CHAPTER III

RESEARCH AND PROCEDURE

In this chapter, the writer discusses: (a) method of the research, (b) research variables, (c) operational definitions, (d) population and sample, (e) technique for collecting data, (f) research instruments analysis, (g) research treatments, and (h) techniques for analyzing data.

A. Method of the Research

The method of the research was quasi experimental method. According to Creswell (2012, p. 626), 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.

In this study, the writer used the pre-test post-test nonequivalent groups design. This design is often used in classroom experiments when experimental and control group are such naturally assembled groups as intact classes, which may be similar (Best & Kahn, 1995, p. 151). Model of the pre-test post-test nonequivalent groups design:

$$\begin{array}{ccc} O_1 & X & O_2 \\ \hline O_3 & C & O_4 \end{array}$$

Where:

-------- : Dash line indicated that the experimental and control group have not been equated by randomization.

O1 : The pretest of the experimental group

O2 : The posttest of the experimental group

O3 : The pretest of the control group

O4 : The posttest of the control group

X : Treatment for experimental group taught using POW + WWW W=2 H=2 Strategy

C : Treatment for control group taught using teacher's strategy

B. Research Variables

Best and Khan (1995, p. 137) state that variables are the conditions or characteristics that the experimenter manipulates, controls, or observes. There are two kinds of variable: Dependent variable and Independent variable. According to Best and khan (1995, p. 137), the dependent variables are the conditions or characteristics that appear, disappear, or change as the experimenter introduces, removes, or changes independent variable.

While, the independent variables are the conditions or characteristics that the experimenter manipulates or controls in his or her attempt to ascertain their relationship to observed phenomena. In this study, the dependent variable is students' achievement in writing narrative text and Independent variable POW + WWW W=2 H=2 Strategy.

C. Operational Definitions

The variable of this study is "Teaching Narrative Writing by using POW + WWW W=2 H=2 Strategy to the Eighth Grade Students of SMP Muhammadiyah 7 Palembang".

1. **Teaching Narrative Writing**

   Teaching Narrative Writing is an interactive process which is done by a teacher helps the students in the classroom by giving more understanding to the students through strategy especially for writing narrative text.

2. **POW + WWW W=2 H=2 Strategy**

   POW + WWW W=2 H=2 Strategy is one of writing strategy. It is designed to improve writing skill especially in writing narrative text.

3. **Students' writing achievement**

   Students' writing achievement means the result of the writing achievement test was gained by the students in experimental group after they received the treatment

D. Population and Sample

1. **Population**

   According to Fraenkel, Wallen, and Hyun (2012, p. 106), population refers to all the members of a particular group. It is the group of interest to the researcher, the group to whom the researcher would like to generalize the results of a study.

The population in this study was all of the eighth grade students of SMP Muhammadiyah 7 Palembang in academic year of 2014/2015 with a total numbers of 114 students. The population of study can be seen in Table 2:

Table 2
Population of the Study

No.	Class	Gender		Total
		Female	Male	
1.	VIII.1	30	9	39
2.	VIII.2	15	24	39
3.	VIII.3	14	22	36
T o t a l		59	55	114

(Source : Administration of SMP Muhammadiyah 7 Palembang academic year 2014/2015)

2. Sample

According to Fraenkel et al. (2012, p. 106), a sample is any part of a population of individuals on whom information is obtained. It may, for a variety of reasons, be different from the sample originally selected.

In this research, the writer uses convenience sampling. According to Fraenkel et al. (2012, p. 99), convenience sampling is a group of individuals who (conveniently) are available for study. In selecting the sample, the writer took the sample with convenience non-random sampling.

In this study, the writer took two classes from Class VIII.1 and Class VIII.2, because the total of the students is same and was taught by the same teacher of English. In this research the writer took 78 students. There were 39 students for experimental group and 39 students for control group. Students from class VIII.1 belonged to the experimental group (writing by using POW + WWW W=2 H=2 Strategy) and the students from VIII.2 belonged to the control group (Teacher's Strategy). Table 3 below showed the sample of the study.

Table 3
Sample of the Study

No.	Class	Group	Number of students
1.	VIII.1	The Experimental Group	39
2.	VIII.2	The Control Group	39
T o t a l			78

E. Techniques for Collecting Data

In techniques for collecting the data, it presented tests and questionnaire. They were as follows:

1. Test

The writer used test to collect the data from this study. According to Brown (2004, p. 3), test is a method of measuring a person's ability, knowledge, or performance in a given domain. For collecting data, the writer used a written test which the students assigned to write a text related

to the topic which has been given by the teacher. During the treatment, the students were mainly focused on writing process. At the end of the treatment, a post test was given to know the influence of the treatment received by the students. In this study the test was given twice to the experiment and control group.

a. Pre-test

The pre-test was given before doing the treatment to the control and experimental groups. Creswell (2012, p. 297), states that a pretest provides a measure on some attribute or characteristic that you assess for participants in an experiment before they receive a treatment

The purpose of giving the pre-test to the students was to assess students' ability in writing before the writing process was given using POW + WWW W=2 H=2 Strategy and the students' result would be check and scored by two raters.

b. Post-test

The post-test was given at the end of treatment to the control and experimental groups. Creswell (2012, p. 297) states that, a posttest is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment.

It was given after the teacher gave the treatment of teaching writing narrative text through POW + WWW W=2 H=2 Strategy. The purpose of this test was to measure students' ability in writing narrative text. The result of this test was compared with the result of

pre-test in order to know the effect of teaching writing narrative text through POW + WWW W=2 H=2 Strategy. From the post-test, the writer was able to get the data that can be used to measure the students' progress taught by using POW + WWW W=2 H=2 Strategy.

2. Questionnaire

A closed-statements questionnaire was given to the students in experimental group after the post-test was done. They were asked to give responses toward eleven statements on the questionnaire. The questionnaire was intended to know students' responses about POW + WWW W=2 H=2 strategy that had been implemented earlier. To ask the students' responses on the questionnaire the writer used Quipper School Indonesia as online learning media which is accessed from http://www.quipperschool.com. There were two choices in each item in which "1 for positive response" and "0 for negative response".

F. Research Instrument Analysis

Research instrument was test-question item designed for students pre-test and post-test activities. The test-question item which was used for students' pre-test was same as it was given for students' post-test activities. Before they were implemented as research instrument, it should be analyzed or checked for their validity and reliability tests.

1. Validity Test

Fraenkel and Wallen (2009, p. 147) state that term “validity” refers to the appropriateness, meaningfulness, correctness and usefulness of the inferences a researcher makes. It means that validity test is used to measure whether the obtained data of an instrument is valid or not. There were two kinds of validity to be used. They were: (1) construct validity and (2) content validity.

a. Construct Validity

Brown (2004, p. 25) states that construct validity is a major issue in validating large-scale standardized tests of proficiency. In this part, the construct validity of the research instruments involves two types. They were question items for pretest and posttest activities, and lesson plans for control and experimental groups. In this study, to evaluate whether the components of the instrument and lesson plan are valid or not to be applied in research activities, the writer used expert judgments from three validators. Furthermore, Sugiono (2011, p. 125) states that expert judgment is required to estimate the construct validity.

There were three validators to validate the research instrument test and lesson plan. The first validator was M. Holandyah,M.Pd. The result analysis of result instrument could be used without revision and the result analysis of lesson plan could be used with little revision. The second validator was Amalia Hasanah, M.Pd. The result analysis of result instrument could be used without revision and the result analysis

of lesson plan could be used with little revision. And the third validator was Manalulaili, M.Ed. The result analysis of result instrument could be used without revision and the result analysis of lesson plan could be used with little revision.

From the three validators, it could be concluded that the research instrument and lesson plan were appropriate to apply for the result activities. The validator sheet could be seen in (*appendix A*)

b. Validity of Each Question Item

Validity test of each question item is used to indicate whether the test item of the instrument in each question is valid or not. To know whether it is valid or not, the score of significance (r-output) should be compared with the score of "r-table" product moment. A question item is considered valid if "r-output" is higher than "r-table" (Basrowi & Soenyono, 2007, p. 24).

In this study, the writer used questionnaire to know student's responses on the implementation of POW + WWW W=2 H=2 Strategy. To measure the questionnaire was valid or not, the writer used Pearson Correlation Coefficient in SPSS version 20. From the result analysis in validity test of each question item, there were 11 statements considered valid from 20 statements given. 11 statements were considered valid since the score higher than r-table (0.801). From the explanation above, it could be assumed that the questionnaire could be applied in research activities to know students'

responses on the implementation of POW + WWW W=2 H=2 Strategy. The result of Pearson Correlation Coefficient in SPSS version 20 could be seen in (*appendix B*).

c. Content Validity

Fraenkel et al. (2012, p. 148) state that, content validity refers to the content and format of the instrument. In other words, according to Cohen, Manion, and Morrison (2007, p. 162), content validity is achieved by ensuring that the content of the test fairly samples the class or fields of the situations or subject matter in question, achieved by making professional judgments about the relevance and sampling of the contents of the test to a particular domain, and concerned with coverage and representativeness rather than with patterns of response or scores.

A content validity is very important since it is an accurate measure of what it is supposed to measure. The specification for the test, it was formulated based on the curriculum or syllabus of English for eighth graders of Junior High School. The writer used book for Junior High School. In order to know if the contents of the test items given were appropriate to the students. Test of specification can be seen in Table 4.

Table 4
Test of Specification Table

Objective	Topic	Indicator	Type of Test	Number of Item	Total Number
The students are able to: 1. Find some information from POW+WWWW=2 H=2 Strategy 2. Write a topic and some supporting details of narrative text through POW+WWWW=2 H=2 Strategy 3. Write a good narrative text	1. Mousedeer and a snail 2. The legend of Surabaya 3. Bawang Merah and Bawang Putih 4. The ant and the grasshopper 5. Timun Emas	1. Identifying the information of narrative text 2. Writing a good narrative text	Writing test	1	1

2. Reliability Test

According to Fraenkel and wallen (2009, p. 147), reliability refers to the consistency of scores or answers from one administration of an instrument to another, and from one set of items to another. Further, Creswell (2012, p. 627) states that reliability means that individual scores from an instrument should be nearly same or stable on repeated administrations of the instrument and that they should be free from sources of measurement error and consistent.

Firstly, in this study, the writer used inter-rater reliability to know whether the test was reliable or not. Inter-rater reliability occurs when two or more scorers yield inconsistent scores of the same test, possibly for lack or attention to scoring criteria, inexperience, inattention, or even preconceived biases, (Brown, 2004, p. 21). Inter-rater reliability was the degree of agreement among raters. Then, the writer used test-retest method to measure the questionnaire which had been considered valid was reliable or not. The test-retest method involves administering the same test twice to the same group after a certain time interval has elapsed (Fraenkel & Wallen, 2009, p. 155). A reliability coefficient is then calculated to indicate a relationship between the two sets of scores obtained. The writer did the try out of written test instruments at SMP Bina Cipta Palembang to the eighth grade students with total 30 students as the sample for finding reliability of the test. Meanwhile, the research study was done at SMP Muhammadiyah 7 Palembang.

The score of students' narrative writing test was calculated by two raters. The first rater was Wissudarti, M.Pd. She is a teacher of English at SMP Kartika II-1 Palembang. The second rater was Arief Pamuji, M.Pd. He is a lecturer at Bina Husada Palembang. *(see appendix K for the complete data)*

In scoring writing skills, the writer used analytic scoring rubric which was created by Jacobs et al. (1981) in Weigle (2002, pp. 115-116). In the Jacobs *et al*. scoring rubric, scripts are rated on five aspects of writing:

content (30 points), organization (20 points), vocabulary (20 points), language use (25 points), and mechanics (5 points). Then the two sets of score was calculated by Spearman rank order method formula suggested by Hatch & Lazaraton (1991, p. 453), to find out whether or not the the instruments were reliable. The formula as follows:

$$R = 1 - \frac{6\,(\sum D^2)}{N\,(N^2 - 1)}$$

Where:

R : Rank-Order Method

d^2 : Different Score

n : The Number of the Students

The test was reliable if the result of the data measurement was higher than 0.70. According to Frankel & Wallen (2012, p. 157), for the purpose a rule of thumb is that reliability should be at least 0.70 and preferable higher.

The rank order correlation was calculated to find the differences between the two sets of rankings using the formula as follows:

$$R = 1 - \frac{6\,(\sum D^2)}{N\,(N^2 - 1)}$$

$$R = 1 - \frac{6\,(309)}{30\,(30^2 - 1)}$$

$$R = 1 - \frac{1854}{30\,(900 - 1)}$$

$$R = 1 - \frac{1854}{30(899)}$$

$$R = 1 - \frac{1854}{26970}$$

$$R = 1 - 0.068$$

$$R = 0.932$$

From the result of Spearman Ranking Order Method was found that the coefficient reliability of the writing test was 0.932 (*see appendix C*) and higher than 0.70. Therefore, it can be stated that the assessment result was reliable.

The students' scores of questionnaire were taken from percentage of students' responses which had been calculated by Quipper School Indonesia (online learning media). To measure the test-retest method, Pearson Correlation Coefficient in SPSS was used. The result analysis of reliable test showed that the score of pearson correlation coefficient was 0.801. From the p-output, it could be stated that the questionnaire was considered reliable since it was higher than 0.70. For the complete data, it could be seen in (*appendix C*).

G. Research Treatments

Treatment refers to any action or process designed to find out that something is effective, workable, and valid. The writer did the experiment by applying the POW + WWW W=2 H=2 Strategy to the sample of the eighth grade students of SMP Muhammadiyah 7 Palembang in academic year 2014-2015.

1. Teaching Schedule

In this study was conducted in 13 meetings. There were two meetings for pre-test and post-test and ten meetings for treatments and one meeting for questionnaire (experimental group). Each meeting was 2 x 40 minutes. Every meeting for treatments the students was given a narrative text. The materials used were the same for experimental and control group. Teaching materials for research treatments could be seen in Table 5.

Table 5
Teaching Materials for Research Treatments

No	Teaching Schedule		Teaching Material	Meeting	Time Allocation
	Experimental	Control			
1.	Thursday, Feb 5th 2015	Thursday, Feb 5th 2015	Pre – test (Test)	1st	1 X 45’
2.	Wednesday, Feb 11th 2015	Saturday, Feb 7th 2015	Malin Kundang	2nd	2 X 40’
3.	Thursday, Feb 12th 2015	Thursday, Feb 12th 2015		3rd	2 X 40’

4.	Wednesday, Feb 18th 2015	Saturday, Feb 14th 2015	The Legend of Toba Lake	4th	2 X 40’
5.	Wednesday, Feb 25th 2015	Saturday, Feb 21st 2015		5th	2 X 40’
6.	Thursday, Feb 26th 2015	Thursday, Feb 26th 2015	The Mouse deer and The Crocodile	6th	2 X 40’
7.	Wednesday, Mar 4th 2015	Saturday, Feb 28th 2015		7th	2 X 40’
8.	Thursday, Mar 5th 2015	Thursday, Mar 5th 2015	Si pahit lidah	8th	2 X 40’
9.	Wednesday, Mar 11th 2015	Saturday, Mar 7th 2015		9th	2 X 40’
10.	Thursday, Mar 12th 2015	Thursday, Mar 12th 2015	Snow white	10th	2 X 40’
11.	Wednesday, Mar 18th 2015	Saturday, Mar 14th 2015		11th	2 X 40’
12.	Thursday, Mar 19th 2015	Thursday, Mar 19th 2015	Post – test (Test)	12th	1 X 45’
13.	Thursday, April 2nd 2015	Questionnaire for Experimental Group		13th	2 X 40’

2. Teaching Procedure for Experiment and Control Groups

To make the writer easier in doing the treatments, the writer developed the procedures of both experimental and control group in teaching narrative writing. The procedure could be seen in the Table 6:

Table 6
Teaching Procedures of Experimental and Control Groups

NO	MEETING	TEACHING PROCEDURES			
		EXPERIMENT GROUP		CONTROL GROUP	
		LEARNING ACTIVITIES	TIME ALLOCATION	LERNING ACTIVITIES	TIME ALLOCATION
1	1st meeting	Pretest	45’	Pretest	45’
2	2nd meeting	1. Pre-activities • Teacher greets students • Teacher explains about POW+ WWW W=2 H=2 strategy and continued by explanation about narrative text such as: definition, generic structures and language features The 1st topic is Malin Kundang	10’ 70’	1. Pre-activities • Teacher greets students • Teacher explains about narrative text such as: definition, generic structures, and language features . The 1st topic is Malin Kundang	10’ 70’
3	3rd meeting	2.Whilst activites • Pick the students ideas by using picture and WWW W=2 H=2 questions. • Organize the students notes. In which the teacher gives the students graphic organizer to be a guidance to reconstruct the story • Writing stage, in which the students are required to produce a similar text individually	20’ 20’ 35’	2.Whilst activites • Teacher asks students to write down the general topic at the top of the students’ paper • Students make a list of every idea that comes into the students’ mind about the topic. Keep the ideas flowing. Try to stay on the general topic, then ask students to use	5’ 30’

		3. Post activities • The teacher asks the students who want to make conclusion about the material today that learned and closes the class	5’	words, phrases, or sentences. Don’t worry about spelling or grammar. • Take the main idea and make final draft individually. 3. Post activities • The teacher asks students who want to make conclusion about the material today that learned and closes the class	40’ 5’
4	4th – 11th meeting	1. Pre-activities • Teacher greets students • Teacher explains about the legend of toba lake, the mousedeer and the crocodile, si pahit lidah, and snow white (2nd, 3rd , 4th , 5th topic)	10’ 70’	1. Pre-activities • Teacher greets students • Teacher explains about the legend of toba lake, the mousedeer and the crocodile, si pahit lidah, and snow white (2nd, 3rd , 4th , 5th topic)	10’ 70’
		2. Whilst activites • Pick the students ideas by using picture and WWW W=2 H=2 questions • Organize the students notes. In which the teacher gives the students graphic organizer to be aguidance	20’ 20’	2. Whilst activites • Teacher asks students to write down the general topic at the top of the students’ paper • Students make a list of every idea that comes into the	5’ 30’

		to reconstruct the story • Writing stage, in which the students are required to produce a similar text individually 3.Post activities • The teacher asks the students who want to make conclusion about the material today that learned and closes the class	35' 5'	students' mind about the topic. Keep the ideas flowing. Try to stay on the general topic, then ask students to use words, phrases, or sentences. Don't worry about spelling or grammar. • Take the main idea and make final draft individually. 3. Post activities • The teacher asks students who want to make conclusion about the material today that learned and closes the class	40' 5'
5	12th meeting	Post test	45'	Post test	45'
6	13th meeting	Questionnaire for Experimental Group			80'

H. Techniques for Analyzing Data

In this study, the writer used IBM SPSS (Statistic Package for the Social Science) Statistics version 20 for calculating students score in pretest and posttest between two groups, experimental and control groups. Then the writer presented the data by using some steps and techniques as follows:

1. **Data descriptions**

In data description, distribution of frequency data and descriptive statistics were illustrated from the obtained data of student's pre-test and post-test scores in control and experiment groups.

a. **Distribution of frequency data**

In distribution of frequency data, the student's score, frequency, percentage are achieved. The distribution of frequency data were got from (1) pre-test score in control group, (2) post-test score in control group, (3) pre-test score in experimental group, (4) post-test score in experimental group.

b. **Descriptive statistics**

In descriptive statistics, number of sample, the score of minimal, maximal, mean, standard deviation, and standard error of mean were obtained. Descriptive statistics were obtained from (1) pre-test score in control group, (2) post-test score in control group, (3) pre-test score in experimental group, (4) post-test score in experimental group.

2. **Pre-requisite Analysis**

Before analyzing the obtained data, pre-requisite analysis should be done to see whether or not the data was normal and homogeneous

a. **Normality Test**

According to Basrowi and Soenyono (2007, p. 85), Normality test is used to measure whether the obtained data is normal or not. The data

can be classified into normal whenever the p-output is higher than 0,025. In measuring normality test, ***1-sample kolmogorov smirnov*** was used. The normality test was used to measure student's pretest and posttest scores in control and experimental groups.

b. Homogeneity Test

Homogeneity test was used to measure the obtained scores whether it was homogeneous or not. Basrowi and Soenyono (2007, p. 106) states that the score is categorized homogeneous when the p-output was higher than mean significant difference at 0,05 levels. In measuring homogeneity test, Levene Statistic in SPSS was used. The homogeneity test was used to measure student's pretest and posttest scores in control and experimental groups.

3. Result of Hypothesis Testing

a. Measuring a Significant Difference on Students' Writing Narrative Text Achievement Taught by using POW + WWW W=2 H=2 Strategy and Teacher's Strategy

In measuring significant difference on students' writing achievement taught using POW + WWW W=2 H=2 Strategy and teacher's strategy, independent sample t-test and paired sample t-test was used. A significant different was found whenever the p-output is lower than 0,05 level and the t-value was higher than t-table (Df: 76 = 2000).

b. Measuring Students' Responses on the Implementation of POW + WWW W=2 H=2 Strategy.

In measuring students' responses on the implementation of POW + WWW W=2 H=2 strategy, Quipper School Indonesia (online learning media) was used. The implementation of POW + WWW W=2 H=2 strategy was successful in improving students' writing narrative text whenever the result of questionnaire was students' positive responses higher than students' negative responses.