

Chapter Three

Research Methodology

This chapter discusses the methodology used by the researcher in this study. There are five sections namely research design, research setting, research population and sampling, data collection method, and data analysis. In addition, several theories are also included in this chapter to support the methodology in this study.

Research Design

The purpose of this research is to find out the correlation between grammar mastery and students' speaking skill. To conduct this research, the researcher used quantitative approach. Creswell (2012) stated that quantitative approach is that the researcher describes the trends based on the need of something happened, and this approach adopts numeric data to analyze data. That is the reason why the researcher used quantitative approach.

This research used a correlational design. Creswell (2012) asserted that correlational design is a quantitative research which the researcher seeks to know the relationship between two or more variables. Furthermore, the researcher used correlational design in order to determine whether the variable one has a relation with variable two. Based on Creswell (2012), there are two types of correlational design namely explanatory design and the prediction design.

Explanatory design was used in this research since the researcher was interested in two variables.

Research Setting

This research took place at a private university located in Yogyakarta. There were two reasons why the researcher chose this private university in Yogyakarta to be the research setting. The reason is that this university provide grammar subject. The last one is the researcher has an

access to conduct the research in this private university. Additionally, this research was conducted in March 2019.

Population and Sampling

The population of this research was the students of three classes of English Language Education Department (ELED) batch 2017 at a private university in Yogyakarta. There were six classes namely class A, B, C, D, E and F, but the researcher chose class A, B and F as the population because the students of these three classes took the subject of Speaking and Listening course for freshmen under the same lecturer. To avoid the different scoring system from every lecturer, the researcher only took those three classes because if the lecturer is different, the scoring system will be different too. The total of the students in the A, B and F classes were 118 students. Following Cohen, Manion, and Morrison (2011), the researcher took 95% from the population. Because the total of the students from three classes were 118 the researcher had to take at least 83 respondents in this study. The researcher only took 118 as the population because of some data from students' speaking skill and students' grammar mastery are not complete. If the data from students are not complete it cannot be analyzed in statistical analysis. Because of that the researcher got 100 students as the respondents.

To take the sample from the population, the researcher used purposive sampling. According to Cohen, Manion, and Morrison (2011) purposive sampling is the researcher can pick the respondents based on their criteria, judgment and their typical characteristics. The criteria that the researcher required were first, the students already took the subject of *Capita Selecta on Grammar* in the first semester and *Capita Selecta on Linguistics* in the second semester. The other criterion was that the respondents have been tested their English skill using

English Proficiency Test (EPT). The last criteria was that the students already took the subject of Listening and Speaking course for freshmen

Instrument

This study used the document of English Proficiency Test (EPT) score to measure the students' grammar mastery and the document of speaking skill score to measure students' speaking skill. The first research question is to find out the students' grammar mastery. To get the result of the first research question, the researcher used the document of students' score of English Proficiency Test (EPT) especially the second part which tested the structure and written expression mastery. The researcher only took the structure and written expression because this section focuses to test the grammar mastery. English Proficiency Test is a test for non-native speaker to measure their proficiency in English. In English Proficiency Test (EPT) the test divided into three sections, the first section about listening comprehension, the second section about structure and written expression and the last section is about reading comprehension. The total of question in English Proficiency Test is 140, 50 for listening comprehension, 40 for structure and written expression and 50 for reading comprehension.

For the listening comprehension the test used multiple choices, the examinees listen the dialogue or monologue and the question from the narrator and the examinees choose the best answer from four option answer. For structure the examinees choose the possible answer in multiple choice questions to complete the correct sentences, for written expression the examinees should identify from four underline word that need to change to create a correct grammatically in a sentences. For reading comprehension used multiple choice question and the examinees choose the best answer.

Based on Manganello as cited in Juanhita (2012) English Proficiency Test is most widely the best known and trusted to measure the English proficiency since Educational Testing Service (ETS) began offering in 1964. From that kind of statement the researcher used English Proficiency Test as the instrument. In addition, there are some classifications about English Proficiency Test (EPT) score related with ETS (Educational Test Service 2017). The researcher used this classification because of the English Proficiency test was developed by Educational Test Service in 1974 and this classification has the same evaluation about English proficiency.

Table 3.1 <i>Classification of English Proficiency Test</i>	
EPT SCORE	DESCRIPTION
60-68	Expert user
51-59	Very good user
42-50	Good user
31-41	Limited user

The second research question is students' speaking skill. The instrument that was used to measure students' speaking skill was the document of the students' speaking score. The researcher collected the document from the lecturer of the subject of Listening and speaking course for freshmen. For this study the researcher only took the score from speaking test. There are four assessments which include in this course, the first one is interview, oral presentation, interview foreigners and recorded role play. The researcher used the classification from Rusdi (2015) classified speaking skill into five criteria. The classification from Rusdi (2015) includes 100 as the maximum score, while in this study the researcher only took the score from speaking

test which was worth 70 for the maximum score. The researcher used the range score from 70 as the maximum score and divided by 5 which are from the five classifications.

No.	Criteria	Converted Range
1.	Very good	56-70
2.	Good	42-56
3.	Fairly good	28-42
4.	Poor	14-28
5.	Very poor	1-14

To ensure the validity and the reliability of the research, the researcher only needed the validated documents. The document of the students' grammar mastery score taken from structure and written expression section of the EPT was validated by the administrative office of the ELED and the students' scores of speaking was validated by the lecturer of the subject. The statistical calculation was not conducted as the method used was documentation.

Data Collection Method

In this research, the researcher used document as a method to collect data. The first document is the document of students' score of English proficiency test (EPT). The students' scores were collected from English Proficiency Test (EPT) which tests the structure and written expression. The procedure to get the data for English Proficiency Test, the researcher asks the

administration office about the English Proficiency Test. The administration office give suggest to the researcher to open in a web from this private university. After that, the researcher downloads the English Proficiency Test from student batch 2017 and the researcher only took the score from structure and written expression. The last step the researcher analyze the student score from English Proficiency test whether to check the data is complete or not and the researcher analyze the data from English Proficiency Test used statistical analysis

The second document is the document of speaking skill score taken from the subject of Listening and speaking course for freshmen. The procedure to get the data for speaking score is that the researcher made an appointment first to the lecturer to collect the students' scores from Listening and speaking course for freshmen. The next step the researcher meets the lecturer and collected the document score from student listening and speaking course for freshmen batch 2017. The researcher analyzes the students score from listening and speaking course to avoid the missing data from student.

Data Analysis

In quantitative research, there are some steps to get the result from the participants. The result from quantitative design was numeric data. After the researcher collected the document of respondents' English proficiency test (EPT) score and document of students' speaking skill score, the researcher analyzed the data. For the first research question, to know the students' grammar mastery the researcher used descriptive statistic as a data analysis. Similarly, to know the students' speaking skill the researcher used descriptive statistic as data analysis.

The last research question is to know the correlation between variable one and variable two. The data analysis used for this research question is inferential statistic. Cohen et al. (2011) stated that inferential statistic is a statistic to make a conclusion or prediction to get the result

based on the data which have been gathered. The researcher used inferential statistic in order to get the results of the correlation between students' grammar mastery and students' speaking skill. The inferential statistic in this study includes test of normality, test of linearity and test of the hypothesis.

Test of normality

Before a researcher processes the data to find out the correlation between variable X and Y the data must be in normal distribution. For that reason, the researcher analyzed the data to find out whether the data distribution was normal or not. The researcher used Kolmogorov-Smirnov to analysis the data. A criterion of normality test is when the significance value is >0.05 that means the data have normal distribution. When the significance value is <0.05 the data do not have normal distribution.

		Unstandardized Residual
N		100
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	5.38987174

Most Extreme Differences	Absolute Positive	.082
	Negative	-.034
Test Statistic		.082
Asymp. Sig. (2-tailed)		.092 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

If the data in a normal distribution the Sig.2 tailed is higher than 0.05. Table 3.4 shows that the result from grammar and speaking was 0.092 and it means that the data were in a normal distribution.

Test of linearity

Test of linearity is used to figure out whether independent variable and dependent variable is linear or not. The data are linear, if the significant value of deviation from linearity is higher than 0.05. The researcher used Statistical analysis program to find out the value of deviation from linearity.

			Sum of Squares	Df	Mean Square	F	Sig.
Speakin	Between	(Combined)	417.949	24	17.415	.795	.731

g*	Groups	Linearity	193.201	1	193.201	8.823	.004
	Grammar	Deviation from Linearity	224.748	23	9.772	.446	.984
Within Groups			1642.241	75	21.897		
Total			2060.190	99			

The result from the table of deviation from linearity showed that the significant value is 0.984 and it is higher than 0.05. It means that the data from two variables namely grammar and speaking were linear.

Hypothesis test

The test was used to find out the hypothesis about the correlation between students' grammar mastery and speaking skill. The researcher used Pearson product moment to identify the correlation between two variables. The level used mostly in any research is 5% or 1%. In this study the researcher used 5% as a level of significant, it means that 5% is the falseness from the conclusion and 95% is the truth from the conclusion. In hypothesis test, there are also null hypothesis, it is also common in research. To test the hypothesis in this research, the formula used is Pearson product moment which calculates using statistical analysis. The significant correlation if r value is higher than r table ($r \text{ value} > r \text{ table}$). The table below will show the classification from the level of coefficient correlation between two variables.

Table 3.5

The orientation of giving interpretation on the coefficient correlation

Interval coefficient	The level of correlation
0.0 – 0.199	Very low
0.20 – 0.399	Low
0.40 – 0.599	Medium
0.60 – 0.799	High
0.80 – 1.000	Very high