

## CHAPTER III

### RESEARCH METODOLOGY

#### A. Research Design

The design of this research is a quasi-experimental research. According to Cohen a quasi-experimental is one where the treatment variable is manipulated but the group not equated prior to manipulation of the independent variable, and a research design having some but not entire characteristic of true experiment<sup>27</sup>. The type will be used is pretest-posttest nonequivalent group are not choosing randomly<sup>28</sup>.in this research, the research uses two classes as the as the sample; control group and experimental group. Both classes are administered a pretest at the beginning, treatment just for experimental class in the middle and posttest at the end of the research. The design of this research can be illustrated as follows<sup>29</sup>.

**TABLE III.I**  
**Quasi-Experimental Research**

Group	Pretest	Treatment	Posttest
Experiment	Y <sub>1</sub>	X	Y <sub>2</sub>
Control	Y <sub>1</sub>	-	Y <sub>2</sub>

Based on the table above, treatment is only given to the experimental group. The experimental group is treated by learning descriptive paragraph

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<sup>27</sup> Louis Cohen, et.al. *Research Methods in Education*. Sixth Edition. (New York: Routledge, 2007), p.275

<sup>28</sup> Dr. Sugiono. *Metode Penelitian Kualitatif, kuantitatif dan R&D*. (Alfabeta:Bandung. 2011), p. 79

<sup>29</sup> Prof. Sukardi, Ph. D. *Methodology Penelitian Pendidikan: Kompetensi dan Praktinya*. (Bumi Aksara: Jakarta. 2010), p. 186

writing by using Hero Quest, while the control group does not receive any treatments.

## **B. Time and Location of the Research**

The research was conducted to the second year students of SMPN 1 Bangkinang Barat, Kampar Regency. The research was started on March 6<sup>th</sup> 2013.

## **C. Subject and Object of the Research**

### **a. The subject of the research**

The subject of research was the second year students of SMPN 1 Bangkinang Barat, Kampar regency.

### **b. The object of the research**

The object of the research was using hero quest strategy and writing ability on descriptive paragraph.

## **D. Population and Sample of the Research.**

### **1. The Population**

The population of this research was the second year students of SMPN 1 Bangkinang Barat in 2012-2013 academic years. The numbers of SMPN 1 Bangkinang Barat were 60 students. They were divided into two classes': VIII A: 30 students and VIII B: 30 students.

**TABLE III.2**  
**The Total Population of the Second Year Student of SMPN 2011-2012**

No	Class	The number of students
1.	VIII A	30
2.	VIII B	30
	Total	60 students

## 2. The Sample

The population above is smaller. Based on the design of the research is the experimental group and control group are not choosing randomly. It is strengthening by Suharsimi Arikunto states that if the population is homogenous enough, for the population which is less than 100 persons, the sample is taken all, but if the population is more than 100 persons, the sample is taken between 10- 15 % or 20-25% or more than it<sup>30</sup>. So, based on the statement above the writer takes all of the population as the sample of this research and the type of sample is total sampling. The class is VIII A and VIII B consists of 60 students.

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<sup>30</sup> Suharsimi, Arikunto. *Prosedur Penelitian Suatu Pendekatan Praktik*. (Jakarta: PT. Asdi Mashatya, 2006), p. 134

**TABLE III.3**  
**The Sample of the Research is the Second Year of SMPN 1 Bangkinang Barat**

No	Group	Class	Number Of Student
1	Experimental class	VIII A	30
2	Control class	VIII B	30
Total			60 students

### **E. Technique of Data Collection**

In the research, the researcher used a test as instrument to collect data. The test was used to find out the students' ability in writing descriptive paragraph. The data of this research were the scores of the students' writing ability obtained by using composition test. The test was done twice, before and after treatment (pre-test and post-test) intended to obtain the students' ability in writing descriptive paragraph at the second year of SMPN 1 BANGKINANG BARAT. The students' ability in writing descriptive paragraph was measured by using writing assessment used by the English teacher of SMPN 1 BANGKINANG BARAT.

#### 1. Procedures of collecting data for experimental group

##### a. Pre-test

The Pre-test was given after teaching writing descriptive paragraph without using hero quest strategy. In pre-test, the students wrote a descriptive paragraph related to the topic has given.

b. Treatment

The treatment was conducted for experimental group. The hero quest strategy was administered for about eight meetings

c. Post test

After conducting the treatment 3 meeting, the post-test was administered and it was analyzed as final data for this research. The test given was the same test as given in the pre- test.

Lesson plan for Experimental group:

1. The teacher shows the hero quest strategy that can be written by the students
2. The teacher asks the students to quest the topic of the hero quest strategy
3. The teacher asks the students search the topic individually
4. The teacher asks the students to write Descriptive paragraph based on the topic in the hero quest strategy.

2. Procedures of collecting data for control group

a. Pre-test

The control group was given pre-test to know their writing descriptive paragraph. The test was the same as experimental group.

b. Conventional strategy

In this case, the teaching of writing descriptive paragraph for control group was by using discussion strategy. It means that, in control group the teacher did not use hero quest strategy in learning processes.

c. Post-test

Post-test was also given to control group and the result was analyzed and used as final data for this research.

Lesson plan for control group:

1. The teacher gives the students a topic to write
2. The teacher asks students to write short paragraph based on the topic that is given
3. The teacher asks students to make their writing individually

**Table III. 4**  
**Assessment Aspects of Writing Descriptive Paragraph**

No	Aspect assessed	Score			
		1	2	3	4
1.	Content				
2.	Organization a. Identification b. Description				
3.	Vocabulary				
4.	Language features <ul style="list-style-type: none"> <li>• Adjective and compound adjectives</li> <li>• Linking verb</li> <li>• Attributes do and does</li> <li>• Simple present tense</li> </ul>				
5.	Spelling and punctuation				
<i>Total</i>					
<i>Maximum score</i>		20			

Explanation of score

1. Incompetent
2. Competent enough
3. Competent score
4. Very competent

$$\text{final score} = \frac{\text{Total score}}{\text{Maksimum}} \times 80$$

**Table III. 5**  
**Blueprint of the descriptive paragraph at the Second Year Students of SMPN 1 Bangkinang Barat**

No	The title of descriptive text	The kind of text
1	My favorite animation character.	Descriptive paragraph
2	My favorite artist.	Descriptive paragraph
3	My hero.	Descriptive paragraph
4	My favorite foot ball team.	Descriptive paragraph
5	My best friend	Descriptive paragraph

#### **F. Technique of Analyzing Data**

In order to find out whether there is any significant effect of Hero Quest strategy toward students' writing ability, the data analyses statistically. In analyzing the data, the writer uses score of experimental class and control class by using T-test. The formula is<sup>31</sup>:

<sup>31</sup> Hartono. *Statistic untuk Penelitian*. (Pekanbaru: Pustaka Pelajar, 2008), p. 208

$$t_0 = \frac{M_x - M_y}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

Where:  $t_0$  = Table Observation

SD = Standard Deviation

$M_x$  = Mean of variable x

$M_y$  = Mean of variable y

N = The Number of students

T-Test was obtained by considering the degree of freedom (df) = (n1 + n2)-2<sup>32</sup>.

The result of the formula will be obtained statistically through the hypotheses below:

$H_0$ :  $t_0 > t$ -table

$H_a$ :  $t < t$ -table

$H_0$  is accepted if  $t_0 < t$ -table or there is no significant influence of Hero Quest strategy toward writing ability on descriptive paragraph.

$H_a$  is accepted if  $t_0 > t$ -table or there is no significant influence of Hero Quest strategy toward writing ability on descriptive paragraph.

The abbreviated hypothesis is tested by using parametric statistic, among used *T-test for one sample, Correlation and regression, Varian analysis, and T-*

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<sup>32</sup> Hartono. 2008. *Statistic Untuk Penelitian.*:Pustaka Pelajar: Pekanbaru. P. 206

*test for two samples*. In behalf of parametric statistic is required each of data have to distribute normally. Therefore, before the testing for hypothesis done, the test for normality of data should be done first. There were some techniques that could be used to test the normality of data such as *Paper chance and Chi- Square*<sup>33</sup>. According to Winarno, the chi-square I a statistic used to compare observed and expected frequencies in sample data<sup>34</sup>. And Namboordiri say that the chi-square distribution confined wholly to the positive side of the horizontal axis<sup>35</sup>. So, the writer compares pre-test and pos-test of experimental and control groups.

To know the score of the post test of students from control class and experiment class was distributed normally or not automatically, the researcher used chi- square analysis in SPSS 16.0 version.

After analyzing by using SPSS 16.0 version, the result is as follows:

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<sup>33</sup> Sugiyono. *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, kualitatif, and R&D)*. Bandung : Alfabeta,2012. p. 241

<sup>34</sup> Winarno, Wing Wahyu. *ENCYCLOPEIA OF STATISTIC*.(Yogyakarta: Graha Ilmu, 200), p.32

<sup>35</sup> Krisnan Namboordiri, N. *Applied Multivariate analysis and Experimental Design*. (United States of America: McGraw-Hill, Inc. 1975), p.222

**Table III.5****Test Statistics**

	student	Post-test score
Chi-Square	.000 <sup>a</sup>	16.200 <sup>b</sup>
df	1	17
Asymp. Sig.	1.000	.510

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

b. 18 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.3.

Ho: Variance Population identical

Ha: Variance Population not identical

If Probabilities  $> 0.05$ , the null hypothesis is accepted.

If Probabilities  $< 0.05$ , the null hypothesis is rejected.

Based on the table above, it answered the hypothesis of the research that based on  $\chi^2_{score} = 16.200 < \chi^2_{table} = 27.587$ , it means that  $H_0$  is accepted and  $H_a$  is rejected. Score of Asymp Sig =  $0.510 > 0.05 = 5\%$ , it means that  $H_0$  is accepted and  $H_a$  is rejected. So, the distribution is normal.