

CHAPTER III

METHOD OF THE RESEARCH

A. The Research Design

The research Design is quasi experiment design. Quasi experiments are experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment.¹ The research design used Non-equivalent control group design; there were two groups; an experimental group and a control group. Before doing experiment, the students were given a pre-test. The experimental group gave treatment and the control group was not given the treatment. After the treatment, the students were given a post-test.² This research consisted of two variables: the independent variable was symbolized by “X” that is Open House Strategy and the dependent one was “Y” referring to students reading comprehension at the eighth grade of State Junior High School 2 Meral Karimun Regency.

According to Gay, the Design of this research can be illustrated as follows:³

Table III.1
The Research Design

Class	Pre-test	Treatment	Post-test
Experiment	O ₁	X	O ₂
Control	O ₃	-	O ₄

¹ John W .Creswell, *Op Cit.* P. 645

² L.R Gay and Peter Airasian, *Educational Research: Competencies for Analysis and Application, Sixth Edition* (New Jersey & Pearson Education International, 2000). P.623

³*Ibid*

Where:

O: Students' reading comprehension in pre-test and post test of experimental and control class

X: Teaching reading by using open house strategy

B. Time and Location of the Research

This research was conducted at State Junior High School 2 Meral Karimun Regency located on Jl. Raja Ishak Iskandar Meral, Karimun. It was conducted from March to April 2014.

C. Subject and Object of the Research

1. The subject of the research

This subject of this research was the students of eighth grade State Junior High School 2 Meral Karimun Regency.

2. The object of the research

The object of this research was the effect of using Open House Strategy on reading comprehension.

D. Population and Sample of the Research

The population of the research includes all of the eighth grade students of State Junior High School 2 Meral Karimun Regency. They were divided into three classes. The total numbers of students was 75 students.

Table III.2
The Total Population of the Eighth Grade Students of State Junior High School 2 Meral Karimun Regency 2013-2014

No	Class	Total
1	VIII.1	25
2	VIII.2	25
3	VIII.3	25
4	Total	75

Based on the design of the research above, the population above was large enough to be taken all as sample of the research. Furthermore because they were homogenous or because all samples had the same characteristics, the writer used cluster sampling to choose the classes taken to be the sample. So, the writer selected two groups of the students to be taken as sample VIII.2 as an experimental group, and class VIII.1 as a control group.

Table III. 3
The sample the Eighth Grade Students of State Junior High School 2
Meral Karimun Regency 2013-2014

No	Class	Total
1	VIII.1	25
2	VIII.2	25
	Total	50

E. Technique of Data Collection

In this research, the writer used test. There were two kinds of tests in this research; they were pre-test and post-test. Both of these tests were being given to the experimental class and control class. The type of test was multiple choice tests. The items were all receptive, or selective, response items in that the test taker chooses from a set of responses. In this research, the items used for pre-test and post-test consisted of 20 items. The test was about reading comprehension with the curriculum of the school. The scores of narrative text were classified in the table below:⁴

⁴Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*, (Jakarta: PT Bumi Aksara, 2011) p.245

Table III.4
The Classification of Students' Score

The Score Level	Category
80-100	Very good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

The procedures of data collection strategy were carried out as follows:

1. Pre-test

At the beginning of the research, every participant in both experimental and control group took the pre-test in order to find out if they were in the same level at the starting point.

2. Treatment

The treatment was conducted for experimental class only. The treatment was using Open House Strategy in teaching English part of reading comprehension. The length of the time to apply the technique was about six meetings and every meeting was about 80 minutes.

3. Post-test

Post- test for both experimental group and control group were administrated after giving the treatment for experimental group. The result of the post- test for both experimental group and control group were analyzed and used as final data for this research.

Before giving the test to the research participant, the writer gave the try out to the other classes that had the same level in the achievement of learning process with research participant to find out the validity and reliability of the test.

F. The validity and the Reliability of the test

1. Validity

Before the test given to the sample of this research, the writer tried out the test item. The test given to the students was considered not too difficult or not too easy. The purpose of the try out was to obtain validity and reliability of the test. The test is said to be valid if it measures accurately what is intended to measure.⁵ In this research, the writer used content validity. A test is said to have content validity if its content constitutes a representative sample of the language skill, structure, etc, with which it is meant to be concerned.⁶ It means that the test given to the students was based on the material that they had learned. It was determined by finding the difficulty level of each item. The formula of item difficulty is as follows:⁷

$$P = \frac{B}{JS}$$

Where:

P : Index of difficulty

B : The number of correct answer

JS : Students taking test

The standard level of difficulty used was < 0.30 and > 0.70 .⁸ It means that the items are accepted if the level of difficulty is between 0.30-

⁵ Arthur Huges. *Testing for Language Teacher, 2nd Edition* (New York: Cambridge University Press). P. 26

⁶*Ibid*

⁷*Op.Cit.*.p. 208

⁸*Loc.Cit.*

0.70 and it is rejected if the level of difficulty is below 0.30 (difficult) and over 0.70 (easy). Then, the proportion is represented by “p”, whereas the proportion incorrect is represented by “q”. It can be seen from the following tables:

Table III. 5
The Students are Able to find the Main Ideas

Variable	Find main idea of narrative text				N
Item no.	3	5	12	18	20
Correct	13	13	13	13	
P	0.52	0.52	0.52	0.52	
Q	0.48	0.48	0.48	0.48	

Based on the table above, the proportion of correct answers for item number 3 shows the proportion of correct 0.52, item number 5 shows the proportion of correct 0.52, item number 12 shows the proportion of correct 0.52, item number 18 shows the proportion of correct 0.52. Based on level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that the items for finding the main idea are accepted.

Table III. 6
The Students are Able to Find Factual Information

Variable	Find the factual information				N
Item no.	8	10	16	19	20
Correct	13	13	16	16	
P	0.52	0.52	0.64	0.64	
Q	0.48	0.48	0.36	0.36	

Based on the table above, the proportion of correct answers for item number 8 shows the proportion of correct 0.52, item number 10 shows the proportion of correct 0.52, item number 16 shows the proportion of correct 0.64, and item number 19 shows the proportion of

correct 0.64. Based on the standard level of difficulty “p” < 30 and “q” > 70, it is pointed out that the items for finding factual information are accepted.

Table III. 7
The Students are Able to Identify Events

Variable	Identifying events				N
Item no.	4	11	13	17	20
Correct	14	14	14	13	
P	0.56	0.56	0.56	0.52	
Q	0.44	0.44	0.44	0.48	

Based on the table above, the proportion of correct answer for item number 4 shows the proportion of correct 0.56, item number 11 shows the proportion of correct 0.56, item number 13 shows the proportion of correct 0.56 and item number 17 shows the proportion of correct 0.52. Based on the standard level of difficulty “p” <30 and “q” > 70, it is pointed out that the items for identifying events are accepted.

Table III. 8
The Students are Able to find out the meaning of Vocabulary in the text

Variable	Finding out the meaning of vocabulary in the text				N
Item no.	1	6	9	14	20
Correct	14	13	15	14	
P	0.56	0.52	0.6	0.56	
Q	0.44	0.48	0.4	0.44	

Based on the table above, the proportion of correct answer for item number 1 shows the proportion of correct 0.56, item number 6 shows the proportion of correct 0.52, item number 9 shows the proportion of correct 0.6 and item number 14 shows the proportion of correct 0.56. Based on the

standard level of difficulty “p” <30 and “q” > 70, it is pointed out that the items for finding out meaning of vocabulary in the text are accepted.

Table III. 9
The Students are Able to making inference in the text

Variable	Making inference				N
Item no.	2	7	15	20	20
Correct	15	13	14	13	
P	0.6	0.52	0.56	0.52	
Q	0.4	0.48	0.44	0.48	

Based on the table above, the proportion of correct answer for item number 2 shows the proportion of correct 0.6, item number 7 shows the proportion of correct 0.52, item number 15 shows the proportion of correct 0.56, and item number 20 shows the proportion of correct 0.52. Based on the standard level of difficulty “p” <30 and “q” > 70, it is pointed out that the items for making inference are accepted.

2. Reliability

Brown says that reliability has to do with accuracy of measurement. This kind of accuracy was reflected in obtaining similar results when measurement was repeated on different occasions or with different instruments or by different persons. The characteristic of reliability was sometimes termed consistency.⁹ It means that the test was reliable when an examiner’s results were consistent on repeated measurement.

⁹H. Douglass Brown, *Language Assessment: Principles and Classroom Practices*. (New York: Pearson Education Inc, 2003)19

To obtain the reliability of the test, the mean and standard deviation of test should be obtained. Reliability in general refers to appropriateness of a given test of any of its component part as measure of what it was purposed to measure. It means the test will be valid to the extent that was measured what it was supposed to measure.

The reliability coefficients for good identified kinds of structure text and reading comprehension test were expected to exceed 0.0 and closed 1.00. Heaton states that the reliability of the test was considered as follows:

1. 0.0 – 0.20 = reliability is low
2. 0.21 – 0.40 = reliability is sufficient
3. 0.41 – 0.70 = reliability is high
4. 0.71 – 1.0 =reliability is very high¹⁰

To obtain the reliability of the test given, the writer used the formula as follows:¹¹

$$\text{KR 20: } r_i = \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2}$$

Where:

K : number of items in the instrument

Pi : proportion of subject who answered the item correctly

Qi : proportion of subject who answered the item wrong (1-pi)

¹⁰J.B. Heaton, *Writing English Language Tests*. (New York: Cambridge University Press, 1988)164

¹¹Sugiyono.*Statistik untuk Penelitian* (Bandung: Alfabeta, 2007) 359

$p_i q_i$: the multiplication result between p and q

S_t^2 : total variance

Firstly, the writer calculates the total variance:

$$s_t^2 = \frac{x^2}{n}$$

Where:

n: number of respondents

$$x^2 = \sum x t^2 - \frac{(\sum x t)^2}{n}$$

$$= 3420 - \frac{(280)^2}{25}$$

$$= 3420 - \frac{78400}{25}$$

$$= 3420 - 3136$$

$$= 284$$

$$s_t^2 = \frac{284}{25}$$

$$= 11.36$$

$$r_i = \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2}$$

$$r_i = \frac{20}{(20-1)} \frac{11.36 - 4.9}{11.36}$$

$$r_i = \frac{20}{19} \frac{6.46}{11.36}$$

$$r_i = 1.05 \times 0.56$$

$$r_i = 0.588$$

Based on the result above, it also can be stated that the reliability was high.

G. The Technique of Data Analysis

In analyzing the students' reading comprehension, the writer used the standard of English lesson in State Junior High School 2 Meral Karimun. It was 70 for students' reading comprehension on narrative text. It means that for those who get score > 70 , they pass the standard (KKM), while those get score < 70 they don't pass the standard (KKM).

In analyzing the data, the writer used the statistical calculation of independent sample T-test formula. The independent sample T-test was used to find out the significant difference between students' reading comprehension on narrative text taught by using open house strategy and students' reading comprehension on narrative text taught without using Open House strategy. To find out whether or not there is a significant difference between two or more variables that can be analyzed by using independent sample t-test.¹² Gay added that the t-test for independent sample is used to determine whether or not there is probably a significant difference between the means of two independent samples.¹³ Independent sample t-test was used to find out the results of the first and second hypotheses. They were as follow:

- a. To find out whether there is no significant difference of using Open House Strategy toward reading comprehension of the eighth grade students at State Junior High School 2 Meral Karimun Regency.
- b. To find out whether there is a significant difference of using Open House Strategy toward reading comprehension of the eighth grade students at

¹² Hartono, *Statistic Penelitian* (Pekanbaru: Pustaka Pelajar, 2010). P. 177

¹³ L.R Gay, *Op.Cit.* p. 484

State Junior High School 2 Meral Karimun Regency. The data were analyzed by using SPSS 16.0 Version.

The T-table was employed to see whether or not there was a significant different gain score in both experimental and control classes.

Statistical hypotheses:

1. $H_0 = t_0 < t\text{-table}$
2. $H_a = t_0 > t\text{-table}$