

Chapter Three

Methodology

In this chapter, the explanation of methodology used in this research is presented. This chapter consists of four sections. They are research design, research population and sample, data collection method, and data analysis.

Research Design

To explore the correlation between the students' involvement in EDSA and students' academic achievements at English Education Department of UMY, the researcher used quantitative method, specifically, a correlational design. Quantitative research method is employed for deductive approaches which the hypothesis justifies the variables of the narrowly defined research questions (Borrego, Douglas, & T.Amelink, 2009). By using quantitative research, the findings resulted in particular numbers can illustrate the correlation between the two variables, which in this research the students' involvement in EDSA and EED students' achievements.

A correlation is defined as a relationship between two variables. The whole purpose of using correlations in research is to figure out which variables are connected (Kowalczyk, 2015). This research used two variables to correlate and to see that two variables have correlate to each other or not, so the correlational research design is the most suitable for this research.

Research Setting

The research took place at English Education Department of Universitas Muhammadiyah Yogyakarta building. The researcher chose this place because

particularly, the results of this research would give information for students at EED of UMY especially who joined EDSA Board member. Then, since the researcher was also a student at EED of UMY, choosing EED of UMY as a research setting was reasonable because the researcher had access to gather the data. Then, the researcher collected the data on November 2017 when the academic activity was still running in Universitas Muhammadiyah Yogyakarta.

Research Population and Sample

The population of this research was students of English Education Department who joined EDSA as a board member. The member of population was fifty students. The researcher used purposive sampling in this research. According to Teddlie & Yu (2007) purposive sampling is a kind of sampling used to achieve representativeness, to enable comparison to be made, to focus on specific things, and unique issues. The selection is based on the certain criteria. In this research, the consideration to select the sample was that the respondents were EDSA Board member batch 2015 and 2016. The respondents were those who already got GPA. This means Board Member of EDSA batch 2017 could not be the respondents because they had no GPA yet. From fifty board members, only twenty eight students who met those requirements. Therefore, the number of sample in this research was twenty eight students.

Instruments of this Research

The researcher used two instruments to collect data of this research. They were questionnaire and Grade Point Average (GPA). These instruments became a researcher's tool to obtain data of the research.

Questionnaire. The questionnaire used to get information about EDSA's board member and students' academic achievements. Questionnaire is an instrument for collecting data with a pilot structured, often numerical data and it is able to be distributing to the participants without the researcher (Cohen, Manion & Morrison, 2011). Thus, the researcher used the questionnaire as the appropriate instrument of this study because the researcher needed numerical data for assessing correlation between the students' involvements in EDSA and students' academic achievements. The researcher used the questionnaire in Indonesian language to make the participants easy in understanding the content in the questionnaire.

The researcher employed structured and closed questionnaire. According to Cohen, Manion, and Morrison (2011), structured and closed questions propose the range of responses that participants will choose and it often more focus and directly to the point. It meant that the participants only chose an answer based on answer choices in the questionnaire, and the participants answered directly about themselves. The researcher designed the questionnaire by using four Likert scales of response mode on multiple intelligences survey. Likert scales is designed "in a degree of sensitively and differentiation of response whilst still generating numbers" (Cohen, Manion, and Morrison, 2011, p. 386). The scoring of questionnaire's response mode is described as follow:

Table 3.1 the response's scales of questionnaire score alternative answer

No.	Scale	Score of The Scale
1.	Strongly Disagree	1
2.	Disagree	2
3.	Agree	3
4.	Strongly Agree	4

GPA. The researcher used the data of GPA filled by respondents in the questionnaire. GPA was to measure the academic achievement of students' who joined EDSA as a board member.

Validity and Reliability

Before analyzing data, the researcher checked the validity and reliability of the questionnaire as instrument testing. According to Cohen, Manion & Morrison (2011), validity is a part of the instrument to assess what is intended to describe and validity in quantitative research aims to provide the appropriate instrument and data statistical treatments. The researcher involved three expert judgments to analyze the validity of questionnaire's items. The expert judgments were in the EED of UMY lecturers who master in this research's topic. Then, after getting judgment from the lecturers, the valid questionnaire items were used for collecting data.

After the researcher know the validity of questionnaire's items, the researcher measured the reliability of questionnaire's items. Therefore,

Cronbach's Alpha was used to show the criteria of reliability of questionnaire's items. The table of the criteria of reliability was shown as the following:

Table 3.2 Criteria of Reliability of Cronbach's Alpha

Cronbach's Alpha	Criteria
>0.90	Very highly reliable
0.80-0.90	Highly reliable
0.70-79	Reliable
0.60-0.69	Low reliable
<0.60	Unacceptably Reliable

The Result of the reliability of the questionnaire items in this research was 0.711.

It means that the questionnaire's items were reliable.

Data Collection Procedure

The researcher did some steps in collecting the data. The researcher met all the board members of EDSA in their monthly meeting. On that meeting, the researcher asked the board members of EDSA's permission to distribute questionnaire and to use their GPA to conduct this research. Then, the researcher distributed the questionnaire to board members of EDSA using social media such as *WhatsApp*, *Line*, and *Gmail*. The researcher gave two days for the respondents to answer all items in the questionnaire.

Analysis of Data

This research used descriptive and inferential statistic to analyze the data. Firstly, this research used descriptive statistic to answer the first and second

research question which were “ How is the students’ involvement in EDSA Board?” and “How is the academic achievement of students who join EDSA Board?” According to Cohen, Manion and Morrison (2011), researchers use descriptive statistics to describe and present the data by indicating central tendency (means, modes, medians).

The correlation test of this research used Pearson’s product-moment or correlation coefficient (r) to measure whether there was a correlation between joining EDSA and students’ academic achievements. Cohen, Manion, and Morrison (2007) stated that the Pearson’s product-moment correlation coefficient (r) is ranging statically from -1.0 to +1.0. The correlation coefficient of -1.0 means the perfect negative correlation between two variables. The table of the categories of correlation coefficient is shown as the following:

Table 3.3 the Correlation Coefficient (r)

No.	r_{xy} Range	Categories
1.	0.85 – 1.00	Very High Correlation
2.	0.65 – 0.85	High Correlation
3.	0.35 – 0.65	Moderate Correlation
4.	0.20- 0.35	Low Correlation
5.	0.00-0.20	Very Low Correlation