

Chapter Three

Methodology

This chapter discusses the methodology used by the researcher in this research. Besides, this chapter explores how to conduct and collect the research data. There are sections of the methodology namely research design, research setting, research population, research sample, research instrument, validity test, reliability test, data gathering procedure, and data analysis. Several theories are also included in this chapter to support the methodology in this research.

Research Design

This research aimed to investigate Facebook as an online environment for learning English at ELED of a private university in Yogyakarta. For the reason, the researcher wanted to get the information about students' perception of Facebook as online environment for learning English. Based on the aims of this research, the researcher chose a quantitative research design because of some reasons. Firstly, the quantitative research could be the generalizations which predicted the value and analyzed trend such as dominant and frequent by using statistical analysis. Also, it could give the clear results of the students' general practices or use of Facebook and their view of Facebook as online environment in learning English. As stated by Castellan (2010), the goals of quantitative research are the generalization of the data, explanation, and prediction. Also, the results could be more valid and reliable by using a quantitative method. Secondly, the quantitative method was to collect numeric data from a large number of people. Besides, those respondents could be reached by using the questionnaire as the instruments to ease the process of

collecting the data. Then, it could ease the researcher to analyze and interpret the results by looking at the numeric results. The statement mentioned was supported by Harris and Brown (2010) who said that numerical data are used to represent the statistical methods and analyze data in order to get the exact results. That way, the readers can easily understand the finding of the research. Deslandes and Bertrand as cited in Creswell (2012) stated that the quantitative research provides a role for the literature through suggesting of the research questions to be asked, justifying the research problem, and creating a need for the direction of the study.

In addition, this research used survey design because it could describe the trends and determine individuals' opinions about their perception of the role of Facebook as an online medium for learning English. Fowler as cited in Creswell (2012) asserted that there are two efforts to establish standardized questions through surveys. Firstly, it uses rating scales through the development of the Likert scale such as never, rarely, often, and very often. Secondly, the instrument guidelines are written for writing clear questions and standardized questions through the questionnaires. Therefore, by using survey design, the researcher can determine the results of the research easily.

Research Setting

This researcher conducted this research at ELED of a private university in Yogyakarta. There were three reasons why the researcher chose this place as the setting of this research. Firstly, there were some students of ELED who used Facebook. Besides, the researcher wanted to know the students' perceptions about the role of Facebook among them for learning English. Also, it could be useful for them to know about Facebook role in learning English and optimize it as a medium

of English learning. Secondly, the researcher was EFL student who felt the positive impact of Facebook and knew the frequency of Facebook use among the students from prior interview. From the statement mentioned, it convinced the researcher to conduct the research. Thirdly, the researcher as an ELED student who was familiar with the condition of students in English and the atmosphere of learning which still was needed to be improved. Besides, this position could help the researcher in formulating background for this research, and it could also help the researcher in accessing and collecting the data and facilitate the researcher to investigate about the needed data.

Research Population

The population for this research was first year students of ELED at a private university in Yogyakarta. The total target populations were 263 students, and not all total target populations were as Facebook members. That way, the researcher did the screening before conducting the research. Screening was done by giving some questions to respondents to find out whether they had a Facebook account or not. The researcher also asked about the benefit of Facebook for learning English in the screening. So, the data to be processed later is the data of those who use Facebook. The first year students were chosen as the target population because they just began to learn English at ELED. Consequently, they still had to learn English for long time so that Facebook could be optimized as incidental tool to improve their English outside the classroom.

Research Sample

Cluster random sampling was used in this research. As the reason, the cluster random sampling enables the researcher to choose several groups or classes

within a particular large of the population with same characteristic of same group. Also, the population had an equal chance being selected. As supported by Cohen, Manion, and Morison (2011), it provides a randomized control of the data as it draws randomly from the wider population into homogenous groups, and each group contains the subjects with similar characteristics.

In this research, the researcher made a lottery filled with the cluster class of first year of ELED students at a private university in Yogyakarta. The classes A, B, C, D, E were shuffled in order to make the respondents to have an equal chance to be selected. From the lottery, the researcher got the respondents from all of the students of class B, C, D and E who answered the questionnaires to be distributed. Cohen, et al. (2011) stated that distributing the questionnaire can be done by drawing the classes out of the bowl until the required cluster to be reached. Also, it is the fair way of selecting a cluster sample from the population and can save the inordinate amount of time and the costs.

Additionally, the sample of the data in this research was 151 students. The number of the data was obtained from the table of sample size, confidence level, and confidence intervals for random samples. The probability of the sample used in education field was confidence level 95% and confidence interval 5%. However, the actual sample who participated in this research was 150 students because of the limited number of students who attended the class when the researcher did the survey. Likewise, these 150 respondents were obtained from all students of class B, C, D and E where these classes had been shuffled. Also, all respondents in this research were Facebook members or users because the researcher had screened before conducting this research.

Research Instrument

The questionnaire was used as the instrument to gather data needed in this research. According to Cohen (2011), a questionnaire is an instrument used to collect the survey information which often forms as numerical data and being straightforward to analyze. As the reason why the researcher used questionnaire as the research instrument, it eased her to collect the data from a large number of the population in short period. Cohen, Manion, and Morison (2011) stated that the information potentially can be collected from a large portion of a group, and it is relatively quick to collect the information and analyze the data.

The type of questionnaire in this research was a structured questionnaire. The reason of choosing structured questionnaire was to ease the respondents to fill the questionnaires based on the responses provided. As supported by Harris and Brown (2010), in a structured questionnaire, the respondents can respond directly by selecting from predetermined answers such as Likert scales responses. Besides, the structured questionnaire can also help the researcher to get fixed data. Also, the structured questionnaire is a complex structure containing four sub-factors. Thus, the questionnaire of mean scores for these factors could give multiple constructions and be separated into different attitudes.

The type of response which the researcher provided in this research was rating scales such as totally disagree (1), disagree (2), agree (3), and totally agree (4). Using rating scales such Likert scales could ease the respondents to express their opinions and the researcher to recognize the categories of responses from the respondents. Regarding the statement mentioned, it was supported by Harris and Brown (2010) who said that the purpose of rating scales is to allow the respondents

to express their opinion in one direction and strengthen their opinion on a topic. Furthermore, rating scales such as Likert scales without mid-point could give a positive reply to the questions in order to assist the researcher in guessing the result of the respondents' answers which were reasonable and acceptable.

The questionnaire in this research consisted of two parts. Part A was used for demographic information. The demographic information of this research was used to know the general activity on Facebook including length time of Facebook, frequency of logging in to Facebook and language used on Facebook. Besides, Part B was used to get information related the role of Facebook as an online medium for learning English. This part provided 16 questions which were divided into four subscales such as (a) language improvement (items 1 to 5), (b) confident (items 6 to 8), (c) motivation (items 9 to 11), (d) attitude (items 12-16). The items of questionnaire were not randomized aimed at facilitated researchers in the data processing. Therefore, the detailed information of the questionnaire in this research is explained in the following table.

No		Adapted	Statements
1	(a) Language improvement	I practice writing in English via Facebook.	Saya praktek menulis dalam bahasa Inggris melalui Facebook.
2		I practice reading in English via Facebook.	Saya praktek membaca bahasa Inggris melalui Facebook.
3		Facebook enhances my English communication skill.	Facebook dapat meningkatkan kemampuan berkomunikasi bahasa Inggris mahasiswa.
4		Facebook helps me	Facebook membantu saya untuk

		to overcome language mistake.	mengatasi kesalahan berbahasa.
5		I learn new words in English via Facebook.	Saya belajar kosa kata baru melalui Facebook.
6	(b) Confidence	Facebook enhances my confidence to write in English.	Facebook dapat meningkatkan kepercayaan diri saya untuk menulis dalam bahasa Inggris.
7		Facebook enhance my confidence to read English material.	Facebook dapat meningkatkan kepercayaan diri saya untuk membaca materi bahasa Inggris.
8		Facebook enhances my confidence to communicate using English.	Facebook dapat meningkatkan kepercayaan diri saya berkomunikasi menggunakan bahasa Inggris.
9	(c) Motivation	Facebook increase my motivation to communicate using English.	Facebook meningkatkan motivasi saya untuk berkomiikasi menggunakan bahasa Inggris.
10		Facebook increase my motivation to read English material.	Facebook meningkatkan motivasi saya untuk membaca materi bahasa Inggris.
11		Facebook increase my motivation to write in English.	Facebook meningkatkan motivasi saya untuk menulis dalam bahasa Inggris.
12	(d) Attitude	Learning via Facebook makes learning more interesting.	Belajar Bahasa Inggris melalui Facebook menjadikan belajar lebih menarik.

13	I have positive attitude towards learning EFL via Facebook.	Saya memiliki sikap positif terhadap pembelajaran Bahasa Inggris melalui Facebook.
14	I have positive attitude towards English as a foreign language.	Saya memiliki sikap positif terhadap bahasa Inggris sebagai bahasa Asing.
15	The use of Facebook makes learning English easier.	Penggunaan Facebook memudahkan untuk belajar bahasa Inggris.
16	Facebook encourages me to spend more time learning English.	Facebook mendorong saya untuk menghabiskan lebih banyak waktu untuk belajar bahasa Inggris.

The questionnaire of this research was adapted from Sa'aleek (2015). For the reason, the source provided details the needed data information of the items for the questionnaire, and it was necessary for the questionnaire which used in this research. Also, the questionnaire had been used in the previous study. That way, the questionnaire could be more valid and reliable to be used in this study. Besides, the original questionnaires consisted of 17 items, but the researcher deleted one item because of the similarity question in two different questions. Those two questions were about "The Facebook enhances the confidence to write in English". Hence, this research only used 16 items for the questionnaire of the research.

The questionnaires of this research were originally in English. However, the questionnaires were distributed in Indonesian language for accessibility purposes, and it was native language for the ELED students. Therefore, using Indonesia

language in the provided questionnaires could ease the students to understand the questions and avoid for bias results.

Validity Test

Before distributing the questionnaires to the respondents, the translation of the questionnaire was judged by the experts. The experts gave a score in the range of one to four for each translation item of the questionnaire. The experts were three lecturers of ELED at a private university in Yogyakarta. After each translation item of the questionnaire was judged by the lecturers, the researcher input the data score given by the lecturers into Microsoft Excel. Besides, Microsoft Excel was used to test the validity of each translation item of the questionnaire based on the score from the experts. Accordingly, the questionnaire was processed by giving a logical formula to know the validity, and the formula was adopted from Aiken (1980). For more detailed information of the validity Aiken test, it is explained in the following paragraphs.

The validity Aiken Test was used as the statistical test. According to Cohen et al. (2011), each translation item of the questionnaire is considered as high valid if the total score is more than 0.8. Besides, if the score of the translation item is higher than 0.4 but less than 0.8, it means that the validity is medium. If the score of the translation item is less than 0.4, it means that the validity is low.

As seen in table 1, the results of the validity Aiken Test showed that there were 11 items with high validity because the value was more than 0.8. Besides, for five items with medium validity, the value was more than 0.4 but less than 0.8. Therefore, the validity of the questionnaire in this research was acceptable because the overall validity of this questionnaire were high and medium in regards to the

classification of Cohen et al. (2011). For more detailed information of the validity results for the research questionnaires, it is mentioned in the following table.

Question naire Items	Expert 1	Expert 2	Expert 3	{Expert Score – (1)}			Sum	Value	Validity
				Σ 1	Σ 2	Σ 3			
				Q1	4	3			
Q2	4	4	4	3	3	3	9	1.00	High
Q3	4	4	4	3	3	3	9	1.00	High
Q4	3	4	4	2	3	3	8	0.89	High
Q5	4	4	3	3	3	2	8	0.89	High
Q6	3	4	3	2	3	2	7	0.78	Medium
Q7	3	4	4	2	3	3	8	0.89	High
Q8	3	4	3	2	3	2	7	0.78	Medium
Q9	4	4	3	3	3	2	8	0.89	High
Q10	3	3	3	2	2	2	6	0.67	Medium
Q11	4	4	4	3	3	3	9	1.00	High
Q12	4	4	4	3	3	3	9	1.00	High
Q13	3	4	4	2	3	3	8	0.89	High
Q14	3	3	4	2	2	3	7	0.78	Medium
Q15	3	3	3	2	2	2	6	0.67	Medium
Q16	4	3	4	3	2	3	8	0.89	High

Reliability Test

The researcher also tested the reliability of the instrument. Reliability of the instrument was used to measure dependency and consistency the instrument of this research. According to Cohen (2007), reliability in quantitative research was basically related to dependability, consistency, and replicability of time,

instruments, and group of respondents. That way, the reliability was important to this research because it affected the results of study. Besides, a statistic software program was used to test the reliability of the instrument, and Cronbach's Alpha was used as the statistical test of the reliability. The items of the questionnaire were very highly reliable if the score was more than 0.90. If the score of the items between the ranges of 0.80-0.90, it was considered highly reliable. If the score of the items was between the ranges of 0.70-0.79, it was reliable. Additionally, if the score of the items was between the ranges of 0.60 – 0.69, it was considered as minimal reliability. If the item score was no more than 0.60, it was considered to have an unacceptably low reliability.

Score	Category
More than 0.90	Very highly reliable
0.80 – 0.90	Highly reliable
0.70 – 0.79	Reliable
0.60 – 0.69	Minimally reliable
Less than 0.60	Unacceptable low reliable

The result of the reliability in table 3 showed that the overall Cronbach alpha (N= 16) was 0.899 which was categorized into “very highly reliable”. Cohen et al. (2011) remarked that the reliability level is acceptable at 0.8. Therefore, the reliability of the questionnaire in this research was acceptable since the overall alpha in this questionnaire was 0.899 which was higher than 0.8. For more detailed information of Reliability statistic results, it is explained in the following table.

Table 3 <i>The Result of the Reliability Statistics</i>	
Cronbach's Alpha	N of Items
.899	16

Moreover, on table 4, it showed that all items in the questionnaire were categorized to “very highly reliability” because the score was more than 0.80. That way, the questionnaire items were all reliable as seen from the overall Cronbach’s alpha and each item of the Cronbach’s alpha.

Table 4 <i>The Result of the Reliability for each Item of the Questionnaire</i>		
Items	Cronbach's Alpha if Item Deleted	Reliability
Q1	.912	Very highly reliable
Q2	.905	Very highly reliable
Q3	.898	Very highly reliable
Q4	.892	Very highly reliable
Q5	.890	Very highly reliable
Q6	.889	Very highly reliable
Q7	.887	Very highly reliable
Q8	.886	Very highly reliable
Q9	.892	Very highly reliable
Q10	.894	Very highly reliable
Q11	.886	Very highly reliable
Q12	.888	Very highly reliable
Q13	.888	Very highly reliable
Q14	.895	Very highly reliable
Q15	.891	Very highly reliable
Q16	.894	Very highly reliable

Data Gathering Procedure

There were some procedures for collecting data in this research. Firstly, the researcher made a lottery which was filled with the cluster class of first year students and shuffled the lottery to choose the cluster class. Then, from the lottery, the researcher got a cluster random sample from class B, C, D and E. These 150 respondents were obtained from all of the students of class B, C, D and E. Hence, the questionnaire was administered by the researcher in a Google-form with the provided link as <https://goo.gl/forms/uxV8aEtX5chFHwxL2>.

Secondly, the researcher came to the class and gave the questionnaire link by asking the students to fill out the questionnaires in the Google form. From the statement mentioned, it was to ensure that all students became the respondents and filled out all questionnaires on time and precisely. Then, the researcher collected the data quickly by using online surveys to manage questionnaires. Based on the statement mentioned, it was a simple way to use online surveys and could be accessed by respondents to respond to questionnaires in short time. Therefore, the online surveys made the data analysis to be collected easily because the researcher directly imported the collected data from Google forms and analyzed the data into the statistic tool.

Data Analysis

Data analysis used in this research was descriptive statistic. The aim of using descriptive statistic was to find the dominant results of each item in the questionnaires. The statement mentioned was supported by Cohen, Manion, and Morison (2011) who said that descriptive statistic enables the researcher to present the data in a meaningful way from the results of frequencies and tendencies.

Besides, descriptive statistic allowed the researcher to interpret the data more simply, and it could provide rich data in large amount. The collected data were processed using statistic tool and transformed into a generally understandable and numerical data such as percentage and frequency. Additionally, the provided information had facilitated researcher in the process of interpreting data and in completing this research. For the analysis of demographic data, the frequency and percentage were used for length time using Facebook, language use and frequency of logging Facebook. Whereas for item descriptions in the questionnaire, the average score, frequency, and percentage were also used to describe the students' perceptions on the role of Facebook as an online medium for learning English.

Besides, the researcher made a range score to classify the results of the mean score in each item and find which category of the mean score belongs to. The formula to make the range of categories was taken from Supranto (2000). Thus, for more detailed information, the formula to make the range of categories is explained below.

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

c : the range prediction (class width, class size, class length).

K : the number of categories.

X_n : the maximum score of the variable.

X_1 : the minimum score of the variable

Moreover, the range scales of the types in the role of Facebook as an online medium by students in learning English were divided into four categories. The categories included about “strongly disagree”, “disagree”, “agree”, and “strongly

agree” which those categories showed the average of each role. Hence, the role of Facebook for learning English is presented in the following table.

Table 5	
<i>The role of Facebook for learning English</i> (N of items = 16)	
Description	Scale
Strongly disagree	1.00 – 1.75
Disagree	1.76 – 2.51
Agree	2.52 – 3.27
Strongly agree	3.28 – 4.03