CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses the methodology of the study which covers: research design, research subject, research instrument, data collection, and data analysis.

3.1 Research Design

Cresswell (2011) defines research design as a master plan specifying the methods and procedures for collecting and analyzing the needed information in research study. It is defined as a plan to conduct a research study which involves the description of research approach, study setting, sampling technique, tool and method of data collection. There some types of research design such as quantitative research design, qualitative research design, and mixed method research design.

According to Ary (2009), quantitative research is a research which has the purpose to generalize findings, to predict behavior, and to provide causal explanation. Quantitative research tends to be more empirical because to obtain the data it needs measurement tools such as scales, test, observation checklist and questionnaires. There are few types of quantitative research; experimental, correlational and survey (descriptive). Experimental research is needed when the researcher intended to find out whether a particular variable has an effect toward another variable or not. Correlational research uses to find out a relationship or pattern among variables in a particular group of subject. Meanwhile Survey research (also called descriptive research) is needed when the researcher want to
seek for an opinion or attitudes toward a particular issue. It uses instrument such as interview and also questionnaires to collect the data.

Creswell (2011) mentions that qualitative research is suitable for exploring or developing a particular problem in order to get a better detailed understanding. The purpose and research question of qualitative research tend to be more general depend on the subject’s experiences. The way to obtain the data is gained from analyzing the data of the subject by using text analysis and interpreting it, the writing is less formal and more flexible. These are the various types of qualitative research such as grounded theory design, ethnographic design and narrative design. Grounded theory design is qualitative process used to generate a particular theory which explains at a broad conceptual level, a process, an action, or an interaction about a factual topic. Ethnographic design are qualitative research procedures to describe, interpret, and analyze a pattern of group's culture, beliefs, and language which develop by the time. Narrative research design is a research used to describe an individual's life, to collect the data of people's stories relate to their lives, and write a narrative based on individual experience (Connelly & Clandinin 1990, in Creswell 2011)

Tashakkori and Teddlie (2003 in Ary, 2009) mention that mixed model research is using both of qualitative and quantitative in formulate the research questions, data collection procedures and research method, interpretations of the results, and final inferences for instance qualitative questions and quantitative data.

In this study the writer used mixed approach in obtained the data because qualitative approach is suitable for the first research problem yet quantitative
approach is also required to measure the data in the second research problem. In this case the researcher uses qualitative research to get the data about Learning Management System used by English Department lecturers of University of Muhammadiyah Malang and quantitative research is needed to analyze the numerical value of the students’ response toward the use of Learning Management System used by English Department lecturers of University of Muhammadiyah Malang.

3.2 Research Subject

In conducting a research the researcher needs to identify the participant of the study called as research subject. Then the researcher has to draw the population and sample. The sample is needed when the researcher cannot reach all of the participant in the population.

Ary (2002) defines population as all of the members of any class of people, events, or objects. It means that all of the subject in the population have the same characteristic to be investigated. In this research the researcher take the 4th semester students from English Department of University Muhammadiyah Malang. The population of this study is all of 4th semester of English Department which consist of approximately 249 members which belong to 5 classes, who are taught with Learning Management System by their lecturer.

Sample is a smaller group of population which are chosen as the representative of the population. In choosing the sample we need a sampling technique. Sampling is a procedure to choose the smaller number of people or object
from population as the representative. Ary (2010) mentions that there are some ways to decide the way of sampling such as random sampling, cluster sampling, systematic sampling, purposive sampling, and quota sampling.

Gay and Diehl (1992, in Hashim 2010) mention that the size of sample needed is differ based on the type of the research. Descriptive research needs a sample minimally 10% from the population. In this study the researcher uses random sampling and took 20% from each classes. Every class has approximately 50 members, so 20% of 50 is 10 students. Finally the researcher will choose 10 students randomly from each class and the total of the sample of this study will be 50 students.

3.3 Data Collection

Data collection includes the instruments and procedures uses in the research. Interview guide line and questionnaires is the instrument uses in this research.

3.3.1 Technique and Instrument

The most important purpose of research instrument is helping in collecting the data while we are conducting research. According to Fraenkel and Wallen (2012):

Qualitative researcher use three main techniques to collect and analyze their data: observing people as they go about their daily activities and recording what they do; conducting in-depth interviews with people about their ideas, their opinion, their experiences; and analyzing document or other forms of communication.
Ary (2010) states that in quantitative data collection, instrument is needed to measure the variable in the study. Some of instruments used in collecting the data for quantitative research including survey questionnaires, standardized tests, and checklists that you might use to observe the subject.

The research instrument which is used by the researcher are interviewing and giving questionnaire. The material used are note, audio recorder and questionnaire sheets. In collecting the data the researcher used the audio recorder to record the information or stories from the participant relate to the use of Learning Management System in English Department of University of Muhammadiyah Malang. Questionnaires is given to all of the students used as sample in order to get the data about the students’ response toward the use of Learning Management System used by English Department lecturers in University of Muhammadiyah Malang.

a. Interview Guideline

Ary (2010) mentions that interview is one of the most popular basic method to get the data in qualitative research. It is useful to gather the data about people’s opinion, belief, and feeling because the subject can describe it with their own words. There are three ways of conducting the interview such as structured interview, unstructured interview and semi or partially structured interview.

According to Ary (2010), structured interview is an interview done with the specific schedule and arranged question. Meanwhile, unstructured interview is a type of interview which is also called “a conversation with purpose”. It means that the interviewer may develop the question as the chance from the interviewee is arise.
In addition semi structured interview is done by preparing the list of the question but the interviewer may modify the question during interview process.

In this study the researcher used semi structured interview because the researcher is expecting to get the specific data. Semi structured interview enable the researcher to have more freedom in improving the question in the interview session.

b. Questionnaire

Questionnaire is needed to obtain a factual information. It is useful to gather an information about opinion or attitude. The advantages of using questionnaire such as for respondent it is easy to fill out and for the researcher questionnaire is easy to analyze or tabulate, and can be distributed personally by the researcher or by someone else or even by mail (Best & Khan, 2005).

According to Best and Khan (2005), there are two types of questionnaire such as closed form questionnaires and open form questionnaires. Closed questionnaires is a type of questionnaire which uses a short, or check mark response from the respondent. It means yes or no, write a short response, or check an item from the list. Meanwhile, open form questionnaire is a type of questionnaire which need a free response from the respondent’s own word.

In this study the researcher uses a close form of questionnaire in order to get a straightforward answer from the respondent. The questionnaires will be written in Bahasa to avoid misunderstanding from the respondent. The questionnaire will be distributed to the students which taken as the sample.
3.3.2 Procedure

This is a sequence of activity in order to collect the data. Based on the research instrument above the researcher have some procedures in collecting the data such as:

1. The researcher interviewed some of the students from English Department of University of Muhammadiyah Malang who ever taught using Learning Management System by their lecturers.

2. The researcher distributed the questionnaires to all of the students used as the sample of this study.

3. The researcher interviewed the lecturer who use Learning Management System.

4. The researcher transcribed the result of the interviews.

5. The researcher collected and analyzed the data which is obtained from the questionnaires.

3.4 Data Analysis

After collecting the data, the researcher have to analyze the data by interpreting and analyzing the result which is obtained from the interview and questionnaire result. The way of analyzing the data is through these following steps:

1. Interpreting the data from the result of interview with the students and lecturer related with the use of Learning Management System by English Department lecturers of University of Muhammadiyah Malang.
2. Counting the percentage of students’ score based on their selected answer.

The scoring formula is below:

\[ P = \frac{F}{N} \times 100\% \]

Where \( P \) = percentage of respondent

\( F \) = frequency of the respondent

\( N \) = the number of the respondent

3. Classifying the students’ answer based on the yes, no and neutral answer which leads to positive, neutral and negative response.

4. Analyzing and describing the data from each answer.

5. Draw conclusion which derived from all of the data.