CHAPTER III

RESEARCH METHOD

This chapter presents the research methodology used in this study. It comprises research design, variable, population, sampling/ setting and subject of the study, data sources, technique of data collection and research instruments and data analysis.

A. Research Design

Research design is generally defined as a way of how researchers obtain valid data from research. In this study, researchers used a quantitative approach and the design used was correlational research. According to Ary (2010: 22) quantitative research uses objective measurements to collect numerical data used to answer questions or test predetermined hypotheses. Usually requires a well-controlled setting. In addition, Creswell (2012: 619) correlational research is a quantitative design in which researchers use statistical correlation techniques to describe and measure the degree of relationship between two or more variables or sets of scores.

In this study, researchers wanted to find out whether the correlation between the two variables really existed or not. Thus, the correlational research design is the most appropriate research design to answer whether English language proficiency has a correlation with statistical competence in 6th semester students.

B. Population, Sampling and Sample

1. Population

The population of this research is all English Department students of IAIN Tulungagung on the 6th semester in the academic year of 2016/2017. There were five classes that consist of 190 students.

2. Sampling

Sampling is the way to determine the sample. Among many sampling techniques, the researcher uses random sampling. Random sampling is part of a sampling technique where each sample has the same probability or opportunity to be chosen. The randomly chosen sample is intended to be an unbiased representation of the total population.

3. Sample

The researcher used systematic random sampling. The sample of this research is the whole TBI's students on the 6th semester in the academic year of 2016/2017.

C. Technique of Data Collection

1. Documentation

Researcher collected data by means of documentation that is by collecting or getting data from the parties concerned. The researcher collecting students' TOEP score from Head of Language Center of IAIN Tulungagung and the data of students' statistics score that

researcher's advisor. So the researcher can directly process the value to become complete data.

D. Data Analysis

The purpose of this study is to measure the correlation between English language proficiency and competency statistics. The data of this study were analyzed using statistical analysis. To measure the relationship between two variables, researchers used bivariate correlation using the Pearson Product Moment formula. The researcher uses it because the data obtained from the two variables are exposed in a quantitative score and also the data uses an interval scale. The variables of this research are English language proficiency and statistics competence.

Based on the researcher's advisor's suggestion to get the Student TOEP score, the researcher was asked to request a score from the Head of the Tulungagung IAIN Language Center. The researcher meets with the Head of the Language Center to ask permission first. After that the researcher meets again by giving a thesis proposal and permission letter that already signed by advisor. Then the Head of the Language Center gives the TOEP score to researchers through WhatsApp in PDF format..

After gathering data, the researcher goes through steps on analyzing it. First, the researcher drafted them into the tables which expected the readers easier to understand. Then the researchers tested the normality of the data using One Sample Kolmogorov-Smirnov. Also, the researcher uses computer calculation of Pearson Product Moments

correlation using SPSS 16.0 program to analyze the data, because the variable of the data is interval and interval. Correlation can produce positive or negative numbers. If the correlation coefficient is close to 1, that means the relationship between the two variables is stronger. Meanwhile, if the correlation number closes to 0, that means the relationship between the two variables is weaker. In addition, to find out a significant correlation can also be done with the degree of correlation that can be seen in the following table:

Table 3.1

Interpretation Correlation Coefficient

Interval coefficient	Interpretation
0,000-0,200	The correlation is very low
0,200-0,400	The correlation is low
0,400-0,700	The correlation is moderate
0,700-0,900	The correlation is high
0,900-1,000	The correlation is very high

Source: Arikunto (2010:319)