Chapter Three

Research Methodology

This chapter discusses the methodology and research design used in conducting the research. It discusses some parts such as the design of the study, such as research setting, research participant, data gathering, data collection method, and also data analysis.

Research Design

In this research, the researcher used quantitative design. Quantitative design was the most appropriate to be use in this research because the researcher wanted to know about the use of Edmodo in English Language Education Department class, beside that the quantitative research is suitable to gather lots of data .Quantitative research allows the researcher to familiarize him with the problem or concept to be studied (Golafshani, 2003).

The researcher used survey design as the methodology. According to Mathers, Fox, Hunn (2009) Surveys are very traditional way of conducting research. They are particularly useful for non experimental descriptive designs that seek to describe reality. Likewise, the survey approach is frequently used to collect information on attitudes and behavior. Survey design will help the researcher to gather more information concerning the research.

Research Setting

The setting of this research was at English Language Education Department of private university. The reasons of choosing ELED of private universityas the research setting are first,

technology is used as supplementary tool for learning English in the ELED of private university classes. The ELED provided some subjects related to the use of technology e.g. Computer Literacy 1 (Offline), Computer Literacy 2 (Online), ICT in Language Teaching, Innovative Technology, Digital Technology in Education. Second, Edmodo wasused as media for teaching and learning practices. There were some activities that teachers do with Edmodo in teaching and learning practice in the class Furthermore, the researcher is also studying in ELED of private university, so it can make the researcher easier to get the data.

Research Population and Sampling

The researcher determined the participants of this research which are English Department student's batch 2015.According to Creswell (2012), "A population is a group of individuals who have the same characteristic." The total students of ELED private university batch 2015 were 118 students. The reason of choosing batch 2015 were because these students have just learnt with Edmodo in the fifth semester so they can answer the questionnaire more comprehensively because they has fresh memory about the use of Edmodo in their class, and batch 2014 has more experiences and fresh data in using Edmodo rather than other batch that can be research. Moreover, the students of batch 2015 are in the academic year of 2017/2018, so it becomes opportunity to gather fresh data about Edmodo as their supplementary tool from them. It is not possible to conduct the research on batch 2013 or 2014 because the students do not have class anymore and some of them are already graduated and are less accessible.

The researcher used simple random sampling to choose the participants. According to Cohen et al. (2007)"In simple random sampling, each member of the population under the research has an equal chance of being selected and the probability of a member of the population

being selected is unaffected by the selection of other members of the population". Simple random sampling is easy sampling technique to be used in this research. The reason why it is easy to use simple random sampling, because it is suitable with the condition at ELED of private university that have so many classes and it become easy to choose lots of the respondents. This method is very effective method because the population was already known and determined by the researcher, so that researcher can easily determine the sample without seeing the differences among the population, for example the level of intelligent or skill of student in the class. Furthermore this method views to be easier for researcher to meet with the population of students at ELED of private university batch 2015, because the researcher and the respondents studies in the same major.The respondents of this research are students batch 2015 ELED, total of students batch 2015 are 118students.According to Cohen at all (2007), if there are 110 or more respondents and the confidence level is 95% and confidence interval 5% we can use 108 respondents for our research.

Research Instrument

The instrument that was used in this research is questionnaire. According to Burgess (2001) "Respondents are more likely to commit to answer a questionnaire when they see it as interesting, of value, short, clearly thought through, and well presented". The researcher uses the respondents' first language which is Indonesian language in questionnaire, so it can make the respondents easy to fill out the questionnaire. The kind of instrument is close-ended questionnaire. Based on Siniscalco and Auriat (2015) "Questions of this kind may offer simple alternatives such as 'Yes' or 'No'. They may also require that the respondent chooses among several answer categories or that he/she uses a frequency scale, an importance scale, or an agreement scale". The researcher provides 34 statements. There are 17 statements for answering

the research question 1, for research question 2 there are 11statements, and for the research question 3 there are 6 questionnaires. 6 statements are adopted from Enriquez (2014) and for the rest are made by the researcher himself. The researcher provides some responses, there are strongly agree, agree, disagree, and strongly disagree. All the responses are same, so the questionnaire items 1 until 34 have same answer.

The questionnaire should be valid to get valid data. According to Kimberlin and Winterstein (2008) "validity is often defined as the extent to which an instrument measures what it purports to measure, alsoKimberlinand Winterstein (2008) said that validity requires that an instrument is reliable, but an instrument can be reliable without being valid". Based on that opinion, validity is the level to understand of the result of the questionnaire that is acceptable, which depend on the questionnaire proposed. The researcher has used the expert judgments before do the research to know whether the questionnaire is valid or not and the experts will give the researcher some comments and the researcher modified some statements and items as experts judgments been told. Determining instrument validity and hence valid inferences, to a greater or lesser extent, is the reliance on the subjective judgments by experts (Bruce and Lack, 2009). The experts who judge the items are 3 teachers of ELED of private university. The result of the judgment toward questionnaire that researcher used is valid, but the experts added some comments to modified the items of questionnaire. Content validity is used in this research, according to Polit and Beck (2006) understands content validity as the extent to which an evaluation instrument contains an adequate sample of items for the construct assessed. Aiken's V is used to assess the validity of item. According to Aiken (1985) in Retnawati (2016) Aiken's V is formulated to measure and calculate content validity coefficient that is based on the assessment results from expert judgments to an items which it represent a constituent that can be

measured. The Aiken format is a very simple way of assessing multiple choice questions. Aiken (1985) in Retnawati (2016) stated the validity index of the items for Aiken is formulated as: V =

$$\frac{\sum s}{n(C-1)}$$

V = Value C = Highest validity score

S = r – lo R = Score from experts

Lo = Lowest validity score

Example of using Aiken's V:

There are 5 items that will judge by 3 expert, the measurement score are 1 (lowest) and 4 (highest), so n=3, lo=1 and c=4.

Example table.1

Expert	Item 1		Item 2		Item 3		Item 4		Item 5	
	Score	S	Score	S	Score	S	Score	S	Score	S
A	4	3	2	1	3	2	2	1	3	2
B	3	2	3	2	3	2	2	1	2	1
C	3	2	3	2	3	2	2	1	2	1
$\sum s$	7		5		6		3		4	
V	0.583		0.42		0.5		0.25		0.3	

The value score (V) of item 1 is get from V= 7/[3(5-1)] = 0.583, then for item 2 V=5/[3(5-1)]= 0.42, and so on for item 3,4 and 5. According to Retnawati (2016) the items are not valid if the value numberis under 0,4 then if the value number is between 0,4-0,8 the items are valid and above 0,8 the items are strongly valid.

In this research, the questionnaire should be reliable to answer what information that researcher wants. According to Creswell (2012) reliable means that individual scores from an instrument should be nearly the same or stable on repeated administrations of the instrument and that they should be free from sources of measurement error and consistent. Joppe (2000) stated that reliability as "the extent to which results are consistent over time and an accurate representation aof the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable". The researcher will have expert judgments first and then use analyze program to check whether the questionnaire is reliable or not reliable. Cronbanch's alpha was used in the research. According to Creswell (2012) Cronbach's alpha is a measure of reliability and, more

specifically, internal consistency. A coefficient of .93 is a high coefficient; .6 is an acceptable level for determining whether the scale has internal consistency. With a .72 reliability coefficient, the reliability is satisfactory for the scores. Table of*Cronbach's alpha*:

Table 2
The Criteria of Reliability (alpha)

Cronbach's alpha	**Internal Consistency**
1. 0.93-1.0	High
2. 0.73 – 0.92	Good
3. 0.6 - 0.72	Moderate
4. < 0.6	Not Good

From the data that have been calculated through SPSS program, the researcher found that the Cronbach Alpha of 17 (feature), 11 (activity), and 5 (skills) items are 0.806, 0.847 and 0.732. These instrument are reliable because the Cronbach Alpha or reliability coefficient is higher than 0.70 or >0.070. The reliability statistics were explained in the table below.

Table 3

Reliability Statistics (Features)

Cronbach's Alpha	N of Items
.806	17

Table 3.7

Reliability Statistics (Activities)

Cronbach's Alpha	N of Items
.847	11

Table 3.8

Reliability Statistic (Skills)

Cronbach's Alpha	N of Items
.732	5

Data Collection Procedure

This research used questionnaire to collect the data regarding the use of Edmodo as supplementary tool for language learning. The researcher use Self-administered questionnaires in the presence of the research technique in administering the questionnaires. According to Cohen (2007) the presence of the researcher is helpful in that it enables any queries or uncertainties to be addressed immediately with the questionnaire designer. There are some steps in collected the

data. First the researcher administered the questionnaire to 108 students of ELED batch 2015. Second, the researcher asked permission to conduct the research to the teacher to use their class as respondents. After agreed by teacher, the researcher came to the class and explains that the students are becomes the respondents of the researcher. Then, the researcher distributed the questionnaire to the students, and also explains to fill the information of respondents first, then how to answer the questionnaire. Afterward, the researcher gave time to respondents to answer the questionnaire. After all the respondents finished filling the questionnaire, the researcher took back the questionnaire (so the researcher can analyze the result as soon as possible) and then the researcher said thanks to the respondents also the teacher.

Data Analysis

The data of this research were used to know the features provided in Edmodo that can assist students in learning English. Second, the data is to find out is there any language skill that can be increased by the use of Edmodo. The last, what are the activities in Edmodo that make students interested in learning English. All of the data are obtained from the questionnaire. Then the researcher processes the data using analyze tool, and the result is descriptive statistics.

In this research, the descriptive statistic measurement showed in the form of table. Cohen et al. (2011) states that descriptive statistic is usually used to describe and present data for the researcher to further analyses and interpret what the description means. Descriptive statistic uses in this study consists of frequencies, measure of central tendency (mean, mode, median), standard deviations, and cross tabulations.

The categories of each research question are different for the first research question the researcher use helpful, and not helpful. For the second research question the researcher used interesting and boring as category. The last research question significant and not significant is used as the category.

Table 4

Category of each research question result

Research Question 1 (feature)		Research Question 2 (activity)		Research Question 3 (skills)	
Helpful	3.00-4.00	Interesting	3.00-4.00	Significant	3.00-4.00
Help a bit	2.50-2.99	So so	2.50-2.99	Increase a bit	2.50-2.99
Not helpful	0-2.49	Boring	0-2.49	Not increase	0-2.49