

Chapter Three

Research Methodology

This chapter presents the methodology of this research. The method is used in a research process to analyze certain data as precisely as possible. It consists of research design, population and sample, data collecting method and data analysis.

Research Design

The purpose of this research is to find out the correlation between students' motivation and their English proficiency in English Education Department at Universitas Muhammadiyah Yogyakarta conduct in this research.

In this research, the researcher used descriptive statistic and inferential statistic to describe students' motivation and their language proficiency level at EED UMY. The researcher chooses quantitative research design because the researcher want to investigate the level of students' motivation at EED UMY. The measurement conducted statistically to describe students' motivation level. According to Sugiyono (2011), a method that use numeric and statistical analysis is quantitative method, the finding result in precise numbers to show the correlation between the two variable.

In addition, the researcher choose inferential statistic because it relate my research. According to Trochim (1980), inferential statistics to try to infer from the sample data what the population might think. Inferential statistics to make judgments of the probability that an observed difference between groups is a

dependable one or one that might have happened by chance in this study. Thus, inferential statistics to make inferences from our data to more general conditions; descriptive statistics simply to describe what's going on in our data.

Population and Sample

Population. “Population is all research objects. The research is a population research. When there are someone who want to make research all element in the research are, the study or research is also being the population study or census study” (Arikunto,2013 p. 173). This research was conducted at Universitas Muhammadiyah Yogyakarta. The population of this research were English Education Department students batch 2014. Therefore, the researcher use sampling to determine the require participants which number population of batch 2014 at EED Universitas Muhammadiyah Yogyakarta. The total numbers of students batch 2014 were 151 students. The researcher got total number of population from the administration staff. Therefore, the population of this research is 151 students. The respondents are still live in Yogyakarta. Moreover, the respondents are still active in EED UMY. So, it is easy for researcher to collect the data.

The researcher took students batch 2014 because they had passed sixth semester at EED Universitas Muhammadiyah Yogyakarta. It shows that the result of language learning and experience was suitable to make data collected by researcher valid and reliable. Second, they have enrolled International Language Testing course of EED Universitas Muhammadiyah Yogyakarta. The researcher

used the International Language test score to know the language proficiency level in learning language of students at EED Universitas Muhammadiyah Yogyakarta.

Sample. The researcher use random sampling to determine the participant required. The researcher use random sampling to conduct this research because each students at EED UMY batch 2014 carries an equal opportunity of being chose as part this research. According to Mc Coll (1997) random sampling is the basic sampling technique where we select a group of subjects (a sample) for study from a larger group (a population). Each individual is chosen entirely by chance and each member of the population has an equal chance of being included in the sample. Every possible sample of a given size has the same chance of selection.

The sample of this research were 95 students from batch 2014 will be take from 151 with 90% confidents level based on Ellen (2010). The sample of this research were 95 EED UMY students batch 2014 from 151 population. The researcher determined sample size using formula from Ellen (2010) as follows.

$$n = N / (1 + Ne^2)$$

n = Number sample

N= Population

e = Error tolerance

The number population is 151, the calculation will be:

$$n = \frac{151}{1 + 151 \cdot (0.10^2)}$$

$$n = \frac{151}{1 + 151 \cdot 0.01}$$

$$n = \frac{151}{1 + 1.51}$$

$$n = \frac{151}{2.51}$$

$$n = 60$$

So, sample of this research were minimum 60 sample. Through the random sampling, 95 respondents participated in this research.

Research Instrument

Questionnaire. Questionnaire was the supportive instrument to get the information which was related to perception, opinion or other resemble thing Creswell (2012). The questionnaire of the research was survey different opinion from students. According to Bowling (1997) Likert-scale or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions. The question was using number students replies. It helped the researcher to collect data from wide number of students. The questionnaire items was place on a 4 - point Likert scale ranging from “strongly disagree, disagree, agree and strongly agree”.

The questionnaires used by researcher in this study was adapted from Taguchi (Dornyei & Ushioda, 2011) who investigated foreign language motivation: internal structure and external connection. The researcher do not made any changed on content, just translated in term language. The researcher consideration to adapt questionnaire from Taguchi (Dornyei & Ushioda, 2011)

because the questionnaire is relevant students' motivation. So the researcher investigated students' motivation.

The total of instrument questions were 14 item question used to collect data on students' motivation and their English proficiency level was used main research instrument of this research. The questionnaire were distributed to answer the research question. The researcher use 1-4 scale from strongly disagree, disagree, agree and strongly agree. The researcher did not use neutral scale to avoid neutral answer from respondents. The researcher made categories rating scales as a number strongly disagree=1, disagree=2, agree= 3, strongly agree =4. The questionnaire used Indonesia language. So, the respondents easy in understanding questionnaire and they know how to answer it. The researcher use social media (Google form) to collect data. In this research, the categories of motivation related to intrinsic motivation and extrinsic motivation. In this research the question of motivation was divided into two parts. Part one were categorized into Intrinsic motivation. Part two were categorized into Extrinsic motivation.

Table 3.1 The list items of questionnaires

Indicator	Items
Intrinsic motivation	1, 2,3,4,5 6, 7, 8
Extrinsic motivation	9, 10, 11, 12, 13, 14

The researcher used this scale to give questionnaire score from 1 to 4 of questions.

Table 3. 2 Scale of questionnaire		
No	Rating Scale	Score
1	Strongly Disagree	1
2	Disagree	2
3	Agree	3
4	Strongly Agree	4

Document. In this research, the researcher used TOEFL like test score as document from students batch 2014 at EED UMY students to collect data .
 “Documentation is seeking data on things or variables such as notes, transcripts, books, newspapers, magazines, inscriptions, minutes of meetings, agenda, and so on” (Arikunto, 2010, p.274). The researcher use document as tool to measure students’ proficiency level. The researcher use document of TOEFL like test score from International Language Testing course in EED UMY batch 2014. The researcher had gotten permission using permission letter from Lecturer who had taught International Language Testing course at EED UMY.

Validity and Reliability of Instrument

Expert judgment. The validity is calculated using format of Aiken test. The researcher made the statement of questionnaire. The researcher did expert

judgment to get valid and reliable questionnaire. The researcher did expert judgment to two experts. The expert is a female lecturer who had been in PBI UMY. Before doing expert judgment, the questionnaire were 14 statement and after doing expert judgment there were not removed questionnaire statement because the questionnaire statement had characteristic as the point what the researcher want to investigate.

Table 3.3 result of expert judgment.						
No	rater1	rater 2	s1	s2	v	validity
1	4	4	3	3	1	High
2	4	4	3	3	1	High
3	4	4	3	3	1	High
4	4	4	3	3	1	High
5	4	4	3	3	1	High
6	4	4	3	3	1	High
7	4	4	3	3	1	High
8	4	4	3	3	1	High
9	4	3	3	2	0.833333	High
10	4	4	3	3	1	High
11	4	3	3	2	0.833333	High

12	4	4	3	3	1	High
13	4	4	3	3	1	High
14	4	4	3	3	1	High

After the researcher did expert judgment, it turn out all of questionnaire statement are valid. It means that the researcher can use this questionnaire statement to collect the data for this research.

After researcher got score of questionnaire from test. The researcher made categories of validity questionnaire because questionnaire need to be identified. . The rage of validity questionnaire presents in following table.

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

V= Validity score

S= Rating score

N= Rater

C= maximum score from rater

(Retnawati, 2016)

After the researcher know score of questionnaire validity. Questionnaire validity score for range interpretation validity was low and high. The researcher made categories of questionnaire validity were present in table 3. 4 following.

Scale	Descriptive
<0.4	Low
0.4-0.8	Moderate
>0.8	High

(Retnawati, 2016)

To ensure validity or not by looking at price of validity. If value less than 0.4 there not validity and > 0.8 there is validity.

Reliability. Cohen(2011) found “reliability is essentially a synonym for dependability, consistency and replicability over time, over instruments and over groups of respondents” (p.199). Reliable to ensure reliability, the data will analyze use If Alpha statistic technique.

Table 3.5, Result of reliability statistic

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	42.17	13.227	.253	.687
Q2	42.11	12.776	.329	.678
Q3	42.22	13.004	.319	.680
Q4	41.85	12.893	.339	.677
Q5	41.87	12.665	.399	.670
Q6	41.79	12.359	.513	.657
Q7	41.86	12.864	.406	.671
Q8	42.96	14.722	-.117	.740
Q9	41.92	13.014	.343	.677
Q10	41.87	12.048	.522	.652
Q11	42.26	12.622	.320	.679
Q12	42.02	12.085	.457	.660

Q13	43.21	13.402	.074	.725
Q14	41.81	12.411	.494	.659

Based on table 3.5, Result of reliability statistic from SPSS explains that the result of all reliability data question research from Q1-Q14. To ensure questionnaire data reliability by looking at Cronbach's Alpha if value. According to Sekaran (2006) the three levels of reliability indicators were as follow table below.

Table 3.6 Reliability criteria	
The criteria of Reliability (if alpha)	
>0.8-1.0	Good
0.6-0.799	Reliability is received
<0.6	Not Good

Sekaran (2006)

To know reliability is by looking at value of If alpha. If value of If less than <0.6 there not reliability, 0.8 there is good reliability and 0.6-0.799 reliability is received. (See table 3.6 reliability criteria according to reliable data).

After researcher know score of reliability data, researcher made categories of questionnaire reliable were present in table 3.7 below.

Table 3.7. Result of reliability questionnaire.

Questionnaire	Reliable
Q1	Reliable
Q2	Reliable
Q3	Reliable
Q4	Reliable
Q5	Reliable
Q6	Reliable
Q7	Reliable
Q8	Reliable
Q9	Reliable
Q10	Reliable
Q11	Reliable
Q12	Reliable
Q13	Reliable
Q14	Reliable

The instrument of the study is categories as valid Cronbach's Alpha if is 0.6-0.799 reliability is received and >0.8 there is good reliability. Therefore, it could be concluded all items of questionnaire were reliable.

Data Collecting Method

In this research, the researcher used questionnaire to collect the data. Questionnaire is an instrument to obtain the information that is associated with opinion, expectation, and perception. According to Arikunto(2013) questionnaire consists of several written question or statement that are used to obtain the information from respondents about something related with the experience or survey.

Data Analysis

The researcher used SPSS software as tool to analyze the data collected. The data analysis included: descriptive statistics and pearson product moment correlation coefficient. The purpose of this research was to find out the correlation between students' motivation and their English proficiency.

The researcher analyzed the data use descriptive statistic. The first question was how is the level of students' motivation with high and low English proficiency at EED UMY. The second question was how is students' proficiency level at EED UMY. The third question was is there any correlation student 'motivation and English language proficiency at EED UMY.

To answer the first and second research question which are how is the level of students' motivation with high and low English proficiency at EED UMY and how is students' proficiency level at EED UMY. The researcher use SPSS program version 22.0 to analyze the data. The data of study will be analyzed using descriptive statistic. "Descriptive statistic indicate general tendencies in the data mean minimum maximum the spread of scores variance and range" (Creswell,

2012, p, 1). According to Trochim (1980) descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. The mean score were calculated by SPSS of questionnaire and interpretation score of subject in context. The researcher takes the score from TOEFL course to know subject' proficiency level.

After getting the students' motivation level in learning English .The researcher calculated the maximum and minimum of students score in motivation learning English. Students' maximum score for range interpretation motivation in learning English was 4 and minimum was 1. By knowing the maximum and minimum score, the researcher made categories of students' motivation in learning English based on interval formulation from Supranto (2000).

$$C = \frac{X_n - X_1}{K}$$

c = The rage prediction(class width, class size, class length)

k = The number of class.

X_n = The maximum score of variable.

X₁= The minimum score of variable.

(Supranto, 2000)

After the researcher know maximum and minimum of students score in motivation learning English. The researcher made categories of motivation in learning English were present in table 3.8 as follows. Based on five percentiles

quartile following scale in SPSS to range of interpretation motivation in learning English.

Table 3.8 categories of motivation in learning English		
No	Description	Scale
1	High	3.01-4.00
2	Moderate	2.01-3.00
3	Low	1.00-2.00

Suprantno (2000)

Table 3.9 Interpretation of TOEFL® Score Scales (PBT) (ETS, 2017)	
Score	Grade
587-677	EXCELLENT
517-583	ADVANCE
423-513	INTERMEDIATE
310-420	BEGINNING

In addition, the researcher used inferential statistic to answer third research question. Inferential statistic is produced by more complex mathematical calculations and allows us to infer trends about a larger population based on a study of a sample taken from it. We use inferential statistics to examine the

relationships between variables within a sample, and then make generalizations or predictions about how those variables relate within a larger population. When conducting research using inferential statistics it is important and necessary to conduct test of significance in order to know whether you *can* generalize your results to a larger population.

Normality test is intended to determine the data of each variable were normal or not. To ensure the normality of test determine the frequency distribution of each variable was normal done by looking at the price indicated by the value p Asymp. Sig, If the value of p greater than 0.05 means the data were normally distributed, if the value of p less than or equal to 0.05, the data distribution was not normal.

Table 3.10 The significant correlation category

>0.05	There is a significant correlation
<0.05	There is no significant correlation

Sarwono (2009)

To know the significant correlation in SPSS. Sarwono (2009) divided the categories into two: <0.05 there is no significant correlation and >0.05 there is significant correlation.