

CHAPTER III

RESEARCH METHOD

A. Research Design

1. Method

This research used quantitative research methods. Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.

According to (Ghanad, 2023), quantitative research aims to quantify the data and generalize findings from a sample of a study from varied perspectives. It requires collecting data, analyzing, and interpreting quantifiable data to prove the hypothesis produced in a specific study.

2. Design

This research will use true experimental research which is post test only control group design. This type of design will only use post-test.

According to (Ghanad, 2023), experimental research comprises of a hypothesis and variable, which can be measured, calculated, and compared in a controlled environment. The purpose of

experimental research is to discover a correlation and relationship between the dependent variable and independent variable.

Based on (Hardani et al., 2020), states that there are several types of experimental design that can be used in research; Pre-experimental Design, True Experimental Design, Factorial Design, and Quasi Experimental Design.

In true experimental design, researchers can control all external variables that affect the experiment. The main characteristic of a true experiment is that the samples used for the experiment and as a control group are taken randomly from a certain population. So the characteristic is that there is a control group and the samples are selected randomly.

There are 2 types of true experimental design; Posttest Only Control design and Pretest Group design. This research will use Posttest Only Control Group design.

There are some steps for this research design:

- a. Choose the control group and the experimental group by randomly selecting classes with the same number of students (R).
- b. Giving a Treatment (X) to Experimental Class by using Charades Game in order to increasing students' vocabulary mastery. Control Class who doesn't accept the Treatment will be teach vocabulary in normal way.

- c. Final testing by using Post-test O on Control and Experimental Class in order to know “Does using ‘Charades Game’ give significant effect on Students’ Vocabulary Mastery at SMP N 12 Padang?”

To make it simple, this is the concepts of the design of the research:

Control Class	R	-	O1
Experiment Class	R	X	O2

Table 3. 1 Concept of Research Design

Description:

R : Class choose randomly

O1 : Post Test on Control Class

O2 : Post-Test on Experimental Class

X : Treatment using Charades Game

B. Population and Sample

1. Population

Population of this research was students from SMP Negeri 12 Padang in the seventh grade on 2024/2025 year academic. The total population was 305 students.

The table below shows all the populations in this research at SMP N 12 Padang.

No.	Class	Total
1	VII.1	35 students
2	VII.2	34 students
3	VII.3	33 students
4	VII.4	34 students
5	VII.5	34 students
6	VII.6	34 students
7	VII.7	33 students
8	VII.8	34 students
9	VII.9	34 students
Total		305 students

Table 3. 2 Population

2. Sample

For the sample, as described above, researcher took 68 students as sample and divided as 34 students for control class in VII.6 and 34 students for experiment class in VII.9.

No.	Class		Total
1	Control Class	VII.6	34 students
2	Experimental Class	VII.9	34 students

Table 3. 3 Samples

Moreover, the researcher choose seventh grade because vocabulary mastery is important as foundation to higher levels skills in English subject.

C. Research Variable

According to (Hardani et al., 2020), the dependent variable is a variable that according to the researcher will be influenced by other variables in an experiment, while the independent variable is a variable that according to the researcher will influence the dependent variable in an experiment.

The independent variable of this research is the used of charades game. The dependent variable of this research is students' vocabulary mastery

D. Technic of Data Collection

Research instrument will be a device used by researcher while collecting data to make the research becomes easier and to get better result, complete, and systematic in order to make the data easy to be process. In this research the researcher used a test to get the data about vocabulary mastery with the topics about "Physical Appearance and Personality" based on module of Kurikulum Merdeka at SMP Negeri 12 Padang. The vocabulary will be use in this moment such as; beautiful, handsome, black hair, thin, fat, tall, short, old, young, moustache, beard, wavy hair, curly hair, patient, hasty, rude, polite, etc.

The instrument of post-test conducted of total 30 questions which contain 10 matching test, 10 fill in test, and 10 completion test.

The data were collected by using post-test to both of the classes (experimental and controll class) after giving a treatment. The treatment by

using Charades Game only give to the experimental class, but for controll class, they will receive conventional method that usually used by the teachers.

After giving both classes post-test, researcher compare the result of post-test by both classes in order to know “Does using ‘Charades Game’ give significant effect on Students’ Vocabulary Mastery at SMP N 12 Padang?”

E. Technic Analysis Data

1. Pre-requisite test

a. Normality Test

Normality testing is conducted to determine whether the gotten data is normal distribution or not. The computation of normality testing in this research using IBM SPSS 30. Normality test in this study use Kolmogorov Smirnov statistical test by the value of significance (α) = 0.050 because the respondent is 34, which is more than 30 ($n > 30$), and with the rules as below:

- 1) If the value significance (α) > 0.05, means the data is normal distributed.
- 2) If the value significance (α) < 0.05, means the data is not normal distributed.

b. Homogeneity Test

Homogeneity test is carried out in order to determine whether or not the gotten data has a homogeneous variance. The

computation of homogeneity testing using IBM SPSS 29 is Test of Homogeneity of Variances by the value significance (α) = 0.05 with the rules as follow:

- 1) If value significance > 0.05, means the data is homogeny
- 2) If value significance < 0.05, means the data is not homogeny.

2. Data Analysis

The researcher will analyze the data were collected by using procedures follows:

- a. Analyzing the post-test raw data of the correct answers from the students got 1, and the wrong answer got 0.
- b. Using the following formula to translate the raw scores to a maximum score of 100.

$$Score = \frac{\text{the total students correct answers}}{\text{the total of items}} \times 100$$

- c. Converting the students' achievement into values.
- d. Classify the student score into the score category below.

The students' test scores in post-test will classified into the following score based on H. Douglas Brown in Fitri (2021)

1	90-100	Excellent
2	80-89	Good
3	70-79	Adequate
4	60-69	Inadequate/unsatisfactory
5	Below 60	Failing/unacceptable

Table 3. 4 Classification of Interval Score

The resercher using IBM SPSS Statistic 30 to evaluate data in windows, analyze the mean score, standard deviation, frequency table, and t-test between the result of the mean score of students in the experimental class and controll class. T-test will be use in order to test the hypothesis.

UIN IMAM BONJOL
PADANG