

Chapter Three

Methodology

This chapter presents the methodology of this research. This chapter contains the design of the research, setting of the research, participants of the research (population and sample of the research), technique of data collection, instruments of the research (document and questionnaire), variable of the research (independent and dependent variable), validity and reliability of the instrument, and analysis of the data.

Design of the Research

Research design was a plan of the researcher to collect data and analyze the data to be feasible data. In using research design, the researcher made data become valid and reliable. It could make feasible data for research for the researcher. Research design helped the researcher collect data that the researcher would analyze. Quantitative research as a method based on the philosophy of positivism; Method is used to examine the specific populations or samples; the sampling technique is usually done by calculating the specific sampling techniques appropriately. According to Creswel (2012), a correlational research presents statistical test to determine the tendency or pattern for two or more variables or two sets of data to vary consistently. In this research, the researcher used quantitative research as the research methodology and correlational as design of the research.

Setting of the Research

The location of this research was at the English Education Department of Universitas Muhammadiyah Yogyakarta. There were two reasons why the research was conducted at the English Education Department. The first reason was because motivation topic taught under LLA (Language Learning & Acquisition) at the English Education Department. Specifically was the EFL (English as a Foreign Language) course at the English Education Department of Universitas Muhammadiyah Yogyakarta. English Department motivated students to learn English as a foreign language by showing how to teach, how to learn and interact with other people. For example, teachers shared the experience in English, how to get better jobs, and soft-skill programs in every semester. Hence, the researcher was interested to find out the relationship between motivation in learning English towards students' learning achievement.

The second reason was the accessibility. The researcher took this place as the setting of the research because the researcher was also studying at the English Education Department of Universitas Muhammadiyah Yogyakarta. Setting of the research was actually to facilitate the researcher to investigate the relationship between motivation in learning English and learning achievement in students' batch 2012. Therefore, it made the researcher easier to collect data. Considering the reasons above, English Education Department of Universitas Muhammadiyah Yogyakarta was selected as the appropriate setting of this research. In addition, the researcher conducted this research at the end of November 2015.

Participants of the Research

Population of the research. Population was the generalization consisting of the object or subject that has certain qualities and characteristics that are applied by researchers to learn and then draw the conclusion (Sugiono, 2011). The population of this research was the students at batch 2012 at the English Education Department of Universitas Muhammadiyah Yogyakarta. Students at batch 2012 were divided into three classes (class A, B, C). The total numbers of students at batch 2012 were 97 students. The researcher got the total number of students from the administration staff that was also approved by the head of the English Education Department of Universitas Muhammadiyah Yogyakarta.

Sample of the research. Sample was taken as part of the overall object studied and considered to represent the entire population (Notoadmodjo, 2010). Sample size in this study was determined based on the formula of Notoadmodjo as follows:

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

Explain:

n = Large sample

N = Large Population

d = Level of confidence/accuracy desired (0.1)

$$n = \frac{97}{(1 + 97(0.1)^2)}$$

$$n = 49$$

Based on the formula of Notoadmodjo above, and referring to some previous research, the researcher took 49 respondents as the number of sample.

Sampling method in this research was using a non-probability sampling. It was a sampling technique that did not provide opportunities or equal opportunity for each element or member of the population to be selected into the sample (Sugiono, 2011). The researcher took students at batch 2012 because they had already passed at least seven semesters at the English Education Department of Universitas Muhammadiyah Yogyakarta. It meant that their result of learning was visible and suitable; this was supposed to make the data collected by researchers valid and reliable.

Instrument of the Research

The research instrument was a tool used to measure the natural and social phenomena observed (Sugiono, 2011). The researcher used a questionnaire as the research instrument to measure the students' motivation. In addition, the researcher also used document to measure students' learning achievement at the English Education Department of Universitas Muhammadiyah Yogyakarta.

The researcher applied the two instruments in this research. The first instrument was the questionnaire to collect the data. This instrument made the researcher know how the motivation of students batch 2012. The second instrument that was used by the researcher was document. This instrument made the researcher know the achievement of students using the GPA of students at the English Education Department of Universitas Muhammadiyah Yogyakarta.

Questionnaire. Questionnaire was the supportive instrument to gain the information which was related to the perception, opinion, and expectation or other resembles things (Creswell, 2012). The questionnaire of this research was a survey of different opinions from the people. The questionnaire was actually using anonymous replies; it helped the researcher to collect data from large number of people.

All the items except the background questionnaire items was placed on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. Sanusi (2011) said, Likert Scale was a scale which was based on amount of respondents to respond to the statements relating to the variable that was being measured.

The researcher did measure the motivation using the international (AMTB) *The Attitude Motivation Test Battery*. The total questions of the international AMTB are 116 questions about attitude and motivation. According to Gardner (1985), the AMTB was designed to assess the non-linguistic goals of second language program. He claimed that emphasize aspect as improved understanding of the other community, desire to continue studying the language, and interest in learning other languages and AMTB was reported to have good reliability and validity. In this research, the researcher uses the international manual AMTB to measure the students’ motivation because this manual AMTB was classify the questions into each category. In addition, the category of the international manual AMTB includes the attitude, interest, integrative, instrumental, and motivation intensity. The researcher did the research about two component of motivation i.e. integrative and instrumental as the most influential

motivation towards learning achievement. The questionnaire were administered in the mother tongue along with the English original. The questionnaire items were translated into Indonesian and being proofread by a translator to make the participant clearly understand each question.

Integrative Motivation		
No	Theory	Statement
1	<p>Integrative motivation refers to a learner's desire to learn more about culture community of the target language or to assimilate in the target community (Gardner & Lambert, 1959).</p>	<p>Q1. Studying English can be important to me because it will allow me to be more at ease with other people who speak English</p> <p>Q2. Studying English can be important for me because it will allow me to meet and converse with more and varied people</p> <p>Q3. Studying English can be important for me because it will enable me to better understand and appreciate English art and literature</p> <p>Q4. Studying English can be important for me because I will be able to participate more freely in the activities of other cultural groups</p>

Instrumental Motivation		
No	Theory	Statement
2	Instrumental motivation refers to learner's desire to acquire a new language for utilitarian reasons and to reflect the practical value and advantages of learning a target language (Gardner & Lambert, 1959).	<p>Q5. Studying English can be important for me because I'll need it for my future career</p> <p>Q6. Studying English can be important for me because it will make me a more knowledge person</p> <p>Q7. Studying English can be important to me because I think it will someday be useful in getting a good job</p> <p>Q8. Studying English can be important for me because other people will respect me more if I have knowledge of a foreign language</p>

In this research, the question of motivation was divided into two parts. First, questions number 1-4 were categorized into the integrative motivation of students. Second, questions number 5-8 were categorized into the instrumental motivation of students.

The researcher used following scale to give the questionnaire a score from 1 to 5 for each of the questions.

No	Rating Scale	Score
1	Strongly Disagree	1
2	Disagree	2
3	Neutral	3
4	Agree	4
5	Strongly Agree	5

Based on five percentiles quartile scale in the SPSS, the range of the interpretation motivation in learning English is as follow:

No	Range	The interpretation
1	0.81 – 1.00	Very High
2	0.61 – 0.80	High
3	0.41 – 0.60	Moderate
4	0.21 – 0.40	Low
5	0.01 – 0.20	Very Low

Document. Cohen *et al* (2011) had found that a document can be defined concisely as a record of an occurrence, an incident or process. Documentation was a method to obtain data using note/transcript to gain the theories related to the research. In documentation, there were books, magazine, document of students' scores, and school's notes (Arikunto, 2013). In this research, the researcher used the GPA (Grade Point Average) as the document from the students at batch 2012 at the English Education Department. The researcher had gotten the permission using the permission letter from administration staff that was also approved by the head of the English Department.

Table 1.4 The interpretation of GPA based on the regulation of university (policy)

Keterangan Nilai / Explanation of Grade		
Nilai / Grade	Bobot / Point	Makna / Meaning
A	4	Sempurna / High Distinction
A-	3.7	Luar biasa / Distinction
B+	3.4	Sangat Memuaskan / Distinction
B	3	Memuaskan / Credit
B-	2.7	Sangat Baik / Credit
C+	2.4	Baik / Credit
C	2	Cukup / Pass with Credit
D	1	Kurang / Pass

Technique of Data Collection

Sample retrieval technique that was used was convenience sampling. It was to gather information from members of the population that feeling good to give the required data (Sekaran, 2006). The procedure of this research started from asking permission to the respondents. Second, the researcher distributed the questionnaire to 49 respondents who were students at batch 2012 and found around the lobby of English Education Department of Universitas

Muhammadiyah Yogyakarta. Third, the researcher explained how to answer the questionnaire. Fourth, the researcher gathered the data from respondents. The next step, the researcher asked permission letters to administration staff that had been approved by the head of the English Department for document school scores or GPA of students at batch 2012.

Variables of the Research

According to Cohen *et al* (2011), “A variable is a condition, factor or quality that, as its name propose, can vary from one case to another case; it is the reverse of a constant, which does not diverge between cases” (p. 606). In this research, there were two variables that were going to be correlated. The variables included the independent variable and dependent variable.

Independent Variable (x). Cohen *et al*, (2011) found that a independent variable was an input variable, which caused, in part or in total, a particular result; it was a stimulus that affects response, an antecedent or a factor that may be modified (e.g. under experimental or the other situations) to influence a results (p. 607). The independent variable of this research is the students’ motivation because students’ motivation can influence the students’ learning achievement.

Dependent Variable (y). Cohen *at el* (2011) found that a dependent variable is the result variable, which is caused, in total or in part, by the input, antecedent variable. It is the consequence, the influence of, or response to, an independent variable (p. 607). The dependent variable of this research was students’ learning achievement because learning achievement was the effect of students’ motivation.

Validity and Reliability of the Instrument

Validity. Validity was the degree to which all of the evidence points to the intended interpretation of the test scores for proposed purpose (Creswell, 2012). Test the validity of the data item was a test instrument to determine how close an item in measuring what to be measured. Item could be said valid if it had significant correlation with the total score. The test of validity that was used by the researcher was correlation or skewness/kurtosis and KMO and Bartlett's Test using SPSS version 22.0. This test was to identify the validity of the instrument used to measure the variable of indicator of this research. An instrument could be said valid if the data of variable was able to measure what the researcher want from research. Since the questionnaire was taken from the previous research, the instrument of the researcher was valid.

Reliability. Sekaran (2006) stated that a research instrument was indicated adequately reliable if the cronbach alpha coefficient is greater than or equal to 0.60. Reliable measurements showed consistency, meaning that repeated measurement would get the same result.

Meanwhile, Sekaran (2000) decided the three levels of reliability indicator are as follow:

Table 1.5 Reliability Criteria	
The Criteria of Reliability (if alpha)	
0.8 – 1.0	Good
0.6 – 0.799	Reliability is received
< 0.6	Not Good

Item	Validity	Sig.	Statement	Reliability	Statement
1	0.862	0.000	Valid	0.887	Reliable
2	0.845	0.000	Valid		
3	0.894	0.000	Valid		
4	0.860	0.000	Valid		
5	0.703	0.000	Valid	0.663	Reliable
6	0.663	0.000	Valid		
7	0.742	0.000	Valid		
8	0.720	0.000	Valid		

Analysis of the Data

The researcher used SPSS software as the tool to analyze the data collected from respondents. The data analysis included: descriptive statistics and Pearson product moment correlation coefficient. The purpose of this research was to find out the relationship between motivation in learning English towards students' learning achievement. Therefore, the researcher analyzed the data using descriptive statistic. The first question was "How is the students' motivation in learning English at the English Education Department of Universitas Muhammadiyah Yogyakarta?" second question was "How is the students' learning achievement at the English Education Department of Universitas Muhammadiyah Yogyakarta?"

The first and second research questions were analyzed using descriptive statistic by SPSS. Creswell (2012) argued that "descriptive statistic indicate

general tendencies in the data (mean, minimum, maximum), the spread of scores (variance, and range)” (p.182). The data was directly taken from the data source and the data was analyzed using SPSS (statistical package for the social science) version 22.0 for windows.

The correlation technique was using by the Pearson product moment correlation coefficient for relationship between motivation and students’ learning achievement. According to Wikipedia, “*Pearson product moment correlation coefficient is a measure of the linear correlation between two variables X and Y, giving a value between +1 and -1 inclusive, where 1 is total positive correlation, 0 is no correlation and -1 is total negative correlation*”, it was developed by Karl Pearson.

Scores of relationship (r)	The interpretation
0.00 – 0.09	No relationship
0.10 – 0.29	Low relationship
0.30 – 0.49	Moderate relationship
0.50– 0.70	Middle relationship
> 0.70	Strong relationship

Yamin and Kurniawan (2009:70)