**CHAPTER III**

**METHOD OF RESEARCH**

**3.1 Design of the Research**

 This research was be design by uses the quantitative method. The design of this research was experimental. The experimental group that receive treatment by using series picture, while control group was the group that receive treatment by conventionally. Both group were given pre-test and post-test. The procedures of the research shown below:

TABLE I

RESEARCH DESIGN

|  |  |  |  |
| --- | --- | --- | --- |
| Group | Pre-test | Treatment | Post test |
| Experimental | √ | Using Picture Series | √ |
| Control | √ | Without Using Picture Series | √ |

**3.2 Population and Sample**

**3.2.1 Population**

 According to Arikunto’s idea, (2010: 173) population was group of people that would be researched. The researcher states that the population of this research are five grade of Swasta Bina Agung Elementary school Academic Year 2019/2020.

**3.2.2 Sample**

 Sample was section of population that you are actually going to survey. Arikunto, (2010: 174) said that, sample was part or representative of the population that will be observed. For the number of data, Arikunto, (2010: 174) said that, if the number of population was less than 100, it was better for us to take all. So, the research can be said as the population research. Futhermore, if the number of population was more than 100, we can take between 10-15% or 20-25%. There are 39 students that research takes a sample. They are V-A as experimental group by using series picture method and V-B as control group by conventionally.

TABLE II

POPULATION AND SAMPLE

|  |  |  |
| --- | --- | --- |
| CLASS | POPULATION | SAMPLE |
| V-1 | 21 | 21 |
| V-2 | 18 | 18 |
| Total | 39 | 39 |

**3.3 The Instruments of Collecting Data**

The instruments of this research was a test of vocabulary in speaking. Where the students will be given a sheet of question paper with some picture. Then students order to said a word about the series pictures with made a simple essay. After they had finished it, the paper and checked their procedure speaking in utterance vocabulary. So the aim of this test was to measure the student error speaking analyze the students and identified the causes of their errors in vocabulary.

**3.4 Technique of the Collecting Data**

The researcher collects the data by collecting the test. The instrument of collecting data as follows:

**3.4.1 Pre-test**

 Pre-test was conduct to find out the samples previous knowledge or beginningability students in each group whether the two groups of the samples in speaking. After that, the answer sheets collected and score by the researcher.

**3.4.2 Treatment**

 In this research, the experimental group learns by using puzzle game while the control group learns by conventionally.

**3.4.3 Post-test**

Having giving a treatment, the post-test was administered to the two groups, the aimed was to measure the student competence in speaking after the treatment. The result of this test was analyzed to evaluate the two groups.

**3.4.4 Scoring the test**

In the scoring the test, the researcher used score ranging from 0-100 by counting the correct answer and appliye this formula (Purwanto, 2008: 102)

S = Rx 100

 N

Where:

S = Score of the test

R = The number

N = The number of test item

TABLE III

THE CRITERIA OF VALUE

|  |  |
| --- | --- |
| SCORE | CRITERIA |
| 80-100 | Excellent |
| 60-80 | Good |
| 50-60 | Fairly |
| 0-40 | Poor |

**3.5 Technique of Analyzing the Data**

To find out the difference means of scores of the test between the experimental and control group, the researcher use t-test formula.

$t=\frac{Мᵪ-Мᵧ}{\sqrt{\left(\frac{X\_{1}^{2}+X\_{2}^{2}}{N\_{1} + N\_{2}-2}\right) ( \frac{1}{N\_{2}}+\frac{1}{N\_{1}})}}$ Arikunto, (2006).

Where:

t = total score

$Мᵪ$ = the mean of experimental group

$Мᵧ$ = the mean of control group

 $X\_{1}^{2}$= standard deviation of experimental group

$X\_{2}^{2}$ = standard deviation of control group

$N\_{1} $= the total sample of experimental group

$N\_{2} $= the total sample of control group