CHAPTER III
RESEARCH METHODOLOGY

This following chapter, would like to discuss the method of the research which is used in this research. It covers research design, research object, research instrument, population and sample, research variable, data collection, and data analysis as follows.

3.1 Research Design

In this research, the researcher uses quantitative approach as a research design. The research design is the steps of some assumptions from the data collection. As stated by Ary et al. (2010) “design is the researcher’s plan for the study, which includes the method to be used, what data will be gathered, where, how and from whom.” Besides, Aliaga and Gunderson (2002) argue “Quantitative research is an inquiry into a social problem, explain phenomena by gathering numerical data that are analyzed using mathematically based methods e.g. in particular statistics”. It means, by using quantitative approach as a research design it can be easier to answer the research problem because the data can measured and analyzed by using the statistical procedures.

In this research, the researcher applied ex-post facto research design to discover the effect of using code mixing by watching Tetangga masa gitu program and student’s vocabulary achievement. In ex-post facto research design, the researcher cannot control the independent variable by manipulation. Meanwhile, variables that have taken place cannot be change or manipulated. Therefore, there is no control group and treatment given to independent variable or variables have occurred
naturally as in an experimental research.

3.2 Population & Sample

According to Muijs (2004) population is the group that the researcher wants to observe its findings. On the other words, a population is a group combined by several individuals with similar characteristics that can help the researcher expands of her/his finding. In this research, the population is the 4th year students in English Language Education Department (ELED) of University Muhammadiyah Malang.

After determining the population, the researcher also needs to determine the sample. As stated by Ary, “Sample is a group selected from population for observation in a study”. In other words, the sample is part of all the objects studied that represent the population taken. The sample is choosen because researcher do not allowed to examine the existing population. In this research, the sample is the 4th year students in ELED that the researcher took only 46 students who willing to be an object because they have watched the program.

3.2.1 Sampling (Purposive Random Sampling)

Sampling is a technique to determining the sample. There are two techniques for taking the sample that would be used in conducting the research namely Probability sampling and Nonprobability Sampling. According to Margono (2004), the selection of a group of subjects in purposive sampling, seen from certain characteristics that are considered to have similarities with the characteristics of the population that has been known previously.
In this research, technique nonprobability sampling with purposive random sampling is chosen. Researchers use this sampling because the characteristics of this research is already known, that is researcher wants to know which one of the sample that already done by watching *Tetangga masa gitu* and who does not watching it yet.

### 3.2 Research Instrument

In collecting the data, the researcher needed to use the research instrument. Commonly, research instrument is a tool that able to help the researcher to collect data. According to Arikunto (2002) research instrument is a tool used by the researcher in collecting data to make researcher easier in order to get a better result in complete and systematic so that the data is easy to be processed. In other words, research instrument covers all the important things that can not be missed in collecting the data.

In this research, the researcher choose the questionnaire and test as the research instruments. It seems to fit well to collect all the data. As it known, questionnaire is a list of some question that asked respondent in order to get reviews. Therefore, the researcher has defined a question in order to find out which respondent that has been watching *Tetangga masa gitu* program. In this questionnaire used close ended questionnaire because its related to the question of the research. On the other hands test is used in order to know is there any effect of using code mixing by watching *Tetangga masa gitu* program with ELED’s student vocabularies achievement. The form of tests are multiple choice and essay paper about vocabulary and code mixing that used in *Tetangga masa gitu*. 
3.3 Research Variables

This research deals with two types of variables, as follow: The independent variable is the 4th year students who has been watching Tetangga masa gitu and the dependent variable is the 4th year students that does not watching it yet.

3.4 Data Collection

Data collection method is processed to collect the data in the research. In order to get the data, the researcher used a method of data collecting as follow:

1. Determining the research subject those are the 4th year students in ELED of the University of Muhammadiyah Malang.

2. Giving a questionnaire as the technique of collecting the data to get an information about who has been watching Tetangga mas gitu and who does not watching it yet.

3. Giving a test to get more the accurate result of student’s vocabulary. The vocabulary test were taken from the code mixing of Tetangga masa gitu program and by adopted and modified from the “Word Power” book by LA Hill.

4. Collecting the result from the questionnaire and test.

Then the researcher analyzes the result of using code mixing of Tetangga masa gitu and student’s vocabulary achievement. From this analysis, it can be concluded whether by using code mixing of Tetangga masa gitu have an effect or not on student’s vocabulary achievement.
3.5 Data Analysis

After the data collection process was done, the researcher analyzed the data by using T-test (Independent sample t-test) in order to know the degree of effect in using code mixing of watching *Tetangga masa gitu* with student’s vocabulary achievement through an application named SPSS ver. 21. Independent sample t-test aims to compare the average of two groups that are not paired or not related to each other. It means, the research conducted for two different sample and subjects. This test also used for examine the effect of independent variable on the dependent variable.

The formula of mean is as follow:

\[
 t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}
\]

Note:  
- \( t \) = coefficient t  
- \( \bar{x} \) = mean of each sample  
- \( n \) = number of cases in each sample  
- \( \sum x^2 = \) is number of deviation \( x^2 \)  

(Yusnaini, Y. 2014. Bab III Metode Penelitian. Taken from: https://scholar.google.co.id/scholar?um=1&ie=UTF-8&lr&cites=66196570354207880099)

In this present research, the step to analyze the data described as below:

1. Defining the differences with T-test;
2. Showing the differences result;
3. Interpreting the statistic product define the result of data significance;
Ho : there is no the difference in using code mixing by watching *Tetangga Masa Gitu* with the student’s vocabulary achievement in 4th ELED’S students.

Ha : there is the difference in using code mixing by watching *Tetangga Masa Gitu* with the student’s vocabulary achievement in 4th ELED’S students.

4. Defining the conclusion from data analysis process.