Chapter Three

Methodology

This chapter describes the methodology applied in research which is elaborated into some parts. Part one discusses the research design. The second point explains about the setting of when and where the research is conducted. The third point discusses the population sample and sampling technique of this research. Then procedure of data collection method is defined. Lastly, the data analysis process to answer the research questions will be explained.

Research Design

In this research, the researcher uses a quantitative approach. Sugiono (2013) stated that quantitative research is context data transformed into number using statistic process. Cresswell (2009) indicated that quantitative research is testing or examining variables of the research which the data are in forms of number which are analyzed using a statistical procedure. It means that in a quantitative research the data obtained in the format of numbers, statistic and counting mode.

Besides, to analyze the correlation between university students' reading habits and their reading achievement on TOEFL test, the researcher used correlation design technique. Correlation design is the correlation between two variables or more that could indicate a linier correlation (Suharsimi, 2006). The correlation design involved quantitative research which is related to statistic data.

Moreover, the meaning of correlation research is to find out whether the variables are connected or not.

Research Setting

      Setting of Place. This research is conducted at English Education Department of Muhammadiyah university of Yogyakarta Batch 2013. The researcher chooses this place as the research setting because there are three reasons. First, the researcher is learning at EED UMY, and then it would be easier to collect the data. Second, there is Language Testing Course to support the students' achievement in TOEFL. It is because the researcher want to find out the score of the university students' reading achievement on TOEFL. Furthermore, they have done TOEFL and suitable to do a research.

      Setting of Time. This research was done on May 2016. This time is appropriate because the researcher focuses on sixth semester of EED UMY batch 2013 who have done TOEFL. The researcher takes the final score of the TOEFL reading section. Then, the TOEFL was conducted in this time of the year.

Population and Sample

      Population. Population is a set of subjects such as individuals, groups, institutions, country. Sugiono (2013) identified that population is all of objects of the research which include a human being, things, animals, plants, indications, values, and phenomenon as the resource data. Then in this study, the researcher takes all of the participants who attended the sixth semester of university students at English Education Department of Muhammadiyah university of Yogyakarta Batch 2013 as the population. The population of the research consists of 194

students which are divided into 5 classes, A class, B class, C class, D class and E class.

Sample. Sample is a part of population which is chosen by the researcher. Sugiono (2013) stated that sample is a part of population which is represented all of population with some technique. In this study, the researcher takes one class of sample from the sixth semester of EED UMY Batch 2013. According to Suharsimi (2006), if the research subject is more than 100, the researcher could takes 10-15% or 20-25% from the population. The researcher considered taking 10-15% from the total population, and then it required 19-29 respondents. Additionally, the samples are 28 students of EED UMY Batch 2013 B class and it was enough to do the research.

For identifying the sample, the researcher focuses on the technique sampling. Technique sampling is a method to determine the sample of the research which is the total of population took as the real data (Suharsimi, 2006). In this research, the researcher used cluster random sampling as the sampling technique. According to Sugiono (2013) found that cluster stratified random sampling is technique for selecting the sample depending on group purpose not on the individual purpose. Moreover, according to Creswell (2009), cluster stratified random sampling occupancy the researcher to select participant or places which could help the researcher in developing more detail understanding about the phenomenon or cases in the group purposes (Creswell, 2009).The researcher used this sampling technique because there are two considerations. The researcher takes the sample randomly among five classes at EED UMY Batch 2013. After

that, the researcher makes a limitation which is based on the appropriate unit
sampling with a group purpose (cluster). The participants in this research are
around 18-25 years old, and the majority of them were considered as late
adolescence.

Research Instrument and Data Collecting Method

There are two instruments for data collecting method such as questionnaire
and score documentation. Besides, the forms of instruments are questionnaire
sheet and the list of score documentation as the value from the students' reading
test of TOEFL.

Research Instrument

Questionnaire. Questionnaire is an effort to collect the information that
has written with some questions and it needed for the respondents to answer it
(Suharsimi, 2006). He also indicates that the questionnaire is a tool for collecting
information from the respondents as self-data report. The researcher design the
questionnaires which has related to literature review in chapter two. The
questionnaire is consists of some statements which concerns on the purposes to
measure students' level of reading habit. The questionnaire consists of 30
statements in Indonesian language. There are 7 criterion of reading habit such as
quantity of reading (Q1, Q2, Q3), reading amount of books (Q4, Q5, Q6), purpose
of reading (Q7 – Q16), frequency of reading (Q17, Q18, Q19), personal feeling or
personal interest amount book (Q20- Q23), self-motivation (Q24 – Q27), and
quantity of library visit (Q28 – Q30). The researcher uses Indonesian language for

the statement because it could be easier to do by the participants. After that, the

researcher would examine the response of questionnaire.

The researcher indicates four options to give alternative answer with

different value. The indications are 4 points for (always), 3 points for (often), 2

points for (sometimes) and 1 point for (never). The questionnaires were about the

students' reading habit in general. The lists of item scoring presented as follows:

Item Scoring	
Always / Sangat Sering (SS)	4
Often/ Sering (S)	3
Sometimes/ Jarang (J)	2
Never/ Tidak Pernah (TP)	1

Table 3.1 *Item scoring*

Score Documentation. Students' reading achievement could be measured

by using a test. In this research, the reading test is taken from TOEFL score.

Then, the data is based on the documentation score of value test. According to

Sugiono (2013) stated that documentation score refers to document which include

all of activities or moments in the past. He also mentioned that document could be

formed of written text, picture, or monumental arts from a personal life. Suharsimi

(2006) mentioned that documentation is looking for or collecting the data which

include written text, transcript, books, newspaper, magazine, note, rapport, or

agenda. Therefore, this instrument is used to complete the data from the written

document that has existed before.

Data Collection Method

The researcher conducts this research in four steps. First step the researcher test validity and reliability of the instrument. In this case, the questionnaire as the instrument is informed by expert judgments. The researcher take two lectures in EED UMY who expert in the reading field. These questionnaires are done before to distribute to the participants.

Then, the second step is distributing the questionnaire to the participants. This step is to answer the first research question by analyzing students reading habit through open-ended questionnaire. Before giving the questionnaire sheets to the participant, the researcher explain the objective the research and how to answer the questionnaire.

The third step which aims to answer the second research question is collecting the students' TOEFL reading score by identifying the participants score level, whether they have very good, good, fair, low, or very low. The researcher design the categories that related to the following formula. Score category can be seen from the score max - interval. For the interval, it can be seen from the range/category and the range is taken from score max - score min. Then, the data is gathered from the score documentation of Batch 2013 students taking International Language Testing Course . Thus, the researcher would ask permission to the lecturer who has taught in International Language Testing class to get the TOEFL reading score.

The last step is to answer the third research question on the correlation between student's reading habit and their reading achievement on TOEFL. In order to find the correlation between these two variables, the researcher uses a correlation analysis. All of the data would identify using a statistical form and then would present into narrative text.

Validity and Reliability

Validity. The important one in the research is the instrument so it needs to be valid. Validity is a tool to measure the real object of the data. According to Field (2009) validity is "an instrument truly assesses what it puts to measure." It means that the data is valid if one variable is measured one purpose. If there are two variable in one subject, it means that the data is invalid.

To know the validity of the data, the researcher use expert judgment for the instrument. Expert judgment supports the researcher to know whether the research instrument (questionnaire) is accepted valid or need a word's revision. For the instrument, it has informed by two lectures at EED UMY who expert in the reading field. The researcher choose two lectures who have been teach in reading for five years. Moreover, they are interested in research reading and writing. The expert suggests that some statement needs to revise with an appropriate word in order easy understanding for the respondent. The researcher make 30 statements and it already fix by the supervisor and two experts. Moreover, the instruments are adapted from the previous questionnaire. For the instrument (questionnaire), its attached in the appendix list.

Reliability. Reliability refers to the flexibility on the data collection. Phankania and Modi (2013) stated that there are two definitions of reliability. First, it finds that the result score of the research is stable or unchanged by using the same instrument. Second, if it uses the same instrument, the measurement of the data is equivalent with the measurement before. In this research, the researcher would use SPSS (Statistical Package for the Social Science) version 16 to test the reliability of the instrument. Thus, reliability examined by identifying the result of the Cronbach's Alpha. According to Phankania and Modi (2013) the reliability indicator divided into six levels. It is presented as below:

The Criteria of Reliability (Alpha)		
No	Cronbach's Alpha	Internal Reliability
1.	≤ 0.90	Excellent
2.	≤ 0.80	Good
3.	≤ 0.70	Acceptable
4.	≤ 0.60	Questionable
5.	≤ 0.50	Poor
6.	≥ 0.50	Unacceptable

Table 3.2 *The criteria of reliability (Alpha)*

In this research, there are 30 items of questionnaire that would be distributed into one class of students of EED UMY batch 2013. The reliability of 30 items is reported the table as follows.

Reliability Statistics

Cronbach's Alpha	N of Items
.756	30

Table 3.3 *Reliability Statistics*

The reliability of the questionnaires is .756 which means it is acceptable to be use.

Data Analysis

The result of scoring is expanded from all of the data of questionnaire and score documentation. To make an easy measurement for data questionnaire and score documentation, the researcher identifies these data using measurement of SPSS program. It is usually used to measure the statistic data. According to Miles (2006) found that the statistic data could be measured by SPSS program which consist of frequency, testing reliability, validity, and also includes mean, median and mode. To elaborate the data in this research, the researcher uses means as main point to report the description of research findings. The researcher uses SPSS (Statistical Package for the Social Science) version 16. It is one of tool in the computer and commonly used in the statistic data. The result would be interpreted by chart which has many types such as pie chart, histogram and bar charts.

To measure students' reading habit and reading achievement, it took from the questionnaire result and reading TOEFL result. According to Suharsimi (2006) there are five categories to know students' reading habit level and their

reading achievement on TOEFL. He also mentioned that the scoring of categories criteria for students' reading habit can be used the following formula:

a. Score maximal:

Score max x question= 4 x 30 = 120

b. Score minimal:

Score min x question = 1 x 30 = 30

c. Range = score max - score min = 120 - 30 = 90

d. Interval = range/category = 90 / 5 = 18

e. Score categories of reading habit = score max - interval = 120 - 18 = 102

Where:

The total of category = 5

The total of question = 30

Score min = 1

Score max = 4

The scoring of categories criteria for students' reading achievement on TOEFL can be used the following formula:

a. Score maximal:

Score max = 50

b. Score minimal:

Score min = 0

c. Range = score max - score min = 50 - 0 = 50

d. Interval = range/category = 50 / 5 = 10

e. Score categories of reading habit = score max - interval = 50 - 10 = 10

Where:

The total of category = 5

The total of question = 50

Score min = 0

Score max = 50

The categories of students' reading habit and reading achievement on TOEFL were presented in the following table.

The categories of students' reading habit and reading achievement level on TOEFL		
No	Category	Value
1.	Very good	102 – 120	40 – 50
2.	Good	84 – 102	30 – 40
3.	Fair	66 – 84	20 – 30
4.	Low	48 – 66	10 -20
5.	Very low	30 – 48	0 – 10

Table 3.4 *categories of students' reading habit and achievement level on TOEFL*

After that, the researcher analyzes the data using descriptive statistics. Miles (2006) argued that descriptive statistics is the researcher technique to explain about what is happening in the data to another people. Furthermore, this research is focused to measure the correlation between university students' reading habit and their reading achievement on TOEFL. Then, the researcher identifies these two variables using Pearson Product Moment Technique. Talking

about the classification, Sugiyono (2013) has five criteria of correlations. It is

shown in the table as follows:

The Correlation Criteria Value	
R	The Level of Correlation
0	No correlation
0 – 0.5	Low correlation
0.5 – 0.8	Moderate correlation
0.8 – 1	Strong correlation
1	Perfect correlation

Table 3.5 *The correlation criteria value*

From the table above, it can be said that there are five level of correlation.

Zero (0) means no correlation, 0 - 0.5 means low correlation, 0.5 - 0.8 means

moderate correlation, 0.8 - 1 strong correlation, and 1 means perfect correlation.