

CHAPTER III

RESEARCH METHOD

A. Research Design

As stated in problems of the research, in this research is to describe and analyze learning process of CALL class in developing student technological pedagogical content knowledge (TPACK). Thus, in this study, the researcher uses descriptive research. Descriptive research method is used to obtain information about existing conditions and have been widely used in educational research (Ary, Lucy, & Chris, 2009).

This research uses that method because it is appropriate to the objectives of the research which focus on the students of 6th semester who take CALL (Computer Assisted Language Learning) course and where they must also practice the use of various technology or software tools to increase their technological pedagogical content knowledge (TPACK) for real teaching.

The results of the research emphasize more toward the data interpretation found in the field. The results are not written in the form of figures and tables with statistical measures, but it is illustrated in the form of describing words to the results and it is presented in the narrative. Therefore, it used instruments such as observation and questionnaire to gather information from a group of individuals.

B. Research Setting

The research is carried out in English Department of Education Faculty and Teacher Training at Antasari State Islamic University which is A.Yani street KM 3,5 South Borneo Banjarmasin and focus on students of the 6th semester who take CALL (Computer Assisted Language Learning) course and where they must also use various technology or software tools to increase their Technological Pedagogical Content Knowledge (TPACK) for real teaching. The research will start at April until May and the researcher will observation four class with three meeting every class. Besides, the researcher will distribute questionnaire for students. The number of questions given amounts to 21 questions and the number of correspondents is 40 people.

C. Participants / Subject

The subjects of this research were learning process of CALL class based on teacher and the students of 6th semester who take CALL (Computer Assisted Language Learning) course and where they must also use of various technology or software tools to increase their Technological Pedagogical Content Knowledge (TPACK) for real teaching.

The population of this study was the students of English Department Antasari State Islamic University Banjarmasin in academic year 2016//2017 or they are now still studying CALL course. If the researcher has several hundred subjects in the population, then they can determine approximately 25-30% of that amount. If the

number of members of the subject in the population only covers between 100-150 people, and in the data collection the researcher uses a questionnaire, then the subject of that number should be taken entirely (Arikunto, 2005).

From the data, there are 120 students studying call course and CALL course have four class. The researcher used random sampling in collecting data for the questionnaire. Random sampling is done by multiplying the student attendance number, for example multiples of 2 or multiples of 3, so that each student has the same opportunity to answer. Random sampling was that all members of the population have an equal and independent chance of being included in the sample. So, the researcher only put 40 students for answer questionnaire (Ary, Lucy, & Chris, 2009).

D. Data

1. Data

The information of the data obtained from the observation and questionnaire based on observation the researcher and the students' reaction. The researcher used these two techniques to collect the valid data for this research. There were observation and questionnaire form in qualitative analysis. There was a questionnaire for the participants who take CALL Class in 6th semester and the researcher will observation the class to get the data about learning process of CALL Class based theories on Chapter II. These two techniques were taken to concern the research

questions of how the learning process of CALL Class in developing students' technological content knowledge (TPACK) and how students' mastery on technological pedagogical content knowledge (TPACK). The researcher observes all CALL Classes, the class consists of 4 classes and the researcher will observe class with 3 meetings every class. For questionnaire, the researcher will give 21 questions to 40 students.

2. Source of Data

The data was taken from:

- a. Learning process of CALL Class based on the teacher, there are 4 classes.
- b. Respondents, 40 students at English Department academic year 2016/2017.

E. Technique of Data Collection

The data collection technique in this research used observation and questionnaire. The first step that the researcher used was observation which answered the first research problem. Afterward, questionnaire was used to answer the second research problems.

1. Observation

Observations were carried out in 3 meetings for each class as for the number of classes observed in 4 classes. So the researcher conducted 12 observations.

The researcher analyzed the data collection by observation technique and matching it with the theories provided in Chapter II. The researcher described and try to analyze the teaching process in CALL class in developing students' technological pedagogical content knowledge (TPACK) s based on the teacher strategy. In this case, the researcher also compared it with some theories that match with the teaching-learning process in CALL class in developing students' technological pedagogical content knowledge (TPACK). So, it answered the first research problem in this research.

2. Questionnaire

A questionnaire was used as the second data collection. It was purposed to gain information about students' opinion or perception related to their understanding and mastery in CALL class of Technological Pedagogical Content Knowledge (TPACK). The type of questionnaire here used rating scale questionnaire where the researcher used Likert Scale to get

information from the participants. Likert scale is a psychometric perception scale primarily used in the questionnaire to obtain participants. The respondents were asked to indicate their level of agreement by giving a statement by way of an ordinal scale.

The number of questions that will be given to students is 21 questions, the questions will be distributed to 40 students randomly in 4 classes. These questions are based on Chapter II and the purpose of this questionnaire is to determine the ability of students in their Technological Pedagogical Content Knowledge (TPACK). The researcher only aims to find out the improvement of their Technological Pedagogical Content Knowledge (TPACK). The researcher tried to generalize the ability of students' Technological Pedagogical Content Knowledge (TPACK), which is still in the stage of not knowing TPACK on the grounds that the CALL class is still relatively new and the CALL class has a TPACK relationship because it is related to technology.

In this instrument, the researcher needed the students as the one subject to answer the questions and gave the informant identity. This research used openly in which the student' respondents only needed to answer the best express what their opinion.

Then, the researcher accumulates the percentage of correspondents who strongly agree, agree, neutral, disagree with the formula. After that, the

researcher accumulates the percentage of each correspondent statement with the formula:

$$p = f/n \times 100 \%$$

Information:

p = percentage

f = frequency of each questionnaire answer

n = ideal score (Arikunto, 2005).

Then, the researcher will present a percentage of people who strongly agree, agree, neutral, disagree, and strongly disagree with the questions given. At last, the researcher accumulates all the questions in the form of percentages to determine the students' abilities.

The result by using likert scale was explained with interval formula as follows:

Interval (I): $100 / \text{score likert (5)}$

0 – 20% = Low/Very Weak

21 – 40% = Weak

41 – 60% = Average

61 – 80% = Good

81 – 100% = Excellent (Hamid, 2011).

In the last stage, the researcher interprets. Before that researcher must know the highest and lowest scores for questionnaire items with the following formula;

Y: Questionnaires x Likert high score x respondents

X: Questionnaires x Likert Low score x respondents

Then the researcher uses the index formula that calculates, as follows:

Index formula%: $\text{Total score} / Y \times 100$ (Hamid, 2011).

F. Data Analysis

To analyze the data, the researcher uses descriptive qualitative to analyze data. There are three activities to analyze data in descriptive qualitative research. Those activities are data reduction, data display, and conclusion drawing/verification (Sugiyono, 2008). Based on those statements, the researcher divides the activity in analyzing data into three activities, they are data reduction, data display, and conclusion drawing. Data processing is done through three activities which happened in the same time as following :

1. Data Reduction

Data reduction means the process of selecting, identifying, classifying and coding the data that are considered important (Sugiyono, 2008). In conducting research, the researcher will get much data. Hence, the researcher must select data that will give valuable information in research. Thus, at first the researcher has to do reduction to analyze the data. Based on the concept of data reduction, reducing the data in this researcher is chosen by identifying learning strategy used, situation, activities, and also student's reaction.

- a. For observation, The researcher collected and summarized the data from observation of learning process of CALL class. Then, the researcher reduced the unnecessary data that did not relate to this research. After throwing the unnecessary data, the researcher collected the data that related to this research.
- b. For questionnaire, The researcher gave the questionnaire to all students in the CALL class, while the number of questionnaires was 21 questions related to Technological Pedagogical Content Knowledge. Then, the researcher calculates all students' answers based on formulas and makes the frequency of the answers to these questions.

2. Data Display

Data display means the process to simply the data in the form of narrative. Data display refers to show data that have been reduced in the

form of patterns (Sugiyono, 2008). It benefits to help the researcher in understanding the data.

In displaying data, the researcher describes data that have been reduced into sentence form. In qualitative research, the most frequent form of display data is narrative text (Sugiyono, 2008). Hence, the researcher arranges the data in good sequence of narrative text in order to be easier to understand.

- a. For observation, the researcher will display the data that has been found and make the data in a descriptive form so that it can be more easily and can also be identified significantly.
- b. For the questionnaire, the researcher will also display the results of the questionnaire that has been filled out to find out the frequency of answers and to find out the results of their Technological Pedagogical Content Knowledge development, the appearance of this data is based on the formulas that are in collecting data.

3. Drawing Conclusion

For the last process is conclusion and verification. In qualitative research, the characteristic of conclusion is temporary. It can change if the researcher doesn't discover strong evidence to support the next collecting data. However, if the conclusion in the previous data can be evidenced by validity and consistency when the researcher is going back

to the field, so the conclusion is credible. In this research, the researcher makes conclusion from the data display (Sugiyono, 2008).

In short, the steps in analyzing the data are: The researcher collects the data through Observation and questionnaire. Then, the researcher selects, identify, and focuses on the data by referring to formulation of the research problem. After reducing the data, the researcher displays those data into good sentences. After displaying data, the conclusion is drawn. This questionnaire is analyzed by using descriptive statistics where frequency counts are tabulated and converted to percentages.