CHAPTER III
RESEARCH METHOD

Following the previous chapter, this chapter will continue the progress of conducting the study. In this chapter, the writer would like to explain research design, research population and sample, research setting, research instrument, validity and reliability, procedures of data collection, and data analysis. Each section is explained in the following.

3.1 Research Design

As the topic indicates the correlation between students’ participation in ILF and students’ speaking achievement, the aim of this study is to find out the magnitude of relationship between the two variables. The variables of this study are students' participation in ILF, as independent variable, and students' speaking achievement, as dependent variable. Therefore, the writer chooses correlation research as the design of this study.

Correlation depends on statistical principles and analysis in measuring the degree of relationship between the two variables. According to Arora and Mahankale (2013: 61):

“Correlation studies are concerned with determining the extent of relationship between variables, they enable one to measure the extent to which variations in one variable are associated with variations in determined through the use of the coefficient of correlation”.

In addition, Creswell (2012: 338) states that correlation design provides an opportunity to predict scores and to explain the relationship among variables.

Moreover, because this study uses correlation, quantitative is automatically used as the approach in this study. Aliaga and Gunderson (2002)
state that quantitative research explain the phenomena by collecting numerical data which are analyzed using mathematically based methods (in particular statistics). In this study, the writer used a formula namely Pearson Product Moment. The writer used Pearson Product Moment because the formula is known to find out and prove the hypothesis between the two variables if the data of both variables are in the form of interval and ratio, and the source of the data from the two variables are same.

According to Hasan (1999: 35), Pearson Product Moment which was developed by Karl Pearson is used to correlate two or more variables based on its correlation coefficient value. It is beneficial to find out the significance of the correlation between those variables, that is variable X (independent variable) and variable Y (dependant variable). The correlation coefficient which usually represented by $r$ is index indicating both the positive or negative direction of the correlation and the magnitude of the relationship between variables. The range of correlation coefficient starts from -1.00 to +1.00. The positive numbers is used to identify a positive relationship while negative numbers is used to identify a negative relationship.

If the value of one variable increases or decreases, then the other value of the variables also increases or decreases, then the correlation of two variables is positive. On the contrary, if the increasing value of one variable affect on decreasing value of the other variable or vice versa, then the correlation of two variables is negative. Yet, if one variable is change while the other variable is constant, it is called zero correlation. The correlation indicates the strength of the
correlation between the variables. The following table can be used to determine the strength of a relationship:

<table>
<thead>
<tr>
<th>Correlation Coefficient (r)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,00 ─ 0,20</td>
<td>Very weak</td>
</tr>
<tr>
<td>0,21 ─ 0,40</td>
<td>Weak</td>
</tr>
<tr>
<td>0,41 ─ 0,70</td>
<td>Moderate</td>
</tr>
<tr>
<td>0,71 ─ 0,90</td>
<td>Strong</td>
</tr>
<tr>
<td>0,91 ─ 1,00</td>
<td>Very strong</td>
</tr>
</tbody>
</table>

(Interpreted based on Sugiyono, 2007: p.231)

From the explanation above, the writer concludes that the purpose of a correlational research is to identify the magnitude of relationship between two or more variables. This design is useful to find out the significance correlation between students’ participation in ILF and students’ speaking achievement. The independent variable of this study cannot be directly manipulated by the writer because there is no treatment given and no control group as in experimental research since the independent variable occurs naturally.

3.2 Research Population and Sample

According to Ary, Jacobs, and Sorensen (2006: 148), population is all members of any well-defined class of people, events, or objects. The population of this study is members and ex-members of ILF, while the sample of this study is
the students of English Language Education Department of UMM. The writer uses a purposive sampling to choose the participant of the research. Purposive sampling is a non-representative participant of some larger population and is constructed to serve a very specific need and purpose. Therefore, the writer only chooses ELED students from any semester who join in ELF, because ELED students have speaking class until they are in the 4th semester.

3.3 Research Setting

This research will be conducted in University of Muhammadiyah Malang. The writer chooses ILF as the Students Activity Units which will be analyze. ILF is chosen based on the consideration that ILF is one of the most active English club in UMM which includes some activities with speaking background such as debate, public speaking, discussion, etc. which is considered to be able to provide the data needed. The participants of this study are members of ILF from ELED. However, because currently there are only 20 members of ILF and not all of them are from ELED, the writer assumes it is not enough to gain valid result. Therefore, the writer will also use ex-members of ILF from ELED as the participant.

3.4 Research Instrument

According to Arikunto (2000: 234), instrument is a tool used in collecting the data for the research. Thus, the writer uses the instrument to complete all data needed in this study. Two instruments are used to collect the research data; documentation and questionnaire.
3.4.1 Documentation

According to Burns (1999: 140), documents have a wide range for research focus which can be used by the researchers, such as students’ portfolios of written work, student records and profiles, lesson plans, classroom materials, letters, class memos and newsletters, and previous test or examination papers. Moreover, Arikunto (2000: 234) states that documentation is a technique in collecting the data about variables in the forms of notes, scores, books, newspaper, magazine, etc. There is one kind of document from which of the data of this study were elicited. The document dealt with the result of speaking score of students. The writer used students’ transcript as the document to be analyzed.

3.4.2 Questionnaire

Questionnaire was used to investigate students' perspective whether or not they can have better achievement by participating in ILF. According to Cohen et. al. (2007: 317), questionnaire is a useful instrument for collecting survey information transformed into numerical data. In this study, the writer decided to use closed question for collecting the data. The questionnaire that was used in this study had been composed based on questionnaire which provided by Kharimah (2014). The questionnaire consisted of two sections; 3 multiple choices items and 10 likert scale items. In multiple choices section, the questions was provided four answers that were divided into A (4 points), B (3 points), C (2 Points), and D (1 Point). For the likert scale section, the questions was also provided four answers namely SD (strongly disagree - 1 point), DA (disagree - 2 points), AG (agree - 3 points), and SA (strongly agree - 4 points). Furthermore, the questionnaire is
written in English because of the respondents were ELED students and considered understand the question even in English. Then, the writer believed this questionnaire was appropriate to respondents.

3.4.3 Validity and Reliability

Validity and reliability are two concepts that are important for defining and measuring bias and distortion in this study. The writer needs validity and reliability to check the quality of instrument which was choses and made before it is distributed to the participants. According to Ari et al. (2010: 211), validity test is a process of checking the level of instrument, whether or not it really measures the construct of interest. Moreover, Fraenkel et al. (1993, 139) stated that “validity is aiming to the appropriateness, correctness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect.” Based on the idea, the writer concluded that validity is a process of examining the degree of correctness and accuracy of the instrument, whether or not the measuring instrument is truly measures what it is supposed to measure.

According to Lefrancois (2000: 501-503), there are four types of validity. Those are; face validity, content validity, construct validity, and criterion-related validity. In this study, the writer used expert validity which also called as face validity before applying the instrument (questionnaire list) to collect the data. In addition, Salkind (2007: 339) stated that, ‘Face validity is a judgment of tests or test items via a sample judged by an expert to thoroughly represent the universe of such questions’. The face validity in this study is done by lecturers as the expert, thus the writer asked help to lecturers to check whether or not the questionnaire
list are appropriate and reasonable to be used. Moreover, the questionnaire which is used in this study is adapt from Kharimah’s thesis in 2014, then in order to strengthen the instrument, the writer conducted a pilot study by modifying the instrument based on advices from some individuals who evaluate the instrument. The writer conducted a pilot study on August 18, 2017 until August 28, 2017. Thereby, the questionnaire list was valid and reasonable to distribute to the participants.

In addition, the writer also uses students’ transcript as the instrument for collecting data. The writer assumes that students’ transcript is a valid instrument because the scores in students’ transcript are issued by lecturer, also it is printed by ELED office and signed by academic advisors.

Another point which is crucial and necessary in checking the instruments is reliability. Reliability is the consistency of the scores obtained, how consistent they are for each individual from one administration of an instrument to another and from one set of items to another (Fraenkel, 1993: 146). In addition, according to Creswell (2012), “reliability is the scores from an instrument are stable and consistent.” In other words, reliability refers to the extent to which assessments are consistent. An instrument claimed reliable if it could produce credible data and measure consistently. Reliability of an instrument is associated with its validity because an instrument cannot be valid unless it is reliable. In this case, the writer made the questionnaire list reliable by computing it into SPSS Statistics 21. Besides, the instruments had through the process of pilot study and checked by the expert.
3.5 Procedures of Data Collection

The writer conducts preliminary research before going to the main research. Preliminary research is attempted to obtain information about the ILF activities, amount of active members (see appendix I), etc. In the preliminary research, the writer meets the general manager of ILF and asking about all information needed related to ILF. The obtained data from preliminary research is used to set up the action of the research. The first step to collect the data is choosing the participants. The participants of this study are ILF members from ELED. The next step is choosing the instrument. The writer used documentation and questionnaire to obtain the data. The detail procedures of collecting the data are explained as below:

1. The writer prepared what kind of questionnaire that she will distribute to the participants.
2. The writer gave the participants detailed instructions and they were told that they could ask questions in the process if there was anything they did not understand.
3. The writer distributed the questionnaire to the participants.
4. Writer took the questionnaire back to analyze.
5. Collecting the photocopy of participants’ transcript as the document before being analyzed.
6. Lastly, the writer checked and analyzed the correlation coefficient results of the questionnaire and documents that have been collected.
3.6 Data Analysis

The next step after the writer collected the data was analyzing the data. This study used a quantitative design. The writer analyzed the data that were collected by using questionnaire and documentation. The analysis was done by the following procedures:

1. Sorting out the data needed after collecting the data. The main data is students’ speaking score from students’ transcript.
2. Calculating the mean of students’ speaking score and the mean of students’ questionnaire score with the following formula:

\[
\bar{x} = \frac{\sum X}{N}
\]

(Adopted from Ary et al., 2006)

Where:
- \( x \) = Mean
- \( \Sigma \) = Sum of
- \( X \) = Raw score
- \( N \) = Number of cases

3. Calculating the correlation coefficient of students’ questionnaire score and students’ speaking score by using Pearson Product Moment formula to find out the correlation significant between student participation in ILF and student speaking achievement. The symbol X represent participants questions answer, and symbol Y represent participants average speaking score after. The formula as follows:
\[ r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \]

*(Arikunto, 2002: 274)*

Where:

\( r \) = correlation coefficient of variable \( X \) and \( Y \)

\( X \) = mean score of questions answer for each participant

\( Y \) = mean score of students’ speaking achievement after join in ILF

\( n \) = the total of respondents

The above formula is very important in finding out whether or not the hypothesis \((H_0)\) or \((H_a)\) is accepted in this research. The computation result will indicate whether or not there is a positive significant correlation between the two variables. Then, from the result of the \( r \) computation (\( r \) observation), it is classified as the perfect positive relationship (+1.00), no relationship (0), or the perfect negative relationship (-1.00).

4. Using Statistical Package of Social Science 21 (SPSS) to compute the data gained in this study.

5. Drawing conclusion based on analyzing data.

To sum up, this chapter has already discussed research design, research population and sample, research setting, research instrument, validity and reliability, procedures of data collection, and data analysis used in this present
study. Next, chapter IV will answer the research problem that writer stated in chapter I. The answer of research problem will be summarized in research finding and discussion.