

CHAPTER III

METHOD OF RESEARCH

A. Research Design

The type of study is a field research. It meant that the study was conducted by researcher to examine whether using of Two Dimensional Aids is effective on students' achievement in vocabulary mastery at the fifth grade of SDN Kebun Bunga 6 Banjarmasin academic year 2017/2018 or not. Therefore, the researcher applied her research directly in the school.

In this research, the researcher used quantitative method is basically experimental research, because the data in the form number and analyzed statistically of study included in the quantitative research. The researcher used type of Quasi-Experimental research, based on Charles in Latif, (2016, p. 96) Quasi-Experimental research is when the researcher can only assign randomly different treatments to two different classes

Fraenkel and Wallen (2006, p.267) stated that experimental research is the most powerful research methodologies that researcher can use. Of the many types of research that might be used, experimental is the best way to establish cause-and-effect relationships among variables. Experimental research is the research which is the

researcher decides the nature of treatment; (that is, what is going to happen to the subject of the study), to whom it is to be applied, and to what extent.

The researcher carried out with two classes are control class and experiment class with pre test and post test as research tools. The pre-test and post-test to be same for experiment and control class. And the goal to solve the actual problem that faced recently and collecting data to design, explain, and analyze of the effectiveness of teaching and learning english vocabulary by using two dimesnional aids of the fifth grade students of SDN Kebun Bunga 6 Banjarmasin Academic Year 2017-2018.

B. Research Setting

The researcher took place in SDN Kebun Bunga 6 Banjarmasin to apply her research which located Jl. Ahmad Yani Km. 4,5 Komp Kelurahan Kebun Bunga Kecamatan Banjarmasin Timur. UIN Antasari. According to observation at SDN Kebun Bunga 6 Banjarmasin the total number of teacher are 22 teachers, one of them is English teacher, Miss. Lily Nur Izzati, S. Pd.

The researcher is interested in applying this research at SDN Kebun Bunga 6 Banjarmasin because she wants to know the development of teaching and learning English there, especially at the fifth grade, in which students have assumption that English is difficult and not intersting.

C. Population and Sample of the Research

1. Popluation

Population is a set (collection) of all elements possessing one or more attributes of interest (Arikunto, 1986, p. 102). The population of this research is all of the fifth grade students at SDN Kebun Bunga 6 Banjarmasin. To know more about them, it can be seen in the following table:

Table 3.1. The Students of The Fifth Grade at SDN Kebun Bunga 6 Banjarmasin

No.	Class	Total
1.	A	25
2.	B	26

Source: Administration Staff Documentary at SDN Kebun Bunga 6 Banjramasin

2. Sample

Sample is part of the population from information which collected Arikunto (1986, p.104). Sudjana (1986, p.163) stated that purposive sampling also known as sampling consideration, this sampling can be down based on individual consideration (teacher) or researcher consideration (researcher). Based on the explanation above, the researcher used purposive sampling. Arikunto (1986, p. 113)

Table 3.2. Sample of the Research

No	Classes		Total
	Control class	Experiment class	
1		VA	25
2	VB		26
Total students			51

In this research, the researcher choose the sample of the research based on the result of pre-test that done to students class V. After the researcher knowing the result of pre-test and hopefully that the result of the students ability of the test almost same. The, it decided which one of the two classes the experimental class and one class the control class. Experiment class means a class is taught by using two dimensional aids media and control is the real class. It means, for teaching and learning activities as usual.

D. Data collection procedures

1. The procedure and technique of collection data

To collect data in this research, the writer used some techniques which consist of:

- a. Observation

Observation is technique that performed by conducting observations accurately and systematically recording. This technique used to observe first-hand about:

1. The process of learning in the classroom
2. The students' achievement of vocabulary mastery
3. The condition of students in experiment class and control class

b. Test (Written Test)

Margono said that “the test is a tool which is given for someone to get answer as fundamental given score” (2007,p.170). In the research, data was analyzed using t-test, if the test percentage of t test more high than the test percentage of t table was effective. It showed that H_0 (zero hypotheses) was rejected and H_a (alternative hypotheses) was accepted. Furthermore, if test percentage of t table higher than test percentage of t test was not effective. It meant that H_0 (zero hypotheses) was accepted and H_a (alternative hypothesis) was rejected. Moreover, if the test percentage of t test same with the test percentage of t table was not effective too. It meant that H_0 (zero hypotheses) was accepted and H_a (alternative hypotheses) is rejected too.

1) Pre-test

Before start teaching and learning vocabulary, the students did pre test. The researcher knew their mastery in vocabulary from the result of pre test. In pre test, the students answered there are 10 multiple choice items, 10 fill in the blank the meaning and 6 complete the dialogue.

2) Post test

After the researcher teaching and learning vocabulary, the students did post test. The researcher knew their mastery in vocabulary from the result of post test. In pos test, the students answered there are 10 multiple choice items, 10 matching the meaning and 6 complete the sentences.

The students' score will be categorized into five levels based on Anas Sudijono as follows (Sudijono, 2011, p.35)

Table 3.3 The Categorized of Score Test (Pre-Test and Post-Test)

No	Score	Category
1	80 – 100	Very High
2	66 - < 80	High
3	56 - < 66	Fair
4	46 - < 56	Low
5	0 – 46	Very low

To know the students learningEnglis vocabulary by two dimensional, the researcher used of mean gotten by formula bellow:

$$M = \frac{\Sigma x}{N}$$

M : Mean score

Σx : Accumulative score

N : Number of Respondents

This technique is aimed looking for all written reports or documents that perhaps keep any detailed documents, pictures, etc.

To know more about these data, sources of data, and the technique of data collecting, the following matrix will be helpful.

Table 3.3 Data, Source of Data and Technique of Data Collecting

No.	Data	Source of Data	Technique of Data Collecting
1.	The Primary Data		
	1.The Effectiveness of Teaching And Learning English Vocabulary By Using three Dimensional Aids Of The Third Grade Students at SDN Kebun Bunga 6 Banjarmasin Academic Year 2017/2018”	Teaching and learning process in the class and the teachers.	Observation, Test, and Documentary
	2. The response of the students regarding Two Dimensional Aids Media that is applied at the third grade students at SDN Kebun Bunga 6 Banjarmasin Academic Year 2017/2018.	Students	Observation
2.	Secondary data		
	1. Guiding book	Documents	Documentary
	2.Syllabus	The Teachers and Documents	Documentary
	3.Lesson plan	The Teachers and Documents	Documentary

E. Design of Measurement

Design of measurement intended to know effectiveness of used two dimensional aids for teaching and learning English vocabulary of the fifth students at SDN Kebun Bunga 6 Banjarmasin. Researcher used a written test before and after the research, and consisting of three types : multiple choice, matching the meaning and complete the dialogue. For multiple choice there were 10 items, each questions had

score 3 points, if the students could answer all questions correctly, they got 30 points. Then, for matching the meaning there were 10 items, each questions has 4 points, if the students answered all questions correctly, they got 40 points. And then, for complete the dialogue there were 6 items, each questions had 5 points, if the students answered all questions correctly, they got 30 points. So, if all the students answered all questions correctly the students got the highest score: 100 points and the lowest score: 0. The students' scores interpreted as their mastery in vocabulary.

F. Technique of Data Processing

1. Editing

This technique is used to the examine all of the collected data to make sure that they are already complete or not. The researcher arranged all of data systematically by following correct role in writing of research.

2. Scoring

The researcher count the scores for the students' based on the correct answer in the sheets of test. The students' scores are arranged on the table based on name of students and are complete with using category of score.

3. Tabulating

Tabulation is to create tables that contain data that has been scoring in accordance with analysis required. Result data on the table to be easy in interpretation data in this research.

4. Data interpretation

Data has been edited and scored will be interpreted by the researcher. Data result of test is interpreted by using category of score based on Anas Sudijono. The interpretation of the researcher does not change the authenticity of data that is gotten in field.

G. Data Analysis Procedure

Before all of the collected data have been reported. The researcher analyzed them descriptively and quantitatively. Then, the researcher made the conclusion by using “t” or t-test formula of Anas Sudijono (1995, p. 297-299) between the students of control class and experiment class at SDN Kebun Bunga 6 Banjarmasin do not have sample because which less than 100. So, the researcher used test “t” for two small sample. The application way to use students “t” or t-test or (t) code formula as follows: (Murdan, 2012, p.164)

1. Looking for Mean Variable I as follows the formula:

$$M_x \text{ or } M_1 = \frac{\sum x}{NI}$$

M_1 : Mean of the Control class of SDN Kebun Bunga 6 Banjarmasin

Σx : Accumulative of the total score of the Experiment class

N_1 : Number of subject of the Experiment class

2. Looking for mean Variable II as follows the formula:

$$M_y = \frac{\Sigma y}{N_1}$$

M_2 : Mean of the Control class

Σy : Accumulative of the total score of the Control class

N_1 : Number of subject of the Control class

3. Looking for standard Deviation for variable I as follows the formula:

$$SD_x \text{ or } SD_1 = \sqrt{\frac{\Sigma x^2}{(N-1)}}$$

SD_1 : Standard Derivation of the Experiment class

Σx^2 : Accumulative of the quadrat of deviation of the Experiment class

4. Looking for Standard Deviation for Variable II as follows the formula:

$$SD_y \text{ or } SD_2 = \sqrt{\frac{\Sigma y^2}{(N-1)}}$$

SD_2 : Standard Deviation of the Control class

Σy^2 : Accumulative of the quadrat of deviation of the Control class

5. Looking for Standard Error of Mean variable I as follows the formula:

$$SE M_1 = \frac{SD_1}{\sqrt{N-1}}$$

$SE M_2$: Standard Error of the Experiment class

I : Value of constant

6. Looking for students standard Error of Mean variable II as follows the formula:

$$SE M_y = \frac{SD1}{\sqrt{N-1}}$$

$SE M_2$: Standard Error of the Control class

I : Value of constant

7. Looking for Standard Error for comparative mean variable I and mean variable II as follows the formula:

$$SE_{M1-M2} = \sqrt{SE M_1^2 + SE M_2^2}$$

SE_{M1-M2} : Standard Error for comparative means of experiment class and control class

SEM_1^2 : Quadrant result of standard error of mean of the experiment class

SEM_2^2 : Quadrant result of standard error of mean of the control class

8. Looking for t, as follows the formula:

$$T \text{ test} = \frac{M_1 - M_2}{SE_{m1-m2}}$$

T : Value of t observation

9. Giving interpretation for “t” with consulting (“t” table):

- a. Looking for degree of freedom

$$Df/db = (N_1 + N_2 - 2)$$

Df/db : Degree of Freedom

N1: Number of subject of the Experiment class

N2 : Number of subject of the Control class

2: Value of Degree of Freedom for two variables

b. Consulting score of “df/db” with “t table”

T table : value of critic “t”

In significant degrees t table 5 %

In significant degrees t table 1 %

c. Making hypothesis interpretation:

H_0 (Zero hypothesis) : there is no significant difference.

H_a alternative hypotheses) : there is no significant difference.

If “ t_{test} is higher than the value of t_{table} “so H_0 is rejected, H_a is accepted

If “ t_{test} is lower than the value of t_{table} “so H_0 is accepted, H_a is rejected