

CHAPTER III

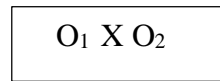
RESEARCH METHODOLOGY

3.1 Research Design

The research method in this study was experimental research. To know the meaning of experimental research, according to Mubarak (2015:88) experimental research is a research method use to find a specific treatment effect against the other in uncontrolled conditions.

The research has two variables. They are Independent variable using symbol “X” and Dependent variable using symbol “Y”. An independent variable is presumed to affect (at least partly cause) or somehow influence at least one other variable (Mubarak, 2015:89). The independent variable is presumed to affect is called a dependent variable. So, in this research the independent variable (X) is Word Wall. While the dependent variable (Y) is vocabulary mastery. Therefore, through Word Wall media is influence in vocabulary mastery at the seventh grade students of MTs Nurul Athfal in academic year 2018/2019.

The researcher used pre-experimental design by using “one group pre-test and post-test design”. The writer did an experiment in a single group only in one class. The researcher gave a pre-test before applying the treatment to find out student’s vocabulary before using Word Wall media, and gave post-test after applying the treatment to find out student’s improvement vocabulary after using Word Wall media. It can be formulated as follows:



O_1 = Observation (pre-test)

X = Treatment given

O_2 = Observation (post-test)

(Mubarok,2015:99)

3.2 Subject of the Research

The subject of this research was the first year of students of MTs Nurul Athfal Pelang Mayong Jepara in the academic year 2018/2019. There was 1 class in seventh levels consists of 29 students as a subject of the research.

3.3 Instrument

According to Arikunto (2013:192) , instrument is guidelines that used as a tool for collecting data. In addition, a research instrument is what you use to collect information (data) to answer your research question. So, the research instrument is a tool used by researchers in the activity of collecting data so that the activity becomes systematic and easy.

This research used test as instrument to gather the data to know student's vocabulary mastery. The try out tests was presented in the form of multiple choices consist of 40 questions. The tests used to measure students' achievement and progress in their vocabulary mastery.

3.4 Procedures of Collecting Data

The researcher followed some procedures in collecting the data, such as doing try-out, giving pre-test, treatments and post-test.

Table 3.1
The Activities

No	Activity	Week					
		1	2	3	4	5	6
1	Preparation	■					
2	Try-out	■					
3	Pre-test	■					
4	Treatment		■				
5	Post-test			■			
6	Data processing				■	■	
7	Report						■

3.5 Try Out of the Instrument

The instrument used in this research was a test (pre-test and post-test). Before a test was given to the students, try out test applied first to know the test is good instrument. The result of the test was to find out the validity and reliability.

Bajpai & Bajpai (2014:173) said that validity is a test of how well an instrument that is developed measures the particular concept it is intended to measure as shown in Figure . Arikunto (2013:211) stated that validity is a measure that shows the level of validity of an instrument. A valid

instrument has high validity. To calculate the validity, the researcher used

Product Moment formula:

$$r_{xy} = \frac{(N \cdot \sum XY) - (\sum X \cdot \sum Y)}{\sqrt{\{N \cdot \sum X^2 - (\sum X)^2\} \{N \cdot \sum Y^2 - (\sum Y)^2\}}}$$

In which:

r_{xy} : the item of test reliability

N : the number of respondent

X : total score of each item

Y : individual total score

X^2 : total for the square for each item

Y^2 : total of the square of individual total score

$(X)^2$: the square of the total score of each item

$(Y)^2$: the square of the individual total score

(Arikunto,2013:213)

The validity computation is consulted to the r-table of product moment by determining the significances level 5% and n which is according to the data. The instrument is valid if the $r_{xy} > r_{table}$ for $\alpha = 5\%$ and $N = 29$.

Bajpai & Bajpai (2014:175) said that if a measurement device or procedure consistently assigns the same score to individuals or objects with equal values, the instrument is considered reliable. To measure the reliability of the test, the researcher uses the following Kuder-Richardson formula 20 (K-R 20).

$$r_{xx} = \frac{K}{K-1} \left(\frac{S_x^2 - \sum pq}{S_x^2} \right)$$

In which:

r_{xx} = reliability of the whole test

k = the number of item or questions

S_x^2 = variance of scores on the total test (squared standard deviation)

p = proportion of correct responses on a single item

q = proportion of incorrect responses on a same item

(Arikunto,2013:231)

3.6 Method of Data Collection

To get the data that is needed in the research, the stages which were used in this research are:

a. Administering a pretest.

Before the students received any treatment, all the students in pre-experimental class did the test of vocabulary mastery.

b. Applying the treatment.

After doing a pretest, the researcher gave 2 materials through Word Wall media in 2 meetings of treatment. The first meeting, the researcher gave material about family. The next meeting, the researcher gave material about occupation. So every meeting the students had new vocabulary that can improve their vocabulary mastery.

Meeting	Treatment
Meeting 1	<ul style="list-style-type: none"> ➤ The researcher attaches a list of words and pictures, then ask the students to identify a lists of words and pictures about family on the wall. ➤ The researcher gives an explanation of family material. ➤ The students one by one wrote vocabulary (father, mother, brother and etc) on the board guided by the researcher. ➤ The researcher gives the meaning and explanation of each word, then divided the students in groups to work in pairs. ➤ The researcher asks students to collect worksheet, then checks the students' understanding of the family material.
Meeting 2	<ul style="list-style-type: none"> ➤ The researcher reviewed material in previous meeting. ➤ Students were asked to answer questions about occupation, example; what is your father?, can you mention the kind of job?. ➤ The researcher gives an explanation then speaks vocabulary one by one by showing pictures.

	<ul style="list-style-type: none"> ➤ Students were asked to make Word Wall in group guided by the researcher, then presented in front of the class. ➤ Each group attaches the results to the wall / blackboard. ➤ The researcher gives an explanation of the material and checks students' understanding.
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c. Administering a posttest.

After the treatment, the researcher gave post-test to measure the success of applying the treatment.

3.7 Technique of Data Analysis

The researcher had been analyzed the data by used statistical calculation through t-test formula in SPSS statistical application. She analyzed the score from the result of pre-test and post-test. This technique was useful to prove statistically, whether there was a significant effect of teaching vocabulary through Word Wall media toward students' vocabulary mastery.

3.8 Statistical Hypothesis

To prove the hypothesis, the data obtained was calculated by using the t-test formula with the assumption as follows:

Ho : There was no significant effect of teaching vocabulary through Word Wall media toward students' vocabulary mastery.

Ha : There was a significant effect of teaching vocabulary through Word Wall media toward students' vocabulary mastery.

The assumption of these hypotheses as follows:

Ho accepted if the significance $> 0,05$ and $t_{\text{count}} < t_{\text{table}}$ OR $-t_{\text{count}} > t_{\text{table}}$

Ho rejected if the significance $< 0,05$ and $t_{\text{count}} > t_{\text{table}}$ OR $-t_{\text{count}} < -t_{\text{table}}$

