CHAPTER III

RESEARCH METHOD

This chapter presents a description of the research methods employed in this study. This includes research design, population and sample, instrument, procedure of collecting data, and technique of data analysis.

3.1 Research Design

In this research, the researcher used quasi experiment with non randomized pre-test and post-test. The writer used quasi experiment with non randomized pre-test and post-test because it was impossible to conduct the true experiment in SMA Al-Muniroh. It was because the classification of the class in SMA Al-Muniroh had been determined by the school whereas a true experiment was needed to randomize the group. It meant that the researcher must change the classification of group. Unfortunately, the school did not permit the researcher to change the classification of the group.

The researcher wanted to know the relationship between dependent variable and independent variable before and after treatment, and also to get the result of the data. The researcher tried to find out the result between pre-test and post-test of students after treatment, and also the researcher tried to figure out the significant influence of Think-Talk-Write strategy in teaching writing narrative text for the tenth grade of senior high school at SMA Al-Muniroh. To get the data, the researcher used test items in this research and the method of the research is quantitative.

The researcher divided this research into two groups, they were the control group and experimental group. Both of them were given pre-test, and then the treatment was administrated to the experimental group while the control group was taught as usual by using conventional method. Conventional method was a traditional method where the teacher teaches the students by way of oral or lectures.

In this study, design chart can be seen in the figure below:

Group	Pre-test	Treatment	Post-test
Experiment	+	+	+
Control	+	-	+

Table 3.1. Pre-test Post-test experimental design.

Where   :

+   : with treatment

-   : without treatment

From the table above, it could be seen that both of the classes were given pre-test in the beginning of the research. Then, the experiment group was given treatments by using Think-Talk-Write strategy for five times. After giving treatments, post-test was given to both groups. The procedures of the research design were as follows:

1. Giving pre-test to the subjects in order to measure writing ability before the treatments.

2. Giving treatment to the subjects by using Think-Talk-Write.

3. Giving post-test to the subjects in order to measure writing ability after being given the treatment.

4. Finding the mean different between the results of the pre-test and post-test.

5. Analyzing the data using t-test formula to prove the hypothesis.

6. H_0 is received if t statistic > t table.

7. H_1 is failed if t statistic < t table.

3.2 Population and Sample

3.2.1. Population

Gall & Borg (2003) stated that population is the larger group that they wish to learn about. In this case, this research was carried out for the students of senior high school at Al-Muniroh Ujungpangkah in second semester of academic year 2014/2015.

The researcher took this school as the population of this research because this school never applied this strategy when teaching English. That was known by the researcher after conducting preliminary observation and interviewed some of the English teachers in this school. In addition, most of students also stated that they got difficulty of learning writing very often. They always had problem of constructing and composing essay paragraph.

3.2.2. Sample

After teacher explained that most of students from class X get difficulty in composing writing, the researcher took tenth grade of senior high school at Al-Muniroh. The total number of the population was 58 students and it was divided into 2 classes. The researcher took two classes, class X-IPA and class X-IPS as sample of this research. They were grouped into two groups. One was the experimental class and the other was the control class.

The experimental group is X-IPA which consisted of 30 students while the control group was class X-IPS with 28 students, so the total number of students as sample was 58 students.

3.3 Instrument

Research instrument is an important role in doing the research. In this study the researcher uses test in collecting the data. In this study the researcher used test as instrument.

3.3.1. Test

The most important point activity in the research was to collect the data needed. Research instrument was a tool, which is used by researcher to collect the data. So, the research instrument played an important role in determining the research quality. Instrument could create whether the research successful or not.

Before giving the tests, the researcher measured the validity of the tests to know whether the tests are proper to be given to the students or not. The researcher used test as its instrument because the researcher wanted to figure out the students' ability. In this case, the researcher used instrument of test that form of pre-test and post-test about writing narrative text.

The test used in this study was written test. The pre-test was given before the treatment in the form of teaching the content. This was carried out in order to gain the data of students' entry in mastering writing ability. And the post-test was given at the end of the time after the researcher gave the new

technique to the students. The teacher gave the students the second test. Each student was asked to make narrative text.

To get the score, the researcher used the scoring guide chosen as the criteria of scoring represents the basic aspect of writing. Students' pieces of writing were analyzed by using "analytical scoring scale".

The test can be elaborated as follows:

3.3.1.1.Pre-test

Before giving treatment, the students were given a pre-test in collecting the data to identify the students' achievement in writing narrative text, the test given was written test. The researcher asked the students to recompose a narrative text based on the text given by the researcher.

The students were instructed recompose the text based on their own ideas. Then they created a narrative text based on their ideas. The result of the pre-test used to measure the students' ability in writing narrative text before getting the treatment.

3.3.1.2.Treatment

Before conducting the treatment, the researcher prepared and arranged teaching design. The design which was used to facilitate the researcher in doing research was teaching writing narrative text by using Think-Talk-Write. The researcher conducted five times for treatment. Think-Talk-Write strategy was applied in experimental class.

3.3.1.3.Post-test

The test was also writing narrative text. Post-test was conducted after giving treatment. For the experimental group, Think-Talk-Write was used in teaching writing narrative text to the students. For the control group, a

conventional method was used. Post-test was used to measure the students' ability after giving the treatment and as the comparator of the experimental group.

3.3.2. Validity

Brown (2004) stated that a test is valid. It is appropriate, meaningful, and useful in term of purpose of the test. There were three kinds of validity: content validity, criterion-related validity, and construct validity. In this study, the test was analyzed by using content validity and construct validity. The content validity was measured by relating the content of the instrument in Indonesia curriculum. According to Ary (1990) Content Validity is not always in numeric form but it can be determined whether the test's items reflect the course and objective in curriculum guides, syllabus, and course books. To test the content validity, the researcher compared the content of instrument to the subject based on English curriculum and English syllabus (the syllabus can be seen in Appendix 2). If the test content reflected the curriculum guides, syllabus, and course books, then the test can be said have content validity. Then the researcher might conduct the pre-test when the test content can be said valid.

BASIC COMPETENCE	SUB BASIC COMPETENCE	QUESTIONS	
		PRE-TEST	POST-TEST
3.9 understanding meaning of short story of narrative text in form of oral and written.	3.9.1 understanding meaning of short story of narrative text in form written.	1. Read the short story "SNOW WHITE" given by the teacher, then recompose it based on your ideas!	1. compose a short story based on one of the following topics ! a. The legend of rawa pening b. Golden eggs c. The story of

			malin kundang d. The story of timun mas

Table 3.2 Analyzing Content Validity

3.4 Data Collection

In collecting the data, the researcher thought a method which was used to represent toward the matter of the research. It was very important because the methods of collecting the data influenced the result of the research.

The data was collected through a test. The test was used in order to find out the students' ability. In this study, the researcher used pre test and post test. The data of this research was taken from the writing ability. The researcher chose the subject and divined the group who was taught by using Think-Talk-Write as experimental group and group who was taught without using Think-Talk-Write as a control group. Then, the teacher collected the result of pretest.

The last step in collecting the data was through post-test. Post-test was conducted in both experimental and control group. Post-test was used in order to find out whether there was a significant difference between students' ability in writing narrative text before and after treatment. The students in control group did the post-test after being taught without getting a treatment. In other hand, the experimental group did post-test after getting a treatment. The time to do pre-test and post-test was with the schedule. They worked individually in doing pre-test

and post-test. The last step was the researcher uses SPSS 16.00 program to analyze the data from pre-test and post-test.

3.5 Data Analysis

After collecting the data by conducting pre-test and post-test, the researcher analyzed data by using analytic scale for rating composition tasks of writing and statistical analysis. The researcher took four steps to analyze the result of the test. First, the researcher gave the test to the students. Second, the researcher scored the test. Third, the researcher analyzed the result of the test by using T-test from SPSS Program. Fourth, the researcher gave conclusion the result of the test which was took by using T-test in order to see whether any significant difference of students' ability in writing narrative text who were taught by using Think-Talk-Write and without using Think-Talk-Write. To calculate the data, the researcher used SPSS Program.

3.5.1. Scoring

Brown and Bailey (1984) in Douglas (2004) designed an analytical scoring scale that specified five major categories and a description of five different levels in each category, ranging from "unacceptable" to "excellent". The order in which the five categories (organization, logical development of ideas, grammar, punctuation/spelling/mechanics, and style and quality of expression) were listed may bias the evaluator toward the greater importance of organization and logical development as opposed to punctuation and style.

In this research, the researcher used three raters to score the test. The

first rater was the researcher himself, the second rater was the teacher from that school and the last rater was a friend of the researcher from English university who had ability in English especially in writing skill. The researcher gave the score for the students' composition based on the table below:

No	Aspect	Score	Criteria
1	Content	30	All sentences are relevant and support the topic, progression of given ideas well linked.
		24	Ideas are not well organized but all sentences are relevant and support the topic.
		18	Some lacks of relevant sentences and re-reading required for clarification of ideas.
		12	Individual ideas may be clear but very difficult to deduce connection between them.
		6	Difficult to understand ideas and have many lacks of relevant sentences.
2	Organization	20	Very easy to understand and all of the generic structures are correctly and clearly stated.
		16	Mostly easy to understand and some of generic structures of narrative text are placed incorrectly.
		12	Not too hard to understand and one of the

			generic structures of narrative text are not stated.
		8	An effort needed to understand and two of the generic structures of narrative text are not stated.
		4	Very hard to understand and have many unstated generic structure in narrative text.
3	Vocabulary	20	Use of wide range of vocabulary taught previously
		16	Good use of new words acquired, fairy appropriate synonyms.
		12	Attempts to use words acquired, fairy appropriate vocabulary on the, whole but sometimes restricted.
		8	Restricted vocabulary and use a synonym (but not always appropriate), imprecise and vague, affect meaning.
		4	Very restrict vocabulary and inappropriate use of synonyms seriously hinders communication.
4	Grammar	20	Mastery of grammar (past form of tense) taught on course -- only 1-2 minor mistakes.
		16	A few minor mistakes only (preposition, articles, etc).
		12	Only 1 or 2 major mistakes but a few minor

		8	Major mistakes lead to difficulty in understanding and lack of mastery of sentence construction (past form of tense).
			ones (past form of tense).
		4	Numerous serious mistakes and no mastery of sentence construction (past form of tense).
5	Mechanics	10	No errors in spelling.
		8	only 1 or 2 minor errors in spelling.
		6	Several errors in spelling and a few words very hard to recognize.
		4	Several errors in spelling and some words very hard to recognize.
		2	Numerous errors, hard to recognize many words.

Table 3.3. Analytical scoring scale of writing assessment.

After giving scoring the composition based on the table above, all of score every aspect was assumed and that was the total score of the students' compositions.

3.5.2. Homogeneity Test of Variance

The analysis of variance, assume that variances were equal across groups or samples. The purpose of this test was to analysis the variances of the observation in Control Group and Experimental Group were equal. Because the researcher could not random the students, the researcher used quasi

experimental design. Quasi experimental design needed homogeneity and it was to convince the researcher that both control and experimental group had the same ability in writing skill. So, homogeneity test was necessary to. After knowing that the homogeneity of both groups was equal, the researcher could conduct the treatment. For homogeneity test, the researcher used Levene's *test of homogeneity in SPSS 16.00 version. The test of Levine's test, or P, defines as follow:*

$$P = \frac{(N-k)}{(k-1)} \frac{\sum_{i=1}^{k} N_i (Z_i - Z_{...})^2}{\sum_{i=1}^{k} \sum_{j=1}^{N_i} (Z_{ij} - Z_i)^2}$$

Where:

P   : The result of the test,

K   : The number of different groups to which the samples belong,

N   : The total number of samples,

N_i : The number of samples in the ith group,

Y_{ij} : The value of the jth sample from the ith group,

$$Z_{ij} = \begin{cases} |Y_{ij} - \bar{Y}_{i.}|, \bar{Y}_{i.} \text{ is a mean of } i^{th} \text{ group} \\ |Y_{ij} - \tilde{Y}_{i.}|, \tilde{Y}_{i.} \text{ is median of } i^{th} \text{ group} \end{cases}$$

The significance of P is tested against $F(\alpha, k-1, N-k)$ where F is a quintile of the F test distribution, with $k-1$ and $N-k$ its degrees of freedom, and α is the chosen level of significance (0,05).

To analyze the homogeneity, the researcher used SPSS (Statistical product and service solutions) version 16.00. The homogeneity assumption was checked in SPSS by Levene's test with the following procedures. The first

procedure was inserting the pre test data both experimental and control groups using the data view. The second procedure was going to the analyze menu, selecting compare means, and the choosing independents sample t-test. The last procedure was interpreting the homogeneity test output, the researcher needed to see Lavene's test Column to know whether the equality of variances in the groups of scores were homogeny or not.

3.5.3. Hypothesis Testing

To find out the mean score of pre-test and post-test each group, The formula is as follows:

- Experimental group

$$\mathbf{M_x} = \frac{\sum X}{Nx}$$

- Control group

$$\mathbf{M_y} = \frac{\sum Y}{Ny}$$

Where:

M_x = Mean of experimental group

M_y = Mean of control group

$\sum X$ = Sum of experimental group scores

$\sum y$ = Sum of control group scores

N_x = Number subject of experimental group

N_y = Number subject of experimental group

Ary (2010) stated that to measure the significance of pre-test and post-test, the t-test had to be used. Before applying the t-test formula, the deviation standard for each group had to be computed first. The computation of standard

deviation was as follow:

$$s^2 = \frac{\sum(xi-x)2}{n-1}$$

Where:

$$S = \sqrt{\frac{\sum(xi-x)2}{n-1}}$$

Independent t-test was used to finds out the significant differences between experimental and control groups. Procedures to calculate the t-test was as follows:

1. Test the hypothesis of the research and setting the α (alpha) level at 0,05 (two tailed test). The hypothesis could be formulated as follows:

   H_0: there is no significant difference on the effect of Think-Talk-Write strategy in writing narrative text between experimental and control group.

   H_1: there is significant difference on the effect of Think-Talk-Write strategy in writing narrative text between experimental and control group.

2. Finding t-value using Independent-Sample t-Test and comparing the probability with the level of significance for testing the hypothesis. After the scores were computed in SPSS 16.00 version, then saw the output of Independent-Sample t-Test and interpreted the output that if sig. (2-tailed) > α (0,05), the researcher should accept the H_0, but if sig. (2-tailed) < α (0,05) so the researcher can reject H_0, it means H_1 is accepted.

T-test was calculated in order to find out the comparison of two means between Control Group and Experimental Group pre-test and post-test.To find out t-test, the researcher used the formula as follows:

$$t = \frac{\overline{x}_1 - \overline{x}_2}{s\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$$

Where:

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

Where:

T $\quad$ = t-value

$\overline{x}_1$ $\quad$ = Mean of experimental group

$\overline{x}_2$ $\quad$ = Mean of control group

n_1 $\quad$ = Number subject of experimental group

n_2 $\quad$ = Number subject of control group

S $\quad$ = Deviation standard

S^2 $\quad$ = Variance

S_2^1 $\quad$ = Variance 1

S_2^2 $\quad$ = Variance 2

In calculating t-test, the researcher uses SPSS 16.00 version. The steps in analyzing the data of post-test of both experimental and control group were as follow: first, input the data of post-test in SPSS program between experimental and control group, then click Analyze → Compare Means → Independent Sample T Test. In Independent Sample T Test, input the score variable into Test Variable column, and group variable into Grouping Variable column, then click Define

Group, choose group 1 (for experimental) and group 2 (for control), then click

OK.