

CHAPTER III

RESEARCH METHOD

A. Research Design

This research is aimed at identifying the effectiveness of homework on students' achievement in English learning. This research is a quantitative approach with experimental research. Quasi Experimental research is one regarding as the most sophisticated research method for testing a hypothesis. So, the researcher will carry out a quasi experimental research in this research.

The quasi experimental research has characteristic that the subjects of the research are not assigned to control class and experiment class randomly because the classes cannot be reorganized and schedules cannot be disrupted so it was necessary to use groups as they are already organized into classes; and pre-test and post-test are administered before and after treatment. Instead the researcher must use already assembled groups such as classes as follow:

Table 3.1 Table of Research

Class	Pre-test	Treatment	Post-test
E	Y ₁	X ₁	Y ₂
C	Y ₁	X ₂	Y ₂

Terms and symbols:

X1 : The treatment in this research is giving homework

X2 : The treatment in this research is not giving homework

Y1 : The implementation of the pre test

Y2 : The implementation of the post test

E : The experimental class. The class that will be given homework.

C : The control class. The class that will be not given homework

B. Research Setting

The location of the research is at MTs Diniyah Babussalam Banjarmasin Jl. Setia Rt. 37 Kel. Pemurus Dalam Kec. Banjarmasin Selatan Kotamadya Banjarmasin, post code 70248. The researcher chooses this place because the students have assumption that English is difficult and not interesting. This research is done on February until April 2017. English teacher in this school is only one person that teaches all of level class. There are 71 students at MTs Diniyah Babussalam Banjarmasin that consist of class VIIA, VIIB, VIII, and IX.

C. Subject and Object of the Research

1. The Subject of Research

The subjects of the research are the students class VII of MTs Diniyah Babussalam in the academic years 2016/2017. It is presented in the following table:

Table 3.2 The Subject of Research

Class	Number of students
VII A	16 students
VII B	17 students
Total	33 students

In this research, the researcher chooses class VII A as control class, and Class VII B as experiment class.

2. The Object of Research

The object of this research is the students' achievement in English learning by giving homework in experiment class and the students' achievement in English learning without giving homework in control class.

D. Research Instrument

The researcher organizes the research instrument to make organizing and analysis of the data processing easier, as follow:

1. Test

- a. Answering 15 multiple choice questions, with four alternatives for each and each question has score 4 points, if the students can answer all questions correctly, they will get score 60 points.
- b. Changing 5 sentences into other sentences and each sentence has score 8 points. if the students can answer all questions correctly, they will get score 40 points.

The highest score is 100 points and the lowest score is 0 after totaling both of them. In this research, the students pass two kinds of the test:

1) Pre-test

In pre-test, all of students class VII at MTs Diniyah Babussalam answer 20 questions. It means the researcher wants to know their achievement and knowledge about material before giving treatment.

2) Post-test

In post-test, all of students class VII at MTs Diniyah Babussalam answer the same level questions with pre-test. It means the researcher wants to know the students' achievement after giving treatment.

The researcher uses instrument of students' achievement suggested by guideline from *Dinas Pendidikan Provinsi Kalimantan Selatan* (2004:27) in classifying the score, as follow:

Table3.3 Interpretation of students' achievement.

No	Score	Category
1	95 – 100	Excellent
2	80 - < 95	Very good
3	65 - < 80	Good
4	55 - < 65	Fair
5	40 - < 55	Low
6	0 - < 40	Very low

2. Questionnaires

Questionnaire is a list of questions or statement provided to others who are willing to respond (respondents) as requested by the researcher. In this research, the researcher distributes questionnaire to the students aimed to know student respond about giving homework and this questionnaire is given only to students in experiment class because they get treatment by giving homework. Total items of the questionnaire are 10 items and using four alternatives based on the Likert's scale types. Likert's scale is used to measure attitude, opinion, perception based on the certain object or phenomena (Siregar in willy, 2017:37).

The instruments data is needed to determine the validity, reliability, and power of distinction. So it is a matter of who meets the requirements can be used to retrieve the data results of student learning.

1. Validity test

Validity is accuracy of an instrument to measure with what should be measured. It means that a valid instruments can provide an overview of the data correctly in accordance with fact or circumstance indeed. To measure the validity of each question that has been tested and it is an essay matter that used formula correlation product moment.

2. Reliability

Reliability refers to the consistency of assessment results. Reliability of test scores is typically reported by means of reliability coefficient or a standard error of measurement. (Gronlund and Keith, 2009:68)

The issue of the reliability of tests can be better understood by considering a number of factors that can contribute to their unreliability. There are four possible factors regarding fluctuations in (a) the student, (b) the scoring, (c) the test administration, and (d) the test itself. (Bachman, 1990; J.D. Brown, 2005; and Fuchs & Davidson, 2007; in H. Douglas Brown and Priyanvada Abeywickrama, 2009:27)

E. Techniques of Data Collection

To collect data in this research, the researcher uses some techniques which consist of:

a. Test

This research used pre-test to know the students' achievement and their first knowledge, and used post-test to know the students' achievement after treatment by giving homework and not giving homework. The test is used to measure the effectiveness of homework on students' achievement.

b. Questionnaire

This technique is used to get data about the students' respond to learning activities by giving homework by the Likert's scale types questionnaire. It only is given to students of experiment class.

F. Data Analysis

1. Data Analysis Procedure to the Students' Achievement

Data of students' achievement is gotten from pre-test and post-test which will be analyzed using descriptively and quantitatively. Then, the researcher makes the conclusion by using "t" or t-test formula of Anas Sudijono (Anas Sudijono, 1995: 297-299). Students class VII at MTs Diniyah Babussalam do not have sample because which less than 50. So, the researcher uses test "t" for two small sample. The application way to use students "t" or t – test or (t) code formula :

- a. Looking for Mean Variable I as follows the formula:

$$M_1 = \frac{\sum x}{N_1}$$

M_1 : mean of the experiment class of MTs Diniyah Babussalam

x : accumulative of the total score of the experiment class of MTs

Diniyah Babussalam

N_1 : number of subject of the experiment class of MTs Diniyah

Babussalam

b. Looking for Mean Variable II as follows the formula :

$$M_2 = \frac{\sum y}{N_2}$$

M_2 : mean of the control class of MTs Diniyah Babussalam

y : accumulative of the total score of the control class of MTs

Diniyah Babussalam

N_2 : number of subject of the control class of MTs Diniyah

Babussalam

c. Looking for standard deviation for variable I as follows the formula:

$$SD_1 = \sqrt{\frac{\sum (x - \bar{x})^2}{(N_1)}}$$

SD_1 : standard deviation of the experiment class of MTs Diniyah

Babussalam

$(x - \bar{x})^2$: accumulative of the quarant of deviation of the experiment
class of MTs Diniyah Babussalam

d. Looking for standard deviation for variable II as follows the formula:

$$SD_2 = \sqrt{\frac{\sum (y - \bar{y})^2}{(N_2)}}$$

SD_2 : standard deviation of the control class of MTs Diniyah

Babussalam

$(y-\bar{y})^2$: accumulative of the quarant of deviation of the control

class of MTs Diniyah Babussalam

- e. Looking for standard error of mean variable I as follows the formula:

$$SEM_1 = \frac{SD_1}{\sqrt{N_1-1}}$$

SEM_1 : standard error of mean of the experiment class of of MTs

Diniyah Babussalam.

1 : value of constant

- f. Looking for standard error of mean variable II as follows the formula:

$$SEM_2 = \frac{SD_2}{\sqrt{N_2-1}}$$

SEM_2 : standard error of mean of the control class of of MTs Diniyah

Babussalam.

1 : value of constant

- g. Looking for standard error for comparative mean variable I and mean variable II as follows the formula:

$$SE_{M1-M2} = \sqrt{SEM_1^2 + SEM_2^2}$$

SE_{M1-M2} : standard error for comparative mean of control class and
experiment class of MTs Diniyah Babussalam

SEM_1^2 : quadrant result of standard error of mean of the experiment
class of MTs Diniyah Babussalam

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

MTs Diniyah Babussalam

- h. Looking for t, as follows the formula:

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

T : Value of t observation

M₁ : Mean of the Experiment class of MTs Diniyah
Babussalam

M₂ : Mean of the Control class of MTs Diniyah Babussalam

SE_{M₁-M₂} : Standard error for comparative mean of control class and
experiment class of MTs Diniyah Babussalam.

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

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 of MTs
Diniyah Babussalam

N₂ : Number of subject of the Control class of Diniyah
Babussalam

2 : Value of Degree of Freedom for variables

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 %

Making hypotheses interpretation:

H_0 (zero hypotheses) : There is no significant difference.

H_a (alternative hypotheses) : There is significant difference.

2. Data Analysis Procedure to the Students' Respond

Analysis technique that is used to measure the students' respond to learning activities by giving homework that is the percentage technique analysis as follow:

$$P = \frac{f}{N} \times 100$$

P : Percentage

f : frequency

N : total of frequency