

Chapter Three

Methodology

This chapter explains the methodology of this research that is employed by a researcher. It consists of several parts, such as: research design, research setting, population, sample and sampling technique, data collection instrument, and data analysis. In the research design, the researcher explains the method and design which is followed by reason of deciding it. Next, in the population, sample and sampling technique, the researcher informs the classification of the population and target population. The number of the sample also is included. Then, the researcher explains the sampling technique used in this study. Besides, next section discusses data collection instrument. In the data collection instrument, the researcher gives the explanation on the way to collect the data. Finally, the researcher presents the way to investigate and analyze the data.

Research Design

This study was conducted using quantitative approach. According to Creswell (2012), quantitative method is a method to describe a research problem through a description of trends or an ELED for an explanation of the relationship among variables. Describing a trend means that this study will answer the questions of researcher to establish the tendency of responses from the respondent. Besides, the characteristic of the quantitative approach is the research will be analyzing trends, comparing groups, or relating variables using statistical analysis and interpreting result by comparing them with prior predictions and past research. Therefore, the researcher attempted to conduct this

research by using quantitative method because this research desires to know the relating variables using statistical analysis.

This research took correlational design. This was because this research had a purpose to explain the degree of association (or relation) between two or more variables using the statistical procedure of correlational analysis (Creswell, 2012). Besides, it is describing a research problem through an ELED for an explanation of the relationship among variables. This researcher had specific design which was especially called explanatory design. The reason researcher conducted this study using explanatory design was to investigate the correlation between two variables. As pointed out by Creswell (2012), an explanatory research design or correlational design is a research in which the researcher is interested in seeing if the change in one variable affects the change in the other. Besides, the researcher collected the data in one point in time and analyzes all respondents as a single group. It was because the researcher collects scores from only one group and did not divide the group into categories or factors. Thus, this study is conducted by using correlational design, specifically explanatory design.

Research Setting

This research was conducted at one private university in Yogyakarta, especially in ELED of Language Education Faculty. The reason why the researcher chose the setting of place in ELED was because this department has applied many teaching and learning methods in the classroom. The various methods to teach students in the classroom would give benefit to the students while learning process. It could be an external motivation for students in the classroom. On the other hand, the various methods allow students to face

anxiety in the classroom. It is because they were having different ways in learning. It means that the students were having experiences of feeling anxious in the classroom.

This study was conducted between March - July 2018. The data were collected entirely on March 2018. The researcher chose on that time to collect data because the students had just had holiday and they began to have a new schedule for the class. The students had more leisure time on the first month of new course period. So, the students could fill the questionnaire with no rush. On the other hand, the researcher could be easier to collect the data from the respondents because they did not have many activities. Besides, that time allowed researcher to analyze the data in a long time. The data also could be analyzed carefully. It allowed getting a valid data. The researcher could analyze the data conveniently after it was collected completely. Therefore, this study took on that time for collecting and analyzing the data.

Research Population, Sample, and Sampling Technique

The researcher collected the data to the certain population, sample and proper sampling technique. Referring to Creswell (2012), population is group of individuals who have the same characteristic. The researcher chose the target population from the students at ELED of one private university in the first year because they were having experiences of feeling anxious in the classroom. That statement was supported by the fact that new students are still adapting in their environment. Widuri (2012) stated that new student faced many problems as a consequence of acculturation with the new culture or behavior where they are studying. They are required to cope everything changes well to make

better education for themselves. So, it proved that they have the experiences of having anxiety in the classroom. The number of target population was 234 students.

The researcher chose the students at ELED of one private university batch 2017 randomly for the sample. Based on Cohen et al. (2011), the numbers of sample are 151 respondents for confident level 95% and confidence interval 5% if the population size is 234. Thus, the researcher chose 151 respondents for the sample. The respondents were chosen randomly from classes which conveniently available.

The researcher used simple random sampling for the sampling technique. Simple random sampling was included in probability sample because it draws randomly from the wider population. In simple random sampling, each member of the population under study has an equal chance of being selected and the probability of a member of the population being selected is unaffected by the selection of other members of the population (Cohen et al., 2011). This technique was also chosen to minimize the sample errors when researcher is collecting the data. Therefore, the researcher preferred to use simple random sampling to select the sample of respondents.

Data Collection Instrument

In this research, the researcher gathered the data using questionnaire to answer the first research question and document of Cumulated Grade Point Average (CGPA) for the second research question. The questionnaire was employed to gather the data of level students' anxiety whereas CGPA was utilized to obtain the data of students' achievement. The type of questionnaire was structured. The researcher chose the structured questionnaire because it is enabling patterns to be observed and comparisons to be made,

and then the questionnaire will be piloted and refined (Cohen et al., 2011). Hence, the result contains a full a range of possible responses as can be reasonably foreseen.

The researcher adopted the question items based on questionnaires of Horwitz et al. (1986). The researcher adopted all of them because it related to the problem of this study. The questionnaire had 33 statements to answer the first research question about level of students' anxiety. The entire question item had rating scale for type of the responses. There were four responses, such as: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). Rating scales are widely used in research. They combine the opportunity for the flexible response with the ability to determine frequencies, correlations and other forms of quantitative analysis (Cohen et al., 2011).

According to Horwitz et al. (1986), this questionnaire had already been reliable. The score of reliability was proved by reliability statistic. There were some categories to determine the score of alpha coefficient. The guideline is that if the score of Cronbach alpha is more than 0.90, it can be considered as very highly reliable. This questionnaire showed that the score of alpha coefficient was .93. Thus, it concluded that this questionnaire was very highly reliable.

In order to make the respondent easier to understand the statements of question items, the researcher translated it from English to Indonesian. The researcher was helped by three expert judgments to test the readability statements. In testing the statements, they gave some comments and suggestions. They gave comment to reduce the alternative response. The researcher deleted the alternative response "neither agree nor disagree" because it made the ambiguous result. Moreover, they gave suggestion to avoid negatives

of statements in question item because it made the respondent could be unsure to answer the questionnaire. Even, it causes confusion about a question's intent. Those things help the most effective data collection instrument possible. Then, it aid in increasing the willingness of respondents to complete the survey accurately.

Data Collection Procedure

The researcher distributed the questionnaires to the students at ELED of one private university batch 2017. Besides, the researcher administered questionnaires by self-administered questionnaires in the presence of the researcher. Using this way, the researcher may guide the respondents as clear as possible. The presence of the researcher is helpful to enables any queries or uncertainties to be addressed immediately with the questionnaire designer (Cohen et al., 2011). It also ensured that all the questions are completed and filled in correctly. Thus, the researcher could ease to monitor the respondents while questionnaires are distributing.

For collecting students' Cumulated Grade Point Average (CGPA), the researcher asked permission from the Dean of Language Education Faculty and the Head of English Language Education Department. The score of CGPA was collected from students in the first year who took 24 University Credit Unit (SKS) of seven courses. This procedure was done in order to obtain institution's archive namely students' CGPA. After obtaining the permission letter from the Dean of Language Education Faculty and the Head of English Language Education Department, researcher asked the students' CGPA of batch 2017 to staff of academic information. In addition, the data had been completed to conduct this study.

Data Analysis

The researcher analyzed the data from the questionnaire using descriptive statistic. Descriptive statistic was used to analyze the data which answered the first and second research questions. The first question is “How is the level anxiety?” and the second question is “How is the academic achievement?”. Cohen et al. (2011) stated that descriptive statistic do to describe and present the data in term of summary frequencies. Thus, the descriptive statistic is used to find the result of students’ anxiety level and the academic achievement.

In descriptive statistic, the researcher saw the mean score of each variable to decide the certain category. The researcher decided the range of each category using formula from Supranto (2006), the formula of the interval class as follow:

$$C = \frac{Xn - X1}{K}$$

Description: C = assumption of the number (class width, class size, class length)

Xn = maximum value

$X1$ = minimum value

K = number of category

Explanation: Maximum Value (Xn) = $33 \times 4 = 132$

Minimum Value ($X1$) = $33 \times 1 = 33$

Number of category (K) = 3 (low, high, moderate)

The researcher decided three categories of students' anxiety level. The categories of students' anxiety level could be seen below:

Table 2 Category of Students' Anxiety Level	
Value	Category
33 – 66	Low
66.1 – 99	Moderate
99.1 – 132	High

Table 2 showed the value and categories of students' anxiety level. The category was divided into three interval values. The first value is 33 to 66. Level anxiety of students in this value was in low categories. The second value was 66.1 to 99. This means level anxiety of students was in moderate categories. The last value was 99.1 to 132. This level showed that level anxiety of students was in high categories. Thus, these categories and values showed the level anxiety of students.

On the other hand, researcher also decided three categories of students' academic achievement which proposed by the ministry of education number 232/U/2000. The categories of students' academic achievement as follow:

Table 3	
Category of Students' Academic Achievement	
Value	Category
2 – 2.75	Satisfactory
2.76 – 3.50	Good
3.51 – 4	Excellent

Table 3 showed the value and categories of students' academic achievement. The category was divided into three interval values. The first value was 2 to 2.75. Academic achievement of students in this value was in satisfactory categories. The second value was 2.76 to 3.50. This means academic achievement of students was in good categories. The last value was 3.51 to 4. This level showed that level anxiety of students was in very good categories. Thus, these categories and values showed the academic achievement of students.

Besides, the third research question is analyzed using inferential statistic. Using inferential statistic, researcher can infer population parameter from sampling and statistical technique based on probability (Cohen et al., 2011). It is used to see the correlation among two variables. The researcher operated Statistical Application and Microsoft Excel in order to ease analyzing the data. Besides, this research activates Pearson Product Moment correlation (r) via Statistical Application to correlate between two variables which were level students' anxiety as the independent variable and student's academic achievement as the dependent variable. There is standard guideline to

measure the strength of association between two variables as showed below (Cohen & Manion, 1994).

Table 4 Correlational Score	
Value	Description
< - 0.20	Very Low
0.21 – 0.35	Low
0.36 – 0.65	Moderate
0.66 – 0.85	Strong
0.86 - >	Very Strong

Table 4 presented the range score of correlation. The interval value was divided into five descriptions. First description was very low correlation which is included the range score around less than to 0.20. Secondly, range score 0.21 to 0.35 is included into low correlation. Third, 0.36 to 0.65 is included into moderate correlation. Fourth, 0.66 to 0.85 is included into strong correlation. The last, 0.86 to up are categorized as very strong correlation.