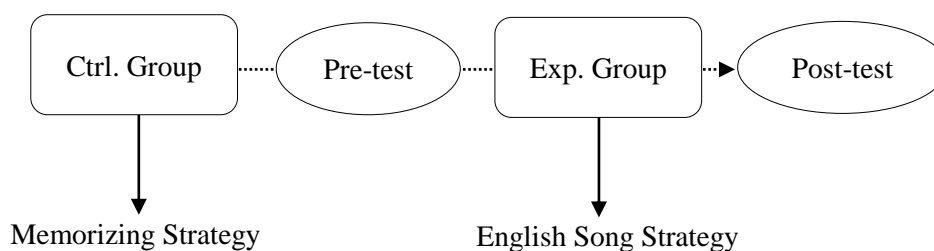# CHAPTER III

RESEARCH METHODOLOGY

This chapter will explain the research design, population, sample, research instruments, validity and reliability of the instrument, method of collection and technique of data analysis.

3.1 Research Design

This study employed an experimental research design. A class of students was given into two different types of treatments. The treatment was using conventional method to learn vocabulary, which is memorizing strategy. After that, students sat for a test using a vocabulary test to measure the effect of memorizing strategy toward students' vocabulary mastery. Then, the same group of students were given a treatment namely English songs before being sat for a post-test using the same instrument. The following stages are in this research:

Figure 3. 1 Research Design

3.2 Population and Sample

Students of SMK Muhammadiyah 2 Samarinda for the 2022/2023 Academic Year are the population of this research. Overall, this study involved 69 people, consisting of 3 classes namely Grade 10, Grade 11, and Grade 12. The number of students in Grade 10 was 32, while in Grade 11 was 26, and 11

students in Grade 12.

The simple random sampling method was used to select the sample for this study. This study was randomly assigned to students from one of the three available classes and from four different classes to participate in the research.. The selection of sample class based a simple draw. First, researcher made four paper lots in which each paper lot represented one available class. Then, researcher conducted a draw by randomly taking one paper lot. The class stated on the paper lot then selected as samples of this study, which was students from Grade 11. After that, all students in Grade 11 were again randomly selected by using the same technique, and finally, 15 students from the class were employed to the present study.

3.3 Treatment

The treatment given in this study was to use English songs to learn vocabulary. First, the researcher played an English song for students to listen to. The researcher then asked the students to identify the words from the song they had just heard. The researcher then explained the meaning, use, and form of these words. After that students were given song lyrics with several blanks and asked to complete the lyrics of the song while the researcher played the song. After that, students were asked to explain what they could learn from the lyrics of the song.

3.4 Research Instruments

In this research, the researcher used a vocabulary test adopted from Prasetia (2017). The test consists of 20 questions divided into two parts. The first part asks students to complete the part with 10 blank sentences. Each blank or item is

followed by four multiple choices. On the other hand, the second section provides English song lyric with 10 blanks. Students are required to complete the blanks while listening to the English songs.

3.5 Validity and Reliability of Research Instrument

The instrument used in the present study was adopted from Prasetia (2017), in his thesis. The vocabulary test had undergone validity and reliability checks for the instrument of the previous study, and the results show that the instrument is valid and reliable to measure students' vocabulary mastery. Therefore, there was no need to check the validity and reliability checks anymore before being used in the present study.

3.6 Data Collection Procedures

In collecting data, the researcher implemented a treatment to the students by using memorization strategy as their conventional strategy that they normally use in daily basis. After three meetings, the students sat for a test using vocabulary test. Next, students were treated by using English songs for three meetings in a row. After that, the students once again were required to sit for a vocabulary test at the end of the treatment.

3.7 Technique of Data Analysis

The researcher measured students' vocabulary proficiency by calculating their score on a given vocabulary test. In the test, the answer that is clearly hit on the one point is as follows using the rule:

$$\textbf{Vocabulary scores} = \frac{Total\ number\ of\ correct\ answer}{Total\ number\ of\ item} x\ \textbf{100}$$

Researchers used paired sample t-test to find answers to the first research question to see whether implementing the English song strategy significantly increased students' vocabulary fluency or not. The null hypothesis was tested with the results of the t-test. Experimental students got an average score on the vocabulary test compared to the control class.

The researchers compared the mean scores after the tests in the two classes to answer research question 2. They also compared the standard deviations in the two classes to find out how to measure students' distributed scores. Inferential and descriptive statistics were calculated using IBM SPSS Statistics.