CHAPTER III METHOD OF INVESTIGATION

A. Setting of the Research

. The researcher conducted the research in SMP Nurul Islami Wonolopo Mijen Semarang. It is located at Rejosari Wonolopo Mijen Semarang. phone: (024) 70774477, website: <u>www.smp-sma-nuris.com</u>. There are some reasons why the researcher chooses the school as the research object. First, the researcher did her practice teaching at SMA Unggulan Nurul Islami which is under the same foundation with SMP Nurul Islami. So, the researcher is more familiar with the school environment. Therefore, the researcher has known on ability and weakness of students in writing especially English lesson. Second, location of research object is near the researcher's boarding house, so it makes easier for the researcher to execute research. Third, based on the information from the teacher, the students of SMP Nurul Islami Mijen were still weak in writing essay in english. They often found difficulties especially in choosing appropriate vocabulary. Sometimes it was difficult for them to differ between recount and narrative text.

B. Participants of the Research

The research is population research. It means the researcher will take all of the students as the subject of the research. Population is the entire of group of entities or persons to whom the results of a research are intended to apply.¹ The population was the 8th grade students of SMP Nurul Islami Wonolopo Mijen Semarang in the academic year of 2009/2010. The total population is 45 students. When the number of subjects is less than one hundred, they all should be taken as the subject of research.² Based on the statement, the researcher took all of the students as the subject of research. They were divided into two

¹Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*, 13th Ed., (Jakarta: PT. Rineka Cipta, 2006), p. 130.

²*Ibid*, p. 134.

classes, that was 23 students as the experimental group (class A) that were taught by using recount text and diary writing as their homework and 22 students as the control group (class B) that were taught by using conventional method, that was only given treatment by using recount text.

C. Research Design

The method of the research was experimental. The researcher chose the method because she wants to know the effectiveness of using diary writing in student's writing achievement. The approach used is quantitative. It means the method and instrument involve numerical measurement and then statistical quantification was conducted. In experimental design, a pre-test was administered and then followed by separate methodological treatments to a number of different groups of pupils. After a fixed period of time a post test was given.

Based on the explanation above, the design of the research can be described in the pattern below:

Experimental	Pre-test (O1)	Treatment	Post-test (O2)
Group			
Control Group	Pre-test (O3)	Treatment	Post-test (O4)

D. Variable of the Research

Variable is the object of research or something that become the concern of research.³ In this research, there are two variables. They are Independent Variable (X) and Dependent Variable (Y).

1. Independent Variable (X)

Independent variable is variable that the experimenter expects to influence the other.⁴ The independent variable of this research is the use of diary writing to teach recount writing.

³*Ibid.*, p. 118.

2. Dependent Variable (Y)

Dependent variable is variable upon which the independent variable is acting.⁵ The dependent variable of this research is the student's achievement in writing recount text.

E. Technique of Data Collection

To collect the data the researcher used two instruments that are writing test as primary instrument and interview as secondary instrument.

1. Test

Test is any procedure for measuring ability, knowledge, or performance.⁶ Test is used to measure the students' mastery in writing recount text. It was done twice; pre-test and post-test:

a. Pre-test

Before the teacher taught new material by using diary, the teacher asked students to make a recount composition about their unforgetable experience. Pre-test was given to the experimental and control classes in same way.

b. Post-test

Post-test was given to the experiment class and control class. It was given in order to know students' achievement after they were taught by using diary (experimental class) and without diary (control class). In this case, students were asked to make writing about their unforgetable experience once more based on the correct order of generic structure.

2. Interview

Interview is dialogue between interviewer and interviewee. The researcher will interview the students related the writing class. The follow

⁴David Nunan, *Research Method in Language Learning*, (Cambridge: Cambridge University Press, 1992), p. 25.

⁵Ibid.

⁶Jack C Richards and Richard Schmidt, *Longman Dictionary of Language Teaching and Applied Linguistics*, 3rd Ed., (London: Pearson Education Limited, 2002), p. 546.

up of interview is aimed to know how the use of diary writing is. So the researcher would get more information about students' responds. Here, the researcher used semi-structured interview. The Researcher did not record the interview but only took a note.

The researcher took 12 students from total number of the experimental class as the interviewees. The researcher used stratified sample where the subjects of interview were took from group of students with high scores, medium scores, and low scores. After grouping the students, the researcher chose the sample randomly. Each group was taken 4 students.

F. Tecnique of Data Analysis

1. Technique of Scoring Test

In this research, the researcher used rating scale to score or evaluate the students' achievement in writing. There are five aspects, which are used as consideration in scoring. They are content, organization, vocabulary, language use (grammar), and mechanics. The scoring guidance is as follow:

Table 1

Score Guidance

Categories	Score	Criteria
Content	30-27	Excellent to very good: knowledgeable, substantive, thorough development of thesis, relevant to assigned topic.
	26-22	Good to average: some knowledge of subject adequate range, limited development of thesis, mostly relevant to topic, but lacks detail.
	21-17	Fair to poor: limited knowledge of subject, little substance, inadequate development of topic. ⁷

⁷ Sara Cushing Weigle, *Assessing Writing*, (Cambridge: Cambridge University Press, 2002), p. 116.

	16-13	Very poor: does not show knowledge of	
		subject, non-substantive, not pertinent, or not	
		enough to evaluate.	
Organization	20-18	Excellent to very good: fluent expression,	
		ideas clearly stated/ supported, succinct,	
		well-organized, logical sequencing,	
		cohesive.	
	17-14	Good to average: somewhat choppy, loosely	
		organized but main ideas stand out, limited	
		support, logical but incomplete sequencing.	
	13-10	Fair to poor: non-fluent, ideas confused or	
		disconnected, lacks logical sequencing and	
		development.	
	9-7	Very poor: does not communicate, no	
		organization.	
Vocabulary	20-18	Excellent to very good: sophisticated range	
		effective word/idiom choice and usage, word	
		form mastery, appropriate register.	
	17-14	Good to average: adequate range, occasional	
		errors of word/idiom form, choice, usage but	
		meaning not obscured.	
	13-10	Fair to poor: limited range, frequent errors of	
		word/idiom form, choice, usage; meaning	
	~ -	confused or obscured.	
	9-7	Very poor: essentially translation, little	
		knowledge of English vocabulary, idioms,	
T	25.22	word form.	
Language	25-22	Excellent to very good: effective complex	
use		construction, few errors of agreement, tense,	
		number, word order/ function, articles,	
	01.10	pronouns, prepositions.	
	21-18	Good to average: effective but simple	
		constructions, minor problems in complex	
		constructions, several errors of agreement,	
		tense, number, word order/ function, articles,	
		pronouns, prepositions but meaning seldom	
	17 11	obscured.	
	1/-11	rail to poor. Inajor problems in	
		simple/complex constructions, frequent	
		number word order/function articles	
		number, word order/ function, articles,	
		pronouns, preposition and magnetics, run-	
		ons, deterions, meaning confused or	
		obscured.	

	10-5	Very poor: virtually no mastery of sentence construction rules, dominated by errors, does not communicate.
Mechanics	5	Excellent to very good: demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing.
	4	Good to average: occasional errors of spelling, punctuation, capitalization, paragraphing, but meaning not obscured.
	3	Fair to poor: frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused
	2	Very poor: no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate. ⁹

Then the researcher formulates to get the mean of each element of writing researched by the formula as follows:

1. Content

$$Mxc = \frac{\Sigma xc}{S_{max}} x100\%$$

Where

Mxc : The level mastery of content

 $\sum xc$: The students' score of content

 S_{max} : Maximum score of content

2. Organization

$$Mxo = \frac{\Sigma xo}{S_{max}} x100\%$$

Where

Mxo : The level mastery of organization

 $\sum xo$: The students' score of organization

 $S_{max} \quad : Maximum \ score \ of \ organization$

3. Vocabulary

$$Mxv = \frac{\Sigma xv}{S_{max}} x100\%$$

Where

Mxv : The level mastery of vocabulary

 $\sum xv$: The students' score of vocabulary

 S_{max} : Maximum score of vocabulary

4. Grammar

$$Mxg = \frac{\Sigma xg}{S_{max}} x100\%$$

Where

Mxg : The level mastery of grammar

 $\sum xg$: The students' score of grammar

 S_{max} : Maximum score of grammar

5. Mechanic

$$Mxm = \frac{\Sigma xm}{S_{max}} x100\%$$

Where

Mxm : The level mastery of mechanic

 $\sum xm$: The students' score of mechanic

 S_{max} : Maximum score of mechanic

After getting the mean of each element in writing report text, the researcher formulates the result to get the total mean score as follow:

$$Mxt = \frac{\sum xt}{s_{\max}}$$

Where

Mxt : The mean of total score

 $\sum xt$: The number of total

S_{max} : Maximum score for writing elements

Then the result of percentage of each component in writing recount text was consulted to the following criterion:¹⁰

Table 2

The Creterion of Writing Mastery

(Scale Change of Five)

The Percentage	of	Scale Change of Five		Creteria
Skill				
85% - 100 %		4	А	Excellent
75% - 84%		3	В	Good
60% - 74%		2	С	Fair
40% - 59%		1	D	Poor
0% - 39%		0	Е	Fail

Based on the table above, the researcher determined the level of the students' achievement in writing recount text.

2. Pre-test

Before the researcher determined the statistical analysis technique used, she examined the normality and homogeneity test of the data

a) Normality Test

It is used to certain normality of the data that is going to be analyzed whether both groups have normal distribution or not. The normality test with Chi-square is done to find out the distribution data. Step by step Chi-square test is as follows:

- 1. Determine the range (R); the largest data reduced the smallest.
- 2. Determine the many class interval (K) with formula:

$$K = 1 + (3,3) \log n$$

3. Determine the length of the class, using the formula:

$$P = \frac{range}{number of \ class}$$

- 4. Make a frequency distribution table
- 5. Determines the class boundaries (bc) of each class interval

¹⁰Burhan Nurgiyantoro, *Penilaian dalam Pengajaran Bahasa dan Sastra*, (Yogyakarta: BPFE Yogyakarta, 2001), p. 228.

6. Calculating the average Xi (\overline{X}), with the formula:

$$\overline{X} = \frac{\sum f_i x_i}{\sum f_i}$$

7. Calculate variants, with the formula:

$$S = \sqrt{\frac{\sum f_i (x_i - \overline{x})^2}{n - 1}}$$

8. Calculate the value of Z, with the formula:

$$Z = \frac{x - \overline{x}}{s}$$

x = limit class

$$\overline{x} = Average$$

S = Standard deviation

- 9. Define the wide area of each interval
- 10. Calculate the frequency expository (Ei), with formula:

Ei = n x wide area with the n number of sample

11. Make a list of the frequency of observation (Oi), with the frequency expository as follows:

Class	Bc	Z	Р	L	Ei	Oi – Ei
						Ei

12. Calculate the chi-square (X^2) , with the formula:

$$\chi^{2} = \sum_{i=1}^{k} \frac{(O_{i} - E_{i})^{2}}{E_{i}}$$

Determine dk = k-3, where k is the number of class intervals and $\alpha = 5\%$

- 13. Determining the value of χ^2 table
- 14. Determining the distribution normality with test criteria:

If $\chi^2_{count} > \chi^2_{table}$, the data is not normal distribution and the other way if the $\chi^2_{count} < \chi^2_{table}$, the data is normal distribution ¹¹

b) Homogeneity Test

In experimental research, they are two (experiment class) and (control class) that are taken from population have same variant or not.¹² A test should be given to both classes of students before the experiment just to make sure that the both classes really are the same. The steps as follows:

 Calculate variants both classes (experimental and control classes), with the formula:

$$S_1^2 = \frac{\sum (x - \overline{x})^2}{n_1 - 1}$$
 And $S_2^2 = \frac{\sum (x - \overline{x})^2}{n_2 - 1}$

2) Determine $F = \frac{Vb}{Vk}$

Where:

Vb	: Bigger	Varian
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Vk : Smaller Varian

Determine $dk = (n_1 - 1) : (n_2 - 1)$

- 3) Determine F_{table} with $\alpha = 5\%$
- 4) Determining the distribution homogeneity with test criteria:

If $F_{count} > F_{table}$, the data is not homogeneous and the other way if the $F_{count} < F_{table}$, the data is homogeneous.¹³

c) Test of Differences

It is used to examine average whether experiment group and control group have been decided having different average. ¹⁴

¹¹Sudjana, *Metoda Statistika*, (Bandung: Tarsito, 1996), p. 273.

¹²Nurul Zuriah, *Metodologi Penelitian Sosial dan Pendidikan: Teori Aplikasi*, (Jakarta: PT Bumi Aksara, 2006), p. 60.

¹³Sudjana, *op cit*, p. 249.

¹⁴Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: PT. Raja Grafindo Persada, 1995), 6th Ed., p. 264.

T-test is used to analyze the data of this research. A t-test would be the measure you would use to compare the mean scores of the two groups¹⁵

If $\sigma_1^2 = \sigma_2^2$ (has same variant), the formula is:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

With

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

Where:

 \overline{X}_1 : The mean score of the experimental group

 \overline{X}_2 : The mean of the control group

 n_1 : The number of experiment group

 n_2 : The number of control group

 ${S_1}^2$: The standard deviation of experiment group

 ${S_2}^2$: The standard deviation of both groups

If $= \sigma_1^2 \neq \sigma_2^2$ (has no same variant) the formula is:

$$t^{1} = \frac{\overline{X} - \overline{X}_{2}}{\sqrt{\frac{S_{1}^{2}}{n_{1}} + \frac{S_{1}^{2}}{n_{2}}}}$$

The hypotheses are:

Ho =
$$\mu_1 = \mu_2$$

Ha =
$$\mu_1 \neq \mu_2$$

- μ_1 : average data of experiment group
- μ_2 : average data of control group

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¹⁵*Ibid*. p.269.

Criteria test is: Ho is accepted $if - t_{(1-\frac{1}{2}\alpha)} < t < t_{(1-\frac{1}{2}\alpha)}$, where $t_{(1-\frac{1}{2}\alpha)}$ obtained from the distribution list t with $dk = (n_1 + n_2 - 2)$ and opportunities $(1 - \frac{1}{2}\alpha)$. Values for other t Ho rejected.¹⁶

3. Analysis phase end

a. Normality Test

Steps normality second step is the same as the normality test on the initial data.

b. Homogeneity Test

Steps homogeneity second step is the same as the homogeneity test on the initial data.

c. Test Average (t-test)

Proposed hypothesis test in average similarity with t-test is as follows:

Ho = $\mu_1 = \mu_2$

 $Ha \ = \mu_1 > \mu_2$

If $\sigma_1^2 = \sigma_2^2$ (has same variant), the formula is:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

With

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

Where:

 \overline{X}_1 : The mean score of the experimental group

- \overline{X}_2 : The mean of the control group
- n_1 : The number of experiment group
- n_2 : The number of control group
- S_1^2 : The standard deviation of experiment group

¹⁶Sudjana., op. cit., p. 240.

 ${S_2}^2$: The standard deviation of both groups

If $= \sigma_1^2 \neq \sigma_2^2$ (has no same variant) the formula is:

$$t^{1} = \frac{\overline{X} - \overline{X}_{2}}{\sqrt{\frac{S_{1}^{2}}{n_{1}} + \frac{S_{1}^{2}}{n_{2}}}}$$

Testing criteria that apply Ho is accepted if $t_{count} > t_{table}$ with determine dk = $(n_1 + n_2 - 2)$ and $\alpha = 5\%$ with opportunities $(1 - \alpha)$ Values for other t Ho rejected.¹⁷ This Analysis used to interpret more complete of the result of hypothesis. In this Analysis the researcher interprets from the results of the data which already proceed. Then, compare t-test or t_o with t table in the value 5%.

- a. If the result of t value < t table, it means there are no differences result between students who are taught by using diary writing and those are taught by using conventional method.
- b. If the result of t value > t table, it means there are differences result between students who are taught by using diary writing and those are taught by using conventional method.

4. Interview

To get the result of interview, the researcher described the note of interview. Data from the interview would be analyzed by using some steps. First, the data would be edited, and then the researcher tabulated and summarized the data.

G. Research Procedures

There are three stages in doing this experiment: pre-test, experiment, and post-test.

¹⁷*Ibid*, p. 243.

1. Pre-test

The pre-test was administered before the treatment session. The students were asked to write a short recount text. This was done to both groups, the experimental and controlled groups.

2. Giving a treatment

The two groups were given a different treatment. It can be explained as follows:

- a. Experimental Group
 - In the classroom, the teacher introduced students about diary and recount text, and why they are almost similar. Then the students were given some exercises related to both recount text and diary to make them easier to understand.
 - 2) In the end of teaching learning process in the classroom, the teacher asked the students to write a recount text and practice writing diary (as their homeworks). They had to write their experience everyday on the diary. The practice was done about four weeks.
 - 3) In the second week, the teacher corrected the students' recount texts and diaries and gives feedback. The teacher also asked students about the problem they had found when they wrote. By giving feedback and correction, it was hoped that the students would be better in writing and they would not repeat same mistakes.
 - Then the teacher asked the students to write recount text again and continued writing diary.
- b. Control Group
 - In the classroom, teacher only introduced and explained about recount text. Then the students were given some exercises related to recount text.

- In the end of teaching learning process in the classroom, the teacher asked the students to write a recount text as their homeworks.
- 3) Two weeks later, the homework was collected. The teacher corrected the students' recount text and asked them about the problem they had found when they wrote. By giving feedback and correction, it was hoped that the students would be better in writing and they would not repeat same mistakes.
- 4) Then the teacher asked the students to write recount text again.
- 3. Administering a post-test

After different treatment was given, the students both experimental and control group were given a post-test on writing test. This test was aimed to measure the students' achievement on writing recount text. The students were asked to make a short recount text. From this test, the researcher scored the students' works and compared the means of both experimental and control group by applying the *t-test* formula.

Table 3

Research Schedule

Date	Experimental	Control Group	
	Group		
Thursday, March 11 th , 2010	Pre-test	Pre-test	
Monday, March 15 th , 2010	Treatment (Teacher	Treatment (Teacher taught	
	taught the students)	the students)	
Monday, March 29 th , 2010	Giving feedback and	Giving feedback and	
	correction	correction	
Monday, April 12 th , 2010	Post-test	Post-test	
Thursday, April 29 th , 2010	Interview	-	