

Chapter Three

Methodology

This chapter discusses the methodology used in this research. There are seven sections explained in this chapter three namely research design, research setting, research population and sample, research instrument, data collection procedure, validity and reliability of the instrument, and data analysis. Several theories are also included in this chapter to support the research methodology.

Research Design

The purpose of the study is to find out the correlation between students' classroom presentation and students' self-confidence. This study uses quantitative method to gather the data. The researcher used quantitative method because the researcher collected the data by numerical data from a large number of people. As Creswell (2012) stated that the characteristic of quantitative research are describe a trends for giving the explanation from relationship among variables. It provides the literature to give the major role from the research problem and justifying the research problem. The numerical data will be collected using an instrument, and analyze the trends that related to variables.

This study has two variables, students' classroom presentation and students' self-confidence. The researcher used a correlation design to access the data. Additionally, Creswell (2012) stated that correlational research design is a statistical research design to establish the tendency for two or more variables in the same way. Furthermore, it is appropriate to know the correlational two or more variables. This

research has two variables, those are variable y and variable x. Variable y is students' classroom presentation, and variable x is students' self-confidence. Hence, this study research used explanatory design as the type of correlational design. According to Creswell (2012) explanatory design is a correlational design which the researcher measures two variables which are reflected to each other. This research used explanatory design because this study aims to examine the correlation between students' classroom presentation and students' self-confidence.

Research Setting

This research was conducted at ELED of private university in Yogyakarta. There are some reasons of choosing this college. First, it is because some lecturers at ELED are using presentation method in a teaching and learning process. Therefore, the students have many experiences in doing presentation. So, the researcher can easily get the data by distributing the questionnaire to the third year students ELED. This research was conducted in October 2018.

Research Population and Sample

In this section, the researcher explains about population and sample of the research. That way, the researcher presents the number of population and samples of this research. Additionally, the researcher also explains the reason why the researcher chooses the population and samples.

Population. The population of this study were students at ELED of private university in Yogyakarta batch 2015. The researcher chose those students as the population because the population fulfil the criteria. The criteria is that they had studied about presentation in the classroom. Moreover, the respondents also had studied around four years in ELED, so they experienced in doing presentation. According to Creswell (2012) "Population is group of individuals who have the same characteristic" (p.142). In this study, the population is all active students in ELED of private university in Yogyakarta batch 2015. Thus, the total populations of this research were 119 students. The researcher knew the population from the administration staff of private university in Yogyakarta. The researcher asked to one of the employees in administration staff office.

Samples. Creswell (2012) maintained that sample is the smallest part of population. In this research, probability sample is applied to select the sample of this study. The researcher chose cluster sampling as the types of probability sample. The researcher argued that in cluster sample, it selects the respondents from the class. It means that the researcher draws the class of ELED from class A until class D. Then, the researcher got the class A, B, and C as samples.

Besides, the researcher adopted reference of random sampling from Notoadmojo (2010) to determine the sample size and the formula that is displayed below.

$$n = \frac{N}{(1 + N \cdot d^2)}$$

n = Sample size

N = Population size

d = Level of confidence/accuracy desired (0.05)

To determine the sample size of English Language Education Department that has 119 students, the researcher used the formula to get the result. The researcher will took 95 students of ELED as the sample. The steps to get the sample is :

$$n = \frac{N}{(1 + N \cdot d^2)}$$

$$n = \frac{119}{(1 + 119 \cdot (0.05)^2)}$$

$$n = 95$$

$$n = 95$$

Research Instrument

The purpose of this research is to find out the level of students' performance in classroom presentation, level of students' self-confidence, and the correlation between students' performance in classroom presentation and students' self-confidence's level. Based on the purposes of this research, the researcher used questionnaire as instrument to collect the data. The researcher used questionnaire to

answer the second research question. Cohen, Manion, and Morrison (2011) stated that questionnaire is an instrument to collect the data of survey information organized by structure. This instrument is formed by numerical data. As the reason, researcher used questionnaire as data instrument because it was easier to collect the data. In addition, this research used rating scale as type of questionnaire items. Rating scale is used as type of questionnaire for the research (Cohen, Manion, & Morrison, 2011). Furthermore, this research used one part of questionnaire for accessing students' self-confidence's level. Moreover, the researcher used score of Academic Presentation course to assess students' performance in classroom presentation.

The second part of the questionnaire is used to access students' self-confidence level. The researcher adopted the questionnaire related about students' self-confidence from source: Katerina Mangampang 2017 by title *Tingkat Kecemasan mahasiswa berbicara didepan umum dengan implikasinya terhadap pengembangan program bimbingan peningkatan kepercayaan diri berbicara didepan kelas*. The researcher used this questionnaire to determine the students' self-confidence This questionnaire is suitable for determining students' self-confidence. This questionnaire consists of 17 items. The respondents answer the questionnaire with four-point rating scales below.

Table 3.1

The Response scale of students' self confidence level

No	Rating Scale	Score
1	Strongly Agree/Sangat Setuju	4
2	Agree/Setuju	3
3	Disagree/Tidak Setuju	2
4	Strongly Disagree/Sangat Tidak Setuju	1

The table shows the rating scale, categories and score of students' self-confidence's level. The rating scale of this response consists of four points. First point is *Strongly Agree* that is for the score number 4 meaning the highest score of this rating scale. Second point is *Agree* that is 3 for the score. Third point is *Disagree* that is 2 for the score. Then, the fourth point is *Strongly Disagree* that is 1 for the score which means the lowest score of the rating scale.

Validity and Reliability of an Instrument

Validity. Validity is an important key to make the research being effective. According to Cohen (2011), validity is one important part in quantitative research to measure the appropriate instrument in the research. If the instrument of research is not suitable, the data are invalid. Thus, the validity of an instrument was measured by three expert judgments.

The validity of this was from Aiken's formula (as cited in Supranto, 2006).

Aiken's formula is shown as the following :

$$V = \frac{\sum S}{n(c-1)}$$

V = Validity index of the instrument

S = The sum of s for the n raters

s = r - I₀

r = The rating by an expert or rater

I₀ = The lowest possible rating

n = Number of raters

c = Number of categories that raters choose

This research used this formula to measure the validity of the instruments.

In addition, the validity index of the instrument is categorized into three categories which are low, moderate and high (Supranto, 2006). Besides, the item is valid if the score is 0.4 – 0.8. It means that if the result of Aiken test shows <0.4, the item is not valid. If the result of Aiken test shows the range between 0.4 – 0.8 or higher, it means the item is valid. Moreover, to get the score, the researcher asked several experts to give score to each questionnaire. Then, the items validity of questionnaire would be shown as the following:

Table 3.2

Aiken Test Result

Items	Expert_1	Expert_2	Expert_3	s1	s2	s3	Sum	Validity	Information
001	4	4	4	3	3	3	9	1.00	High validity
002	4	4	4	3	3	3	9	1.00	High validity
003	4	4	3	3	3	2	8	0.89	High validity
004	3	3	3	2	2	2	6	0.67	Medium validity
005	4	4	4	3	3	3	9	1.00	High validity
006	3	4	3	2	3	2	7	0.78	Medium validity

007	3	3	3	2	2	2	6	0.67	Medium validity
008	2	2	1	1	1	0	2	0.22	Low validity
009	4	3	3	3	2	2	7	0.78	Medium validity
010	4	4	3	3	3	2	8	0.89	High validity
011	3	4	3	2	3	2	7	0.78	Medium validity
012	3	4	4	2	3	3	8	0.89	High validity
013	4	4	4	3	3	3	9	1.00	High validity
014	4	4	4	3	3	3	9	1.00	High validity
015	2	2	1	1	1	0	2	0.22	Low validity
016	4	4	4	3	3	3	9	1.00	High validity
017	4	4	4	3	3	3	9	1.00	High validity

The table 4.1 showed that the 15 items are valid and 2 items are not valid.

The researcher find out that 10 items were high validity because the validity score was more than 0.8. there are 5 items were medium validity because the validity score was less than 0.8 and more than 0.4. 2 items were invalid because the validity score less than 0.4. It means that 15 items were valid to use for this research. Then, 2 items were invalid not to use for this research.

Reliability. Reliability is a measure of consistency time and samples. Cohen (2011) asserted that reliability is a test to examine an accuracy and precision of instrument. The researcher will use statistic application to know whether the instrument was consistent or not. The table below is about the Cronbach alpha score's category.

Table 3.3

Criteria of Reliability of Cronbach's Alpha

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<i>Category of Reliability</i>	
Score	Category
>0.90	Very Highly Reliable
0.80-0.90	Highly Reliable
0.70-0.79	Reliable
0.60-0.69	Minimally Reliable
>0.60	Unacceptably Low Reliable

Cohen (2011) stated that if the reliability level score 0.7 or higher. Then, if the data were lower than 0.7. Then it will be reliable. The data will be minimally reliable.

Thus, the data should be higher than 0.7.

In this research, there were 15 items of questionnaire that were distributed to 95 respondents. The reliability of items was in Very highly reliable criteria.

Therefore, the interval of Cronbach's Alpha of the questionnaire's item was 0.958 which means the questionnaire's items were highly reliable. The table result of reliability is shown as the following :

Reliability Statistics

Cronbach's Alpha	N of Items
.958	15

Figure 3.3 Reliability Statistics of Items

Data Collection Procedure

This study has two variables. For the first variable, the researcher did some steps in collecting the data. Firstly, the researcher contacted the teacher who taught Academic Presentation course to ask a document of score's Academic Presentation course. Additionally, for the first variable, the researcher did some steps in collecting the data. Firstly, the researcher made a questionnaire by google form. In the google form, the questionnaire consisted a permission to the respondents to fill the questionnaire, the statement of the questionnaire, and thanking to the respondents from the researcher. Secondly, to distribute the questionnaire, the researcher contacted some respondents that the researcher knows. Then, the researcher shared the link and asked them for helping the researcher to share the link on the other respondents from four classes students the third year at ELED. Thirdly, the researcher analysed the results as soon as the data had been gathered.

The researcher distributed the questionnaire to the respondents based on internet via Line, Whatsapp and researcher uses Google Form to manage the questionnaire <https://goo.gl/forms/BjFZ4sL2BQcntXfi1>. Moreover, the researcher distributed the questionnaire on 01 October 2018. Next, the researcher waited for respondents response to fill one part of questionnaire for seven days.

Data Analysis

The researcher used statistic application as the tool to examine the data. The researcher examined the data using descriptive statistic and inferential statistic. The descriptive statistic is used to answer the first and second question. According to Cohen, Manion, and Morrison (2011) descriptive statistic is to used describe and present the included data, frequencies, and percentage. The inferential statistic is used to answer the third research question. The researcher used inferential statistic because the data was taken randomly, so this research needed to be analysed using inferential statistic.

Descriptive statistic was used to answer the first and second of research question which are about “how is the ELED students’ performance of classroom presentation?” and “how is the ELED students’ self-confidence’s level?” The researcher used statistic application for windows and Microsoft Excel to ease the researcher in analysed the data. In order to find out the first and the second research question, the researcher inputed the data to statistic application and analysed the data. This research provides the class width and class length. This research using interval formula to devide the range category. Formula from Rahmawati, Fajarwati & Fauzia (2013). The formula is presented as follows :

Decide the ‘Range/Category’

$$Interval = \frac{Maxvalue - Minvalue}{n \text{ Category}}$$

Maximum value = Maximum score of variable

Minimum value = Minimum score of variable

n category = Number of category

This research will show the interval of score of the category of two variables as the following :

Then, the researcher made a category for the level of students' performance of classroom presentation. The categories are explained below :

Table 3.4		
<i>Students' performance of classroom presentation</i>		
No	Interval	Category
1	25.71 – 34.00	High
2	17.31 – 25.70	Moderate
3	9.00 – 17.30	Low

The table showed the interval and the categories of students' performance in classroom presentation. The first interval is 25.71 – 34.00, students' performance in classroom presentation in this interval was in category *High*. The second interval is 17.31 – 25.70, students' performance in classroom presentation in this interval was in category *Moderate*. The last interval is 9.00 – 17.30, students' performance in classroom presentation in this interval was in category *Low*.

Table 3.5		
<i>Students' self confidence level</i>		
No	Interval	Category
1	3.1 – 4.0	High
2	2.1 – 3.0	Moderate
3	1.0 – 2.0	Low

Students' self-confidence level will categorized as *High* if the interval is 3.1 – 4.0. This category shows that students' self-confidence level in high confidence. Second category shows that students' self-confidence level in the presentation are *Moderate* if the interval is 2.1 – 3.0. Therefore, the last category shows that students' self-confidence level in presentation is *Low* if the interval is 1.0 – 2.0.

To find out the answer of the third research question which is about the correlation between students' performance of classroom presentation and students' self-confidence's level, the researcher used inferential statistic. Inferential statistic is appropriate to be used because it helps the researcher conclude the data from the first and the second research question. Cohen et al. (2011), inferential statistic is used to make a prediction from sample to population based on data gathered. To answer the third question, the researcher used inferential statistic because this research provides hypothesis and pre-assumption which there is a correlation between students' classroom presentation and students' self-confidence. However, to analysed the result

of the data, the researcher had to consider the result of Product Moment in the statistic application. Two variables will have a correlation if the value of significance (r- value) is more than the level of significance (r-table). The hypothesis will be rejected if sig (r- value) more than 0.05, hypothesis would be accepted if sig (r- value) lower than 0.05. If hypothesis is accepted, then the researcher will know the interpretation the correlation coefficient by Cohen et al. (2011) who mentioned that low and near zero value indicate weak correlation, while nearer to >1 suggest strong correlation. The coefficient of correlation is interpreted as follows:

Table 3.6 <i>Correlation Coefficient Interpretation</i>	
Standard $r_{x,y}$	Interpretation
0.00-0.20	Weak Correlation
0.21-0.50	Modest Correlation
0.51-1.00	Moderate Correlation
>1.00	Strong Correlation

