Chapter Three

Methodology

This chapter discusses the methodology used by the researcher in this study. There are five sections namely research design, research setting, research participants, research instrument, data collection method, and data analysis technique. There are also several theories included in this chapter to support this research methodology.

Research Design

This research used a quantitative approach. Quantitative approach was chosen because it enabled the researcher to identify the trends of problems or explained how blended learning factors affects to students' attitude in blended learning toward EFL classroom. Creswell (2012) asserted that in quantitative research, the researchers describe a research problem which depends on the trend cases or explains why something happen. Furthermore, the quantitative method describes the trends of research in which the research problem will be the answers from seekers to compose the overall tendency of responses. The quantitative method does not have various tendencies among people. In addition, by applying the quantitative method, the tendency could be covered from exploring the problem or phenomena produced by the respondents regarding the EFL students' attitude, perceived competency, and the use of blended learning in the learning process.

The research was conducted using survey design. Besides, this research was aimed to find out individuals' beliefs and behaviors such as EFL students' attitude. As supported by Creswell (2012), the use of survey design is to identify

major assumptions and manners of individual at one point of time. This research used cross-sectional survey design as the basic of survey design. Using survey design, this research aimed to find out the students' attitude toward factors in blended learning EFL classrooms. Creswell (2012) asserted that survey design has three types of design namely cross-sectional cases in survey design, manner and practice, community needs and program evaluations. Besides, this research was focused on Cross-sectional survey design which was used to compare two or more education samples in terms of manner and practices. Thus, to deliver the results, it described the tendency of EFL students' attitude of blended learning to promote English since the researcher wanted to analyze the trends of this research.

Research Setting

This research was conducted at ELED of an Islamic private university in Yogyakarta. Additionally, this department also provided some courses which had implemented the blended learning like the use of Learning Management System (LMS). There were six courses out of 48 courses which not implemented blended learning in this ELED in academic years 2019/2020 batch for 2017. The courses were Arabic language, Curriculum design, Instructional design, Education and Teaching Practice, Digital Technology in Education, and Material Design. In addition, this department has an A accreditation which shows that this ELED is one of the best ELED departments in Indonesia. Also, according to the Decree of Rector about blended learning implementation. For the reasons, it came up as the reasons why the researcher wanted to choose ELED of an Islamic private university in Yogyakarta as the research setting. Also, the researcher wanted to investigate the implementation of blended learning in Indonesia especially in

Yogyakarta. In relation to blended learning, the researcher only focused on ELED because all students are supposed to learn English. Following this, the researcher wanted to find out the trends of EFL students' perceptions in the use of blended learning to promote their English. This research was conducted in November 2019, and the data collection was taken 12 days.

Research Population. This research was conducted in Yogyakarta. The populations of the research were ELED students of an Islamic private university in Yogyakarta. Hence, the total target populations were 208 students form batch 2017 at ELED of an Islamic private university in Yogyakarta. Additionally, this department students who were involved as respondents in this research were the students of batch 2017. That way, the respondents were experienced enough using blended learning because they had already joined some courses using blended learning. To conclude, the issues mentioned above could be the reason why the researcher wanted to conduct this research at ELED of an Islamic private university in Yogyakarta batch 2017 in semester 5 academic year 2019/2020.

Research sampling technique. This research used random stratified sampling to collect the sample of the research. Besides, random stratified sampling enabled the researcher to select several groups within homogenous groups of population with the equal characteristic of the same group. As supported by Cohen, Manion and Marison (2011), random stratified sampling defines the numbers of groups into the same group with equal characteristic. The characteristic of this research sampling was ELED students' batch 2017 that had passed more than 4 semesters and had experience using blended learning in their courses learnt. Moreover, the researcher made a lottery written with the cluster

class of batch 2017 which were A, B, C, D, E, and F. Those all classes were shuffled in order to give a quall change to all the respondents to be selected. Therefore, the researcher found class A, B, D, and F as the respondents. As asserted by Cohen et al. (2011), this method enables the researchers to draw the classes out of bowl until the required cluster is reached. Therefore, a cluster sample is an effective to select the costless method in selecting sample of the research.

Research sample. The samples of the data were the students of ELED at an Islamic private university in Yogyakarta batch 2017. The number samples of batch 2017 were 208 students in academic year 2019-2020, and the selected respondents were 151 respondents. The samples were selected form the table of sample size for probability sample with confident levels of 95% and confident interval of 5% for the education society. Also, 151 respondents were obtained from all the classes which had been shuffled into A, B, D and F. Hence, for more detailed information, the research sample was mentioned in the following table.

Table 1

Sample Size, Confident Level and Confidents Interval for Random Samples

Target Population Size	Confident level 95%
	Confident interval 5%
208	151

Table 2

Research Sample of 151 respondents from class A, B, D and F by random stratified sampling

Class A	38
Class B	38
Class D	38
Class F	37
Total	151

The random stratified sampling selected 151 respondents who were selected from the number of the students' attendant list 1-37 and 1-38 every class. As the result, there were three classes of 38 respondents and one class of 37 respondents.

Data Collection Method

The research adopted the questioners as data collecting method. There were two reasons why the research used questioners as data collecting method. Firstly, the questioners enabled the researcher to gather the data from a large number of populations in a short period of time. Cohen et al. (2011) stated that the information can be collected from the several numbers of a group, and it is relatively efficient for collecting and analyzing the data. Secondly, the questioners were considered as method for collecting data of research under the quantitative research. As supported by Wilson and McLean (1994), the questioner is relatively useful to collect the information and extensively to gather the survey data in the form of numeric data which are able to administer and analyze the data comparatively. Therefore, using questionnaires to collect the data were suitable as data collection method for this research.

In addition, the researcher chose Likert scales as the types of the questioner. The Likert scales were used to answer opened-ended questions and

find the tendency from the responses systemically in generating number. The statement mentioned was in line with Cohen et al. (2011) who asserted that Likert scales is name of discovered Rensis Linkert 1932 which settles a range of respondents' answers on statement or question. The rating scale to find the data of the students' attitude in blended learning consists of, 1 = very negative, 2 = negative, 3 = neutral, 4 = positive, 5= Very positive. The other rating scale to find the data of blended learning factors use of blended learning consist of 1= strongly disagree 2= disagree, 3= neutral and 4= agree, 5= strongly agree. Hence, the researcher chose Likert scales because the researcher wanted to find out the trends of EFL students' attitude towards the blended learning in EFL classroom.

Data Collecting Procedure

The questioner of the research administered the questionnaires by doing self-administered technique. The statement mentioned was supported by Cohen et al. (2011) who argued that questioner can be conduct in several ways including self-administration, post, face-to-face interview, telephone, and internet. Also, the researcher administered the questioners by herself. Moreover, the researcher chose self-administered questioner in this research because the researcher helped the respondents directly if they found any trouble during answering the questionnaires in order to ensure that all the respondents did well and gave the best responses as possible regarding the questionnaires provided. According to Cohen et al. (2011), the presence of the researcher is accessible in the process of administering the questionnaires which enables any doubt or ambiguousness to be asked directly to the questionnaire design. In addition, the researcher came to the class where the research was conducted. To make the respondents understand and clear with the

questionnaires, the researcher gave short explanation to respondents about the title of the research, the aim of the research, and blended learning as a brain-storming.

Moreover, the questionnaires were distributed to the respondents through the online mobile survey to save the cost and time. Dillman, Smyth, and Christian (2014) maintained that conducting questionnaire using online and mobile survey is affordable way to be administered because it does not need the printed questionnaire cost. Furthermore, the online questionnaire was in the form of Google Form provided by Google. In addition, the researcher shared the link of the questionnaire by sending the link to the class leader, and later he or she shared the link to the WhatsApp group. Accordingly, the link of the questionnaire (https://forms.gle/SkP9HPd1N6fP8yj78), and the presences of researcher ensured that all of the respondents responded the questionnaire answers well.

Research Instrument

Research Instruments are measurement tools (for example, questionnaires or scales) intended to collect data on a case of interest from research subjects. Moreover, the researcher provided 55 items of adopted questioners form Meng Tang and Yen Chaw (2013) and English Department Collages of Arts and Sciences, Bisha University of Bisha, Saudi Arabia (2015). All the question items were authentic in English, and the researcher needed to translate the questions into Indonesia language in order to make the respondents understand with the questioners. The first part of the questionnaire was about the item number 1 to 8 which were intended to answer research objective part 1 about “the students’ attitude towards the classroom learning factors of blended learning”. In the second part of the question, it included the items numbers 9 to 18 intended to answer the

research objective about “the students’ attitude towards the online learning factors of blended learning”. In the third part, it included about the items numbers 19 to 28 intend to answer the question topic about “students’ attitude towards the learning management factors of blended learning”. In the fourth part, it provided the items numbers 29 to 38 intend to answer “the students’ attitude towards the learning flexibility factors of blended learning”. Part 5 was about the items numbers 39 to 48 intended to answer the question about “the students’ attitude towards the Online Interaction factors of blended learning”. Part 6 included about the items numbers 48 to 55 intended to answer the question about “students’ attitude towards the technology factors of blended learning”. Hence, the researcher adopted and modified the questions from the researches which had conducted the research before. Hence, the table 3 shows about the questioner items distribution.

Table 3

Questioner Items Distribution

Part	Items	Numbers	Learning factors
1	8	1-8	Classroom learning
2	10	9- 18	Online learning
3	10	20-28	Leaning management
4	10	29-38	Leaning flexibility
5	10	39-48	Online interaction
6	7	49-55	Technology

For the first step before sharing and collecting the data, the researcher did validity test for the questionnaire to the three experts. Validity test aimed to measure the validity of questionnaire items with the research. According to Cohen et al. (2011), validity is an appropriate instrument and statistical treatment of the data. The research was possible to be 100% valid because quantitative research processed a measure of standards error which incorporated and had to be accepted. In this research, the content of validity is determined by using a formula AIKEN, and it is displayed in the following figure.

Figure 3

Validity and Reliability Test

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

V: validity score

s: score of each expert minus the lowest score of categories

n: number expert

c: number category

Aiken (1985) argued that 0-1 and the criteria of the questions are used to declare the item which is proven to be valid in the contents on the mount of assessor of 9 on 0.78. That way, the valid score of AIKEN test are V<0.4 (low validity), 0.4<V>0.8 (average validity), and V >0.8 (high validity). In addition, the formula of Aiken is to validate the questionnaire items of validity test.

In addition, the researcher analyzed the data by inputting the questionnaires in to *Microsoft Excel* and *Google Form.* Also, the researcher input those data into SPSS. Moreover, the researcher found the reliable data using

Cronbach Alpha test. The reliable data of test were the data which had a higher score than Cronbach Alpha's score. Cohen et al. (2001) asserted that the table of requirement to find reliable item is presented in the following table.

Table 4

Reliability Test

Reliability Categories	
Cronbach' Alpha	Categories
R>0.9	Very high reliable
0.8-0.9	Highly reliable
0.7-0.79	Reliable
0.60-0.69	Marginally/ minimally reliable
R<0-0.60	Unacceptable low reliability

Additionally, the descriptive statistic was used to analyze the data. According Cohen et al. (2001), descriptive statistic presents what exact responses of the respondents are. On the table reliability categories above, the data item was reliable if the score is 0.70 or higher. Hence, if the score is under of 0.60, the data item is not reliable. The researcher checked whether the data was reliable or not using the statistical application program. The results of reliability analysis on SPSS application program were 8 items of questioner not reliable, and those item numbers were 12, 24, 25, 26,27,44,45, and 53. Thus, 8 items which not reliable were deleted from questioners' items.

Table 5

The Result of Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.856	55

Normality Test

Before processing the data to find out the tendency, the data must be in normal distribution. For that reason, the researcher analyzed the data to find out the data distribution was normal or not. The researcher used Kolmogorov-Smirnov to analyze the data. The normal data came up when the significant value was >0.05 which the data had the normal distribution. When the significant value was <0.05, the data did not have normal distribution.

Table 6

One-Sample Kolmogorov-Smirnov Test

		SUM
N		150
Normal Parameters[a,b]	Mean	204.2533
	Std. Deviation	19.11048
Most Extreme Differences	Absolute	.070
	Positive	.070
	Negative	-.063
Test Statistic		.070
Asymp. Sig. (2-tailed)		.066[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

If the data were normal distribution, the sig tailed data were higher than 0.05. Based on the table above, it showed that the results of the data were normal distributions.

Descriptive Arrange Score

Table 7

The Qualifications Standards on Students' Attitudes towards Learning Aspects

Score (%)	Point	Qualifications
80-100	4.1-5	Strongly Agree/ Very Positive
60-79.99	3.1-4	Agree / Positive
40-39,99	2.01-3	Neutral
20-39,99	1.1-2	Disagree / Negative
0-19,99	0-1	Strongly Disagree / Very Negative

The attituded mean score can be founded from total of respondents' points from each questioner items divided with total of respondents, then multiplied 5.

$$X = \frac{\sum P}{\sum \mathrm{R}} \times 5$$

X= mean score

$\sum P$= total respondents of point from each questionnaire items

$\sum \mathrm{R}$= total of respondents

5= maximal point of the respondent's answer