

CHAPTER III RESEARCH METHODOLOGY

3.1 Research Design

The research is experimental study which focused on quantitative approach. In conducting this research the writer will do treatment teaching using Electronic Dialogue Journaling through *WhatsApp* to improve the vocabulary of students. In this research there are two group that became samples. They were experimental group and control. The control have not treatment both class control group and experimental group will give pre-test and post-test. The result of the test compared to find out the different between control group and experimental group. The test is combination type of test consist of 35 items.

Table 3.1
Research design

Group	Pre-Test	Treatment	Post – Test
Experiment	X	T	Y
Control	X	-	Y

Where:

- E : Experimental Group
- C : Control Group
- T : Treatment
- X : Pre-test fo experimental Group
- Y : Post-test for control Group

This is an experimental research focused on one class. There are two variables; Independent Variable and Dependent Variable. The independent variable is a variable that is identified as a casual variable that identify as an effect, the result variable to be caused by the independent variable. In this case, the indenpent variable is Electronic Dialogue Jurnalng through WhatsApp and dependent variable is vocabulary mastery.

3.2 Location and Time of the Research

This research will be carried out at second year students of SMP 16 Pekanbaru which was located on Jl. Cempaka No. Pekabaru. The data was collected in first semester. The time was stated on Julay until Agustus 2017.

The reasons of the writer choose this school as location of the research because some of students have still low in vocabulary and also easy for writer to get the data.

3.3. Population and Sample

3.3.1 Population

Gay (1987: 102) has stated that populationis the group of interest researcher; the group to which she or he like the result of the study to be generalize able. The population in this research took from the second year of SMP 16 Pekanbaru in academic year 2017/2018. The Population were 224 students.

3.3.2 Sample

The sample in this research is students of class VII.5, VIII.4 with the number of students are 50 students.

Table 3.2

The sample Distribution of the Research

No	Class	Number of Students	Sample
1	VIII 4	20	Experimental Group
2	VIII 5	30	Control Group
Total		50	

3.4 The Research Materials

The material was given for pre-test where the same materials, after pre-test the writer was do treatment by using electronic dialogue journaling through WhatsApp (Descriptive Text). The materials were taken based on lesson plan of curriculum 2013 for the second grade students at SMPN 16 Pekanbaru. as the detail explanation in the following table:

Table 3.3

The schedule of the research in the classrom

No	Meetings	Material	Explanation
1	I	Vocabulary Test	Pre-Test
2	II	The Mouse Deerand The Tiger	Treatment
3	III	The Crow and The Jug	Treatment
4	IV	The Smart Monkey and The Dull Crocodile	Treatment
5	V	Bell The Cat	Treatment
6	VIII	Vocabulary Test	Post-Test

3.4 Instrument of the Research

The instrument of this research was test. Based on pre-test and post-test, the research could be know how is the effect of electronic dialogue journaling thourgh WhatsApp second years Vocabulary.

Table 3.4
Research Intrument Blue Print

Activities	Topic/Material	Indicator	Item
Pre-Test	Education	Noun	1,4,7,8,24
		Verb	2,6,9,2,23
		Adjective	3,5,10,1,25
		Synonym	13,14,15,21,22
		Antonym	16,17,18,19,20
Post-Test	Education	Noun	1,4,7,8,23
		Verb	2,6,9,2,23
		Adjective	3,5,10,1,24
		Synonym	13,14,15,21,22
		Antonym	16,17,18,19,20

3.5 Research Procedure

In this reserch the procedure of collecting data were divided in two phrases: the fristwas the procedure of collected data for experimental class and the second was procedure of control class. The research used two classes to be equal and homogeneous in order to came into classroom and gave some material, length of time but different treatment. The procedure of treatment for the classes as follow:

3.5.1 ResearchProcedure of Experimental Class

1. Pre-Test

Pre-test will be conducted to determine the students' vocabulary mastery especially about noun, verb, and adjective in synonym and antonym. The research gave 10 minutes to prepared, after that, the students answer the quetions in front of the class. The research will do pre-test before treatment by Electonic dialogue jurnaling through whasApp.

2. Treatment

The treatment will be conducted for experimental class. The treatment used electronic dialogue journaling through WhatsApp in improving vocabulary mastery. Here, the writer only focused on the electronic dialogue journaling through WhatsApp in presenting vocabulary which the material noun, verb, and adjective in synom and antonym.

- a) Meeting 1 : in the frist metting, the teacher gave pre-test. Before giving the pre-test the teacher introduced herself and cek attendace list. The teacher gave pre-test paper to the students. The pre-test was given to experimental group and control group.
- b) Meeting 2: in this meeting, VIII 4 as experimental group. Teacher introduced descriptive text with electonic dialogue journaling through WhatsApp to the students. Teacher began explain about descriptive with electronic dialogue journaling, and the teacher explain about teaching vocabulary in WhatsApp. In here, teacher geve tex to increasing student's vocabulary before answering the descriptive text with electronic dialogue journaling in whatsapp. The topic was "The Mouse Deerand The Tiger". The firs steps, the teacher asked students to fill the descriptive electronic dialogue in whatsapp individually with a deadline time. Thrid steps, the teacher discussed with the students about the correct answer.
- c) Meeting 3 : in this meeting, Teacher introduced descriptive text with electonic dialogue journaling through WhatsApp to the students. Teacher began explain about descriptive with electronic dialogue journaling, and

the teacher explain about teaching vocabulary in WhatsApp. In here, teacher geve tex to increasing student's vocabulary before answering the descriptive text with electronic dialogue journaling in whatsapp. The topic was "The Crow and The Jug". The firs steps, the teacher asked students to fill the descriptive electronic dialogue in whatsapp individually with a deadline time. Thrid steps, the teacher discussed with the students about the correct answer.

- d) Meeting 4 : in this meeting, Teacher introduced descriptive text with electonic dialogue journaling through WhatsApp to the students. Teacher began explain about descriptive with electronic dialogue journaling, and the teacher explain about teaching vocabulary in WhatsApp. In here, teacher geve tex to increasing student's vocabulary before answering the descriptive text with electronic dialogue journaling in whatsapp. The topic was "The Smart Monkey and The Dull Crocodile". The firs steps, the teacher asked students to fill the descriptive electronic dialogue in whatsapp individually with a deadline time. Thrid steps, the teacher discussed with the students about the correct answer.
- e) Meeting 5 : in this meeting, Teacher introduced descriptive text with electonic dialogue journaling through WhatsApp to the students. Teacher began explain about descriptive with electronic dialogue journaling, and the teacher explain about teaching vocabulary in WhatsApp. In here, teacher geve tex to increasing student's vocabulary before answering the descriptive text with electronic dialogue journaling in whatsapp. The topic

was “Bell The Cat”. The first steps, the teacher asked students to fill the descriptive electronic dialogue in whatsapp individually with a deadline time. Third steps, the teacher discussed with the students about the correct answer.

- f) In the last meeting, the teacher gave post-test to the students. The purpose of this test was to know the effect of electronic dialogue journaling through whatsapp toward student vocabulary.

3. Post-test

After doing the treatment, the research was gave post-test to the students. In this case are student’s vocabularies by using electronic dialogue journaling through whatsapp. It aims to know is there any significant effect of student’s vocabulary by electronic dialogue journaling through whatsapp. It was done to know whether there is significant effect for experimental group.

3.6.2 Control Group

1. Pre-test

Before takes the data, the test was from textbook and other sources were try students in control group at the second year students of SMP 16 Pekanbaru. The pre-test in order to know whether the test items are difficult for the students at SMP 16 Pekanbaru or not difficult for them.

2. No Treatment

There was no treatment when teaching learning process in control group classes. The students was study in the class depend on subject from the teacher by using their textbook.

3. Post-test

The post-tes was conducted after the pre-tes. It has purpose to know there is increase on the students' learning to improve vocabulary.

3.7 Technique of collecting the data

The data of the research are the students' score pre-test and post-test of vocabulary. The procedure of collecting data as follows :

1. Pre-Test

The students are give pre-test before treatment. One of the purposes of the giving this kind of test are measures the sample repondents' English vocabulary by electronic dialogue jurnaling through WhatsApp.

2. Post-Test

After the treatment has done, the research gave post-test to the students. It aims to know increasing to the students learning vocabulary by electronic dialogue jurnaling. The materials are the same with pre-test. To calculate the ability of students in the test, the writer prepares the score level:

Table 3.5

Score Level of the Students

Score	Criterion
80-100	Good to Excellent
60-79	Average to Good
50-59	Poor to Average
0-49	Poor

(Harris, 1969)

3.7 Technique of Analyzing Data

After the data of the research is collected, it was necessary to analyzed the data which is the purpose is in order to know rhe result of students' vocabulary before and after taught by electronic dialgue journaling through whatsapp. The steps can be as following as:

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

P = individual score

X= the number of correct vocabulary

N= the number of the test material

pos-test was conducted after all of treatment was implemented. the score of pre-test was taken aas data for the research and was compared with the pre-test score. It can calculate by the formula based on Hatch and Farady (1982:112).

1. Mean of group

$$\bar{X} = \frac{\sum X}{N}$$

Where : \bar{X} : The mean score

X: The score

N: The number of individual score

2. Variance

$$(S)^2 = \sum \frac{(X-\bar{X})^2}{N-1}$$

Where : S^2 : Variance of students' score

N : The number of students

\bar{X} : The means score

X : Summation score

3. Standard Deviation

The second formula use to find out the resultof the standard deviation of each group.

$$S = \sqrt{\frac{\sum(x-\bar{X})^2}{N-1}}$$

Where :
 S : Standard deviation
 N : The number of students
 \bar{X} : The mean score
 X : Summation score

4. Standard Error

$$S(X1-X2) = \sqrt{\left[\frac{S1}{\sqrt{N1}}\right]^2 + \left[\frac{S2}{\sqrt{N2}}\right]^2}$$

Where :
 S(X1 – X2) : Standars Error
 N1 : The number of the students in experiment group
 N2 : The number of the students of in control group
 X1 : Summation score the students in experiment group
 X2 : Summation score the students in control group

5 T-test

$$T = \sqrt{\frac{n1n2(n1+n2-)}{n1+n2}} X \frac{\bar{X}2-\bar{X}1}{\sqrt{n1S1^2+n2S2^2}} T_{-obs} = \frac{\bar{X}1-\bar{X}2}{S(\bar{X}1-\bar{X}2)}$$

Where :
 S(x1-x2) : Standard Error
 $\bar{X}1$: The mean score
 $\bar{X}2$: The mean score

After computing the t-test, the degree of the freedom has to be found in order to determine if the value of t-calculated is bigger than value t-table, this indicates that the alternative hypothesis is accept. In other words, if the value if calculated

is smaller than the value than of t-table, this indicated that null is accepted and alternative is rejected.

$T_{obs} > table H_a$ Alternative hypothesis is accept

$T_{obs} > table H_a$ Alternative hypothesis is rejected

