

## **CHAPTER III**

### **METHODOLOGY OF RESEARCH**

This chapter provided information about the methodology of the research that the researcher applied in this study, they were researching design and variables, location and duration, population and sample, instrument of the researcher and procedures of the data analysis.

#### **A. Research Design**

The type of research that be used is a creational associative research type. This study aims to determine whether or not there is a relationship between two or more variables, Sugiyono. The relationship used in this study is a causal relationship. A casual relationship is a causal relationship, which consists of independent variables (influenced variables) and dependent (influenced variables) according to Sugiyono. This study aims to determine the influence of variables, namely variable (X) the effect of the use raung guru application and variable (Y) students' learning English achievement.

#### **B. Location and Duration of the Research**

In the implementation of the study, the researcher directly goes localized studies to obtain data by asking permission to the Head master. Study site is a place where a study was carried out. The location of this of research was taken in SMPN 1 Pinrang and this research will spend 45 days.

### C. Variable of Research

The research variable is the object of research or the concern of a study. According to Suryabrata, variables are everything that will be the object of research observation. Research variables are often expressed as factors that play a role in the events to be studied. An independent variable is a variable which if at one time coincides with another variable, the other variables will be able to change their diversity. While the variable that changes due to the influence of the independent variable is called the dependent variable.<sup>1</sup>

1. The independent variable is a predictor variable, a variable that can affect changes in the dependent variable and has a positive and negative relationship. The independent variable in this study was "the use of the Ruan guru application".
2. The dependent variable is the main concern (as a valid factor in the observation) and at the same time becomes the target of the research. The dependent variable in this study is "students' English Learning Achievement".

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<sup>1</sup>Suryabrata, *Metodologi Penelitian*, (Jakarta: Raja Grafindo Persada, 2003), P. 25

## D. Population and Sample

### 1. Population

Population is the entire research object.<sup>2</sup> In this research the population would be students class ninth in SMPN 1 Pinrang, the number of population is 403 students.

### 2. Sample

In this study the sampling technique used was purposive sampling technique. According to Sugiyono that: "purposive sampling is a technique of sampling data sources with certain considerations."<sup>3</sup> The reason for using purposive sampling technique is because not all samples have criteria that match the phenomenon under study. Therefore, the authors chose a purposive sampling technique which establishes certain considerations or criteria that must be met by the samples used in this study. In this study, the samples were students of SMPN 1 Pinrang who met certain criteria. The sample criteria in this study are:

1. Students of class IX at SMPN 1 Pinrang
2. Students of class IX at SMPN 1 Pinrang who use the ruang guru application.

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<sup>2</sup>Arikunto, *Prosedurpenelitian*, (Jakarta: RinekaCipta, 1995),p.198

<sup>3</sup>Sugiono. *MetodePenelitianPendidikanKuantitatifKualitatif*. Cet. 22, Bandung:Alfabeta.

**Table 3.1.**  
**Purposive Sampling**

No	Sample criteria	Number
1.	Students of class IX at SMPN 1 Pinrang	403
2.	Students of class IX at SMPN 1 Pinrang who use the ruang guru application..	45
	The number of research samples	45

Based on the sampling criteria as mentioned above, the number of samples used in this study was 45 students.

The following is a list of the number of students who will be used as research samples:

**Table 3.2. Sample**

No	List of classes IX	Total
1.	IX.1	3
2.	IX.2	4
3.	IX.3	5
4.	IX.4	4
5.	IX.5	6

No	List of classes IX	Total
6.	IX.6	3
7.	IX.7	3
8.	IX.8	-
9.	IX.9	4
10.	IX.10	3
11.	IX.11	2
12.	IX.12	4
13.	IX.13	4
	Total	45

#### E. Instrument of the Research

Research instruments facilities used by researchers in collecting research data so that their work becomes easier and better, in the sense that it is more accurate, complete, systematic so that it is easier to process. The research instrument according to Sugiyono is a tool used to measure observed natural and social phenomena. From this understanding, it can be understood that the instrument is a tool used by researchers in using systematic and easier data collection methods. Research instruments occupy a very important position in terms of how and what to do to obtain data in the field. The instrument used in the study, namely:

## 1. Questionnaire

The questionnaire instrument is the main instrument in this study. Considering that research data is an important aspect in research, the instrument or tool used to measure must be reliable. A research instrument is a tool or facility used by researchers in collecting data so that their work is easier and the results are better, in a more accurate, complete, and systematic sense so that it is more accurate and easy to process.

From the above explanation, it can be concluded that in this study, a questionnaire trial was used which was expected as a research measurement tool used to reach the truth or approach the truth. So that from this questionnaire it is hoped that the main data related to the research problem can be solved. The collection techniques and instruments in this study will use a Liker Scale. In answering this Liker Scale, the respondent only gave a sign, for example, the checklist he chose was by the question.

## 2. Documentation

The last, to get the data of this research, he writer used documentation technique. The researcher captures some screenshots of the result of the questionnaires. The documentation technique of this research is used as a complement to the questionnaire an interview data that had been conducted.

## **F. Data Collection Techniques**

The data collection technique used in this study was as follows :

### **1. Questionnaire**

The questionnaire is a data collection technique that is carried out by giving a set of written questions to the respondent to answer, which can be given in person or by post or the internet. There are two types of questionnaires, namely closed and open. The questionnaire used in this case is a closed questionnaire, which is a questionnaire that has provided the answer so that the respondent only needs to choose and answer directly.

## **G. Technique of Data Analyzing**

To process the data in this study, the authors took the following steps:

### **1. Processing data**

#### **a. Editing**

In analyzing the data, the first thing to do is editing at this stage to check the filling of the questionnaire, each questionnaire must be examined one by one regarding the completeness, clarity and correctness of filling out the questionnaire in order to avoid

mistakes, errors in determining information so that accurate data can be obtained

b. Tabulating

After each indicator, all the data is tabulated in a table for later calculation.

c. Scoring Techniques

Questionnaire is one of supporting techniques that researcher aims to identify students' feel, opinion, problem, and their situation on process learning English. In this test, the form of questionnaire closes with the alternative answer that will be chosen by the students. Students will choose only the best answers which are suitable to themselves. Questionnaire consists of 10 questions that need to be answered honestly and transparently by the students. In analyzing the students' response, the writer uses formula.

**Table 3.3. Tabel Scale Likert**

POSITIVE STATEMENT		NEGATIVE STATEMENT	
Category	Score	Category	Score
Strongly Agree (SA)	5	Strongly Agree (SA)	1
Agree (A)	4	Agree (A)	2
Neutral (N)	3	Neutral (N)	3



POSITIVE STATEMENT		NEGATIVE STATEMENT	
Category	Score	Category	Score
Disagree (D)	2	Disagree (D)	4
Strongly disagree (SD)	1	Strongly disagree (SD)	5

## 2. Correlation test

What is meant in this study is the variable X, namely the use of the Ruang guru application using a questionnaire or questionnaire and for the Y variable is the student's English learning achievement obtained from the student report cards. To find the point of correlation between the X and Y variables, the writer uses the "r" Product moment formula to determine whether the relationship between the research variables is positive (close), sufficient, or weak.

According to Anas Sudijono, Product moment correlation is a technique to find the correlation between two variables, and is called Product moment correlation because the correlation coefficient is obtained by looking for the product of the moments of the correlated variables.

Pearson Product Moment correlation formula (Arikunto)

$$r_{xy} = \frac{n \sum XY - (\sum X) (\sum Y)}{(nX^2 - (\sum Y^2) (n \sum Y^2 - (\sum Y)^2)}$$

Information :

$r_{xy}$ : The correlation coefficient between x and y

N: Number of subjects

X: Score the item

Y: Total score

$\Sigma X$ : Total item score

$\Sigma Y$ : Total total score

$\Sigma X^2$ : Sum of squares of item score

$\Sigma Y^2$ : Sum of squares of total score

After obtaining the percentage results and questionnaires distributed to students, then to determine the category of assessment and the results of the research, the authors formulate as follows:

Table 3.4

## Index Product Moment Correlation

Large "r" Product Moment ( $r_{xy}$ )	Interpretation
<b>0,00-0,20</b>	There is indeed a correlation between the X variable and the Y variable, but it is very weak or very low so that the correlation is ignored (it is assumed that there is no correlation between the X variable and the Y variable).
<b>0,20-0,40</b>	Between variable X and variable Y there is a weak correlation.
<b>0,40-0,70</b>	Between variable X and variable Y there is a moderate or sufficient correlation.
<b>0,70-0,90</b>	Between variable X and variable Y there is a strong or high correlation
<b>0,90-1,00</b>	Between variable X and variable Y there is a very high correlation

