

## CHAPTER III

### RESEARCH METHOD

This chapter involves with the steps for conducting the study. It includes research design, population and sample, research instrument, data collection technique, and data analysis technique.

#### **3.1. Research Design**

The design of this research is examined as a survey method. In this case, the researcher wants to deeply know the happens outside or the field using a survey to analyze the data. The purpose of this research is to collect the data about the applying e-learning based on the application in the learning of English specific purpose classroom. To find out the information about e-learning by using Quizizz. Therefore, the researcher uses survey research to interpret and describe it. Based on *Research Method* by Patrick and Steve Chapman, a social survey is a method of obtaining large amounts of data, usually in a statistical form, form a large number of people in a relatively short time, it usually takes the form of self-completion questionnaire or interview.

James E Barlett states that a common goal of a survey research is to collect data representative the population. In this case, after take the data from numerical data then the researcher will be analyzed the data and explain the results to make the easy-understanding by reader. Therefore, this survey method used in this research and using questionnaire as a research instrument to collect the data. Specifically, this research only concerned to students' perception towards the implementation of e-learning by using Quizizz in ESP classroom.

### **3.2. Population and Sample**

Population is the group which the researcher would like the results of the study to be generalized (Gay, 2000). The population of this research will involve students of PGSD Department at University of Muhammadiyah Gresik who join in English D1 class. The most important thing, the students who will be participants in this study should have an experience doing e-learning by using Quizizz in courses of English D1. They have to be respondents who filled the questionnaire because they have more experience in conduction e-learning using Quizizz during online assessment.

Sample which a set of elements taken from a larger population (Johnson & Christ, 2008). The sample of this research will used only 2<sup>nd</sup> semester of PGSD Department students consist of 46 students, so the researcher takes 46 students as a sample.

### **3.3. Research Instrument**

Sugiono (2015) says that research is doing the measurement, then there must be a good measuring tool. Measuring instruments in research are usually named as a research instrument. The research instrument is a tool used to measure both natural and social phenomena observed. Specifically, those phenomena are called research variables. In this study, there are two research questions. First, identifying the students' perception towards the e-learning while in the second is to know what is students' obstacles in doing e-learning by using Quizizz. To answer those questions, the researcher used questionnaire as the instrument in this research. Questionnaire will be covered by close ended questionnaire. So, the respondents will answer by choosing their perception.

#### **3.3.1. Questionnaire**

According to Wilson and McLean that the questionnaire is a widely used and useful instrument for collecting the survey information, providing structured, often numerical data, being able to be

administered without the attendance of the researcher and often being comparatively frankly to analyze.

In this research, the researcher collected the data by using questionnaire where the contents of the questionnaire is adaptation. For perception questionnaire the researcher adapted from combination of two journals by Zaidatun Tasir, Yahya M. Hashem, Jamalludin Harun, and Nurbiha A. Sukhor (2018) entitled *Students' Perception towards the use of Social Networking as an e-Learning Platform* and journal by Alex Koohang and Angela Durante (2003) entitled *Learners' Perception toward the Web-Based Distance Learning Activities/Assignments*. The total of items in this questionnaire are 20 questions, and the researcher will take 10 questions from the first journal by Zaidatun Tasir, Yahya M. Hashem, Jamalludin Harun, and Nurbiha A. Sukhor (2018) entitled *Students' Perception towards the use of Social Networking as an e-Learning Platform*, then put it in the item number 1-10 and take 10 questions for number 11-20 from second journal by Alex Koohang and Angela Durante (2003) entitled *Learners' Perception toward the Web-Based Distance Learning Activities/Assignments*, whereas, for obstacles questionnaire, there are 15 questions, the researcher create by herself based on confirmation from 4 lecturer who teaches in English D1 class for number 1-5 and adapted from journal by Karen Becker, Cameron Newton and Sukanlaya Sawang entitled *A Learner Perspective on Barriers to e-Learning* (2013) for number 6-13, and the rest, number 14 & 15 are taken from student's own version in 'other' feature in questionnaire. The type of questionnaire used in this research is close ended questionnaire. Close ended questionnaire here used a rating scale questionnaire, where the researcher uses Likert Scale to get information from the participants, Likert Scale is to measure the extent of subject

agreement with each item. The extent is measured on a five points-scale: *strongly agree, agree, neutral, disagree, strongly disagree*. In this case, the researcher will make questionnaire in online form using Google Form as an instrument and shared by link.

### **3.4. Data Collection Technique**

Data collection technique is the way the researcher collects data empirically and objectively (David McNabb, 2010: 121). Data collection is one of important procedure in the research, it because data is the main purpose of this research. In data collection, the instrument of this research is questionnaire. The items of questionnaire for perception data is based on adaptation by Zaidatun Tasir, Yahya M. Hashem, Jamalludin Harun, and Nurbiha A. Sukhor (2018) entitled *Students' Perception towards the use of Social Networking as an e-Learning Platform* and *Journal of Information Technology Education* entitled *Learner' Perception toward the Web-based Distance Learning Activities/Assignments* by Alex Koohang and Angela Durante (2003), for obstacles data the researcher adapted from journal of *A Learner Perspective on Barriers to e-Learning* (2013) by Karen Becker, Cameron Newton and Sukanlaya Sawang, the researcher will also use WhatsApp to share the questionnaire because most of the students use WhatsApp Group on their mobile phone. The researcher will share the questionnaire in the online form which created from Google Form and share it by link. There are some steps performed by researcher during the study.

#### **3.4.1. Research Stage**

1. The researcher has to prepare the instruments for data collection.
2. Create the questionnaire. The questions in a questionnaire are concerned about students' perception and students' obstacles.
3. Then, the questionnaire needs to test validity and check reliability.
4. In doing the research, the researcher shares the questionnaire to the participants by using online form.

5. After get the data, the researcher has to analyze the data and explain it descriptively and conclude the results of the research.

### 3.4.2. Validity

For the participants of validity test, the researcher will use half of amount research sample. Because the sample are 46 students so the participants for validity test will take only 23 students in 2<sup>nd</sup> semester of PGSD Department.

In testing validity, the researcher used SPSS program application to determine that each item in the questionnaire are valid. Here,  $r_{tabel} = 0,433$  based on  $N-2 = 23-2= 21$ , and the level of significance 5%, so the way how to make decision are:

- If  $r_{hitung} > r_{tabel}$ , so the item of the questionnaire is valid
- If  $r_{hitung} < r_{tabel}$ , so the item of the questionnaire is invalid

How to compare score Sig. (2-tailed) and probability 0,05:

- If score of Sig. (2-tailed)  $< 0,05$  and person correlation is positive, it means that the questionnaire is valid
- If score of Sig. (2-tailed)  $> 0,05$ , it means that the questionnaire is invalid
- If score of Sig. (2-tailed)  $< 0,05$  and person correlation is negative, it means that the questionnaire is invalid

### 3.4.3. Reliability

Reliability refers to consistency or stability of a set of test courses (Johnson and Christ, 2008). In this case, after all items on the questionnaire are declared valid, the researcher needs to check the reliability of each questionnaire item, researcher will use the same participants in validity test which is 26 students, then the questionnaire will measure by SPSS. Item that

used for reliability measurement is Cronbach Alpha test. Here is the table of reliability interpretation coefficient:

**Table 1. Reliability Interpretation Coefficient**

Coefficient	Interpretation
0.80 -1.00	High
0.60 – 0.79	Quite High
0.40 – 0.59	Enough
0.20 – 0.39	Low
0.00 – 0.19	Meaningless

Source: Djiwandono (2008) and Nofridawati (2013)

If the Cronbach Alpha is around 0.49 – 0.59, it can conclude that the questionnaire is reliable to be used, meanwhile, if the score of Cronbach Alpha is less than 0.40, it means that the questionnaire is not reliable to be used.

### **3.5. Data Analysis Technique**

According to Lexy Maeleong, data analysis is process of gathering, modeling and transforming data with useful information, suggesting conclusion, and supporting decision making. In this research, data were collecting with two types of questionnaire that are close and open-ended questionnaire. Then, data collection will be analyzed after the participants filled the questionnaire.

The researcher used SPSS to find out each item of minimum, maximum, and standard deviation. Descriptive statistic used to provide an overview of the collected data.

#### **1.5.1. Validity Test**

The researcher used SPSS to test validity of the instrument. Validity explains how well collected data covers the actual area of investigation (Ghauri and Gronhag, 2005) The researcher used content validity to see how well

content of the instrument represents the whole universe of content which might be measured. The validity test aims to determine of all question or statement involves students' perception and students' experience. It because the questionnaire is valid if the statements of the questionnaire are able to so express something will be measured. As supported by Field, validity basically means "measure what is intended to be measures". The steps are follows:

1. Insert each data of the questionnaire in Ms. Excel.
2. Copy data to SPSS Program
3. Click Analyze, Correlate, Bivariate, and put all in variables

### **1.5.2. Reliability Test**

After all items are already valid, the researcher needs to check the reliability to make sure the results are still consistent. The steps to check reliability are:

1. Insert each data of the questionnaire in Ms. Excel.
2. Copy data to SPSS Program
3. Click Analyze, Scale, Reliability Analysis, put in all variables that already valid.

### **3.5.3. Descriptive Statistics**

In analyzing data, the researcher used SPSS program to find out the descriptive statistic. Descriptive statistic such as samples, means, frequency, standard deviation, and percentage are used to find out the students' perception toward the implementation of e-learning by using Quizizz. The researcher will count the mean score and standard deviation. The mean itself is the strategy used to clarify data variable based on average data. While, standard deviation is to know the difference the population score and the average. The lower

standard deviation, the closer of it will average, while the higher Standard Deviation, the wider variation of the range of data. The steps are follows:

1. Input the questionnaire results include the statements in Ms. Excel to help the researcher doing coding process.
2. Copy data to SPSS Program
3. Click Analyze, Descriptive Statistics, Descriptive, and put all variables.
4. Interpret and conclude the Descriptive Statistics test output.

