in a table. The next step was processing the data of the

Academic Reading and writing scores from the lecturer that had been documented. The score was computed in order to find out the relation between the two variables, namely reading habit and writing ability. Therefore, the statistic software, SPSS version 22.0 was used to process the data in order to see the relation through product moment coefficient to reveal the second research question. After completing the statistical analysis, the researcher will analyze the students' answer on the open-ended questionnaire to support the result of correlational analysis.