Chapter Three

Research Methodology

This chapter presents the methodology of this study, and discusses how this study was conducted. It consists of four parts, namely research design, population and sample, data collection method, and data analysis. In the research design, the researcher explains the design and some reasons of choosing the design. Next, in the population and sample, the researcher explains the population and the number of samples, and the sampling technique used for this study. In the data collection method, the researcher explains the way to gather the data. The last is data analysis. In this part, the researcher reveals some steps in analyzing the data.

Research Design

This research adopted a quantitative research method. "In quantitative research, the investigator identifies a research problem based on trends in the field or on the need to explain why something occurs" (Creswell, 2012, p.13). Quantitative research was a research on phenomena using measurement of quantity or amount (Kothari, 2004). A quantitative research method was suitable for this research because the researcher wanted to calculate the common errors and error types of the use of conjunction that most frequently occur in students' writing.

To be more specific, this research used an error analysis as a method because error analysis was "a part of the methodology of investigating the

language learning process" (Corder, 1981, p. 27). The purposes of this study were to find out the students' common errors and the types of errors which most frequently occurred in the use of conjunction in students' writing. This study is important because it can discover the students' errors in using conjunction, and research on the issue has not been conducted yet at the English Education Department (EED) of Universitas Muhammadiyah Yogyakarta (UMY).

Population and Sample

"Population is a group of individuals who have the same characteristic" (Creswell, 2012, p. 142). In this study, the population was all students of the EED of UMY in academic year 2015/2016. There were several reasons of choosing the students of batch 2015 of the EED of UMY. Firstly, they were in the first year in learning English. It was assumed that they had problems in using conjunction. Secondly, the researcher could have easy access to collect the data because the researcher studied at the EED of UMY.

The total number of students who enrolled at the EED of UMY in academic year 2015/2016 was 140 students. The researcher used total sampling to select research respondents. Total sampling is a sampling technique if the number of population and sample that were used in the study is equal (Sugiyono, 2009). Thus, all students of the EED of UMY enrolling in academic year 2015/2016 become the sample of this study.

Data Collection Method

To collect the data, the researcher used document analysis. The researcher collected the data by collecting students' writing assignment with the lecturer's permission. The data were taken from Academic Reading and Writing subject. The researcher took one of the final writing assignments that the genre was recount text. There were 140 recount texts of students' writing assignment and each text consisted of 20 sentences. The documents were collected to measure the errors that students made in the use of conjunction.

Validity

Validity is the main key in successful research and it determines the worth of a piece of research (Cohen, Manion, & Morrison, 2005). The researcher checked the validity of the data by proofreading. First, the researcher retyped what respondents wrote on their writing assignment. Then, the proofreader read the documents of respondents' original worksheets and the documents that the researcher retyped. This method was conducted to ensure that the data of respondents' writing assignment were exactly the same as what the researcher wrote.

To ensure the validity of the data, the researcher also used expert judgment. The expert judgment was carried out by the researcher's supervisor. All of errors that were found in the respondents' writing assignment were discussed and consulted with the researcher's supervisor.

Reliability

According to Cohen, Manion, and Morrison (2005), "Reliability is essentially a synonym for consistency and replicability over time, over instruments and over groups of respondents" (p. 117). This research reliability is important to reveal whether or not the instrument used by the researcher can be trusted. Sekaran (2000) classified three criteria of reliability.

Table 1

The criteria of reliability

0.8-1.0	Good
0,6-0,799	Moderate
< 0,6	Not good

Based on the table above, the researcher applied Cronbach's alpha in SPSS to measure the reliability. The result of reliability instrument fell off in 0,633. The table of Cronbach's alpha is presented below.

Table 2

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.634	.633	20

Data Analysis

To analyze the data, the researcher used Corder's (1967) method of error analysis. There were three steps. Firstly, the researcher took samples from the respondents. Secondly, the researcher read all the respondents' worksheets, and identified the errors. Thirdly, the researcher analyzed and classified the errors.

After collecting data, the researcher read all of the respondents' worksheets. There were 140 recount texts that consisted of 2800 sentences. After read all the worksheets, the researcher identified the errors found in respondents' worksheet based on errors in the use of conjunction *but, and, or, because,* and *so*. The identified error sentences were typed in Microsoft Word and the researcher made lists of errors in the use of conjunction *but, and, or because,* and *so*. Then, the researcher analyzed all of the identified error sentences. After the researcher re-read and analyzed all of the error sentences, the researcher deleted some sentences, which did not have errors in the use of conjunction, from the list and left the rest sentences that had errors. Last, the researcher classified the errors into four types, namely misuse, unnecessary addition, omission, and redundant repetition.

In this study, the researcher used a statistical analysis program, SPSS, to process the data. After all of the data were collected, the researcher analyzed the data using descriptive statistics. According to Creswell (2012), "descriptive statistics indicates general tendencies in the data (mean, mode, median), the spread of scores (variance, standard deviation, and range), or a comparison of how one score relates to all others (*z* scores, percentile rank)" (p. 182). The

components of descriptive statistic are mean, mode, and median used to answer the research questions. Creswell (2012) stated mean is an average score of the data, median is the middle of a position of scores, and mode is the numbers that often appear in the data.