CHAPTER III
RESEARCH METHOD

A. Research Design

In this reseach, the researcher applied quasi experimental pretest and posttest design. Creswell (2012) states that quasi experiments include assignment, but not random assignment of participants to groups. We could apply the pretest and posttest design approach to a quasi-experimental design. The researcher assigned intact groups the experimental and control treatments, administers a pretest to both groups, conducted experimental treatment activities with the experimental group only, and then administers a posttest to assess the differences between the two groups. The research design can be presented as follows:

Table 3. Research Design

Select Control Group	Pretest	No Treatment	Posttest
Select Experimental Group	Pretest	Experimental Treatment	Posttest

Based on the table above, the researcher chose two classes as the sample of this research that consists of experimental class and control class. The experimental class is taught by using charades game as a treatment whereas in the control class is taught by using teacher's method. In this research, the students are given pretest to both classes before the treatment to know the students' mastery in vocabulary. Then the posttest is given to know their vocabulary after the treatment is done by using riddle game for experimental class and by using teacher's method for control class. The researcher also conducts this post test for control class and experimental class.

B. Variable of Research

Variable is anything that can take on different values Donald Ary, *et.al.*, (2010). It is various indications that become research object (center of the research) Arikunto (2010). Two kinds of variable are independent (affecting another variable) and dependent (affected by another variable) variables. The researcher takes two variables in this research. The variables is charades game

as Independent variable and the students' vocabulary mastery as Dependent variable.

C. **Population, Sample and Sampling Technique**

1. Population

The larger group to which one hopes to apply the results is called the population. The population of this research will be all the students at the fifth grade elementary school N 4 Sendang Agung in academic year 2021/2022.

2. Sample

Fraenkel and Wallen state that sample in a research study is the group on which in-formation is obtained. [1] It means that sample is part of individual members which is chosen to represent of the whole population. In this research, the researcher will take two classes as the sample of the research. They will be one class as control class and one class as experimental class.

3. Sampling Technique

In this research, the researcher will use cluster random sampling. Fraenkel and Wallen state that the selection of groups, or clusters, of subjects rather than individuals is known as cluster random sampling. Here are the steps of taking sample by using cluster random sampling technique:

1. First, the name of each class will be written in small pieces of paper.
2. Then, these pieces of paper will be rolled and put into a box.
3. After that, the box will be shaken until one of the rolled-paper out of the box. It will be done twice since the sample consisted of two classes.
4. And then, the researcher will take two pieces of the rolled-paper. The first class (VA) will be an experimental class and the second (VB) class will be a control class.

D. Data Collecting Technique

In collecting the data, the researcher used tests. They are Pre-test and Post- test as described below:

1. Pre-test, it is done to know the students' vocabulary before the treatment. The test is multiple choice, the students are given 30 multiple choice.

2. Post-test is done to know the students' vocabulary after the students are given the treatment by using charades game. The system is same with the pre-test. In this research, the control class and the experimental class have same pre- test and post-test. The result of the test is written in the scoring column on the paper.

E. Research Instrument

The research instrument is a device used by the researcher during the data collecting by which the work is easier as the data were complete and systematic. In this research, the researcher uses a test to get the data about vocabulary mastery. Test is vocabulary test based on their material on the textbook. The researcher provides 30 questions vocabulary that related on noun and verb (*see Appendix*). In this research, the researcher uses expert judgment to measure that the test have been good validity or not. The researcher asks the English teacher at elementary school N 4 Sendang Agung to measure the validity of the test based on the aspects which will be measured.

F. Research Procedures

There will be some steps done by the researcher to apply the research procedures well. The steps will be as follows:

1. Determining the subject

    The researcher will determine the subject. In this case the researcher will choose the students at the fifth grade of SDN 4 Sendang Agung in academic year of 2020/ 2021.

2. Determining the instruments of the research

    The researcher will determine the instruments that will be taught to students. The instrument will be a written test. The students will get the same instrument for both classes of experimental and control class.

3. Conducting treatment

    The researcher will give the treatment in three meetings. In the treatment, the researcher as the teacher will teach the students by using charades game.

4. Administrating the post-test

    The researcher will conduct the post-test after the treatment. By

give the post-test, the researcher wants to know whether the students can improve their vocabulary mastery or not through the treatment that will be done. The test will on receptive and productive vocabulary.

5. Analyzing the result of post test

In analyzing the result, the researcher will compare the result of post-test between experimental class and control class to know whether the post- test score of experimental class is higher than control class or not.

F. Validity

Fraenkel and Wallen say that validity refers to the appropriateness, meaningfulness, correctness, and usefulness of the inference a researcher makes. Based on the statement, validity is the most important idea to consider in preparing or selecting an instrument for use. A test can be said valid if the test measures the object to be measured and suitable with the criteria. There are some criteria of good validity as follows:

1. Content validity

Best and Kahn state content validity refers to the degree to which the test actually measures, or is specifically related to, the traits for which it is designed.

Content validity is based upon careful examination of course textbooks, syllabi, objectives, and the judgments of subject matter specialists". In this research, the researcher will suit the material with the syllabi of English for the fifth grade of SDN 4 Sendang Agung in 2020/2021 academic year.

2. Construct validity

Construct validity focuses on the kind of the test that is used to measure the ability. In other words, the test can measure what needs to be measured especially in vocabulary mastery. Best and Kahn state construct validity is the degree to which scores on a test can be accounted for by the explanatory constructs of a sound theory. Construct validity refers to assumption, showing the measurement use contains correct operational definite, which is based on the theoretical concept. In other words, construct validity is just like a

concept, both of the mare abstraction and generalization that need to be defined so clearly that can measured and be examined.

In this research, the researcher will administrate a multiple-choice test with the scoring of vocabulary test. By considering multiple-choice test that will be scored, the English teacher at SDN 4 Sendang Agung will help the researcher to make sure that the test is valid.

G. Reliability

Fraenkel and Wallen state that reliability refers to 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. Besides having high validity, a good test must have high reliability too.

To get the reliability of the test, the researcher will use inter-rater reliability. This inter-rater reliability will count level of the reliability based on two series of score that will be gotten from two raters more simultaneously. The inter-rater in this research will be an English teacher and the researcher. In this research, the researcher will get score from the written test and the score is hoped consistent with assessment. The researcher will ask the students to do the vocabulary test about 60 minutes. The researcher will check the students' test and compare with teacher's assessment. The statically formula for counting the inter rater reliability can use SPSS (*Statistical Program for Social Science*). The formula is as follows:

$$r = 1 - \frac{6\left(\sum D^2\right)}{N\left(N^2 - 1\right)}$$

Where:

r = Reliability

D = The differences of rank correlation

N = Number of student

Then the result was consulted to the criteria of reliability as follows:

Reliability coefficient 0.800 – 1.000 is very high

Reliability coefficient 0.600 – 0.800 is high

Reliability coefficient 0.400 – 0.600 is fair

H. Data Analysis

After collecting the data, the researcher analyzes the data by using *SPSS verse* There are two assumptions that is done, before the researcher analyzes the data by using *SPSS.*

1. Fulfillment of the assumptions as follows:

   a. Normality Test

   The researcher conducts this normality test to know whether the data has normal distribution or not. The researcher used SPSS (Statistical Program for Social Science) of version 16 to calculate the Kolmogorov-Smirnov test and the Shapiro- Wilks test. After the researcher gets conclusion that the data are normal or not, the researcher continues into the next test. It is homogeneity test. The hypothesis for the normality test are formulated as follow:

   b. Homogeneity Test

   After the researcher gets the conclusion of the normality test, the researcher conducts this homogeneity test to know whether the data are homogeneous or not. The researcher uses SPSS (Statistical Program for Social Science) of version 16 to calculate the Levene's test. The hypotheses for the homogeneity test are formulated as follows : H_0 = The variance of the data is homogenous H_a = The variance of the data is not homogenous While the criteria for the homogeneity test are as follows : H_0 is accepted if Sig. (pvalue) > $\alpha = 0.05$ H_a is accepted if Sig. (pvalue) < $\alpha = 0.05$

2. Hypothetical Test

   After the researcher knows that the data are normal and homogeneous, the data is analyzed by using t-test in order to know the significance of the treatment effect. The reseracher uses SPSS (Statistical Program for Social Science) of version 16 to calculate the independent sample t-test. The hypotheses are:

   H_0 : There is no significant affectiveness of using charades game toward students' vocabulary mastery at the fifth grade of elementary school 4 Sendang Ayu in the Academic Year of 2020/2021

Ha   : There is a significant affectiveness of using charades game toward students' vocabulary mastery at the fifth grade of elementary school 4 Sendang Ayu in the Academic Year of 2020/ 2021

While the criteria for acceptance and rejection of the hypothesis are: Ho is accepted if Sig. (pvalue) > α   = 0.05

Ha is accepted if Sig. (pvalue) < α = 0.05