

## CHAPTER III

### RESEARCH METHOD

#### A. The Research Design

The type of this research was experimental research because it was the appropriate one of this research. Experiment is testing an idea (for practice or procedure) to determine whether it influences an outcome for dependent variable.<sup>1</sup> The design of this research was quasi-experimental design with non-equivalent control group design, which used two groups; control group and experimental group. According to Gay and Airasian, quasi-experimental design is used when the researcher keep the students in existing classroom intact and the entire classrooms are assigned to treatments.<sup>2</sup> In conducting the research, two classes of second grade students of Senior High School Budi Dharma Dumai were involved. The two classes were called as control group and experimental group that were given pre-test at the beginning in order to know their ability in writing report paragraph. The experimental group was given a treatment (just the teacher-centered teaching). During the treatment in experimental group, the writer was as an observer who observed the students' activities by using Magnet Summaries Strategy. At the end, the students were given post-test. In this research, the pre-test and post-test were compared each group in order to determine the effect of using Magnet Summaries Strategy

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<sup>1</sup>Jhon W. Cresswell. *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, (New Jersey: Person Education, 2008). P. 299.

<sup>2</sup>L. R. Gay, and Peter Airasian. *Educational Research: Competencies for Analysis and Application (Sixth Edition)*. (New Jersey: Pearson Prentice- Hall, 2000). P. 394.

toward ability in report paragraph. The design of this research can be illustrated as follows:

**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>

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

This research was done from August to September 2013 at Senior High School Budi Dharma Dumai .

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

The subject of this research was the Second Grade Students of Senior High School Budi Dharma Dumai in the academic year 2012-2013. The object of this research was the effect of using Magnet Summaries Strategy toward students' ability in writing report paragraph.

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

#### **1. The Population of the Research**

The population of this research was the Second Grade Students at Senior High School Budi Dharma Dumai. The total population of this research was 141 students that consisted of five classes. The specification of the population can be seen on the table below:

**Table III. 2**  
**The Population of the Research**

No	Classes	Population		Total
		Male	Female	
1	IPA 1	18	12	30
2	IPA 2	11	22	33
3	IPS 1	16	8	24
4	IPS 2	10	14	24
5	IPS 3	14	16	30
<b>Total</b>		<b>69</b>	<b>72</b>	<b>141</b>

The population above was large enough to be taken all as sample of the research. Based on the design of the research, the researcher took only two classes as a sample. The reason why the writer took this class was because the students' ability in writing was homogenous. Both groups were selected without random assignment. It was class XI IPS 1 for control class and XI IPS 2 for experimental class.

## **2. The Sample of the Research**

The samples of this research were two classes; XI IPS 1 (24 students) and XI IPS 2 (24 students), in which XI IPS 1 was as control class and XI IPS 2 as experimental class by using cluster sampling. Gay states that cluster sampling is sampling in which groups, not individuals, are randomly selected.<sup>3</sup>

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<sup>3</sup>*Op. Cit.*, p. 129.

### E. The Technique of Collecting Data

To obtain data from the samples of this research, the writer used writing test. The test had been distributed to measure the students' writing ability in writing report paragraph. The aspects that should be measured in writing report paragraph were content, organization, vocabulary, language feature, and spelling and punctuation. The test was divided in two tests; pre-test and post-test. Pre- test was given before the treatment, while post-test was given after treatment.

**Table III. 3**  
**Writing Assessment**

No	Aspect Assessed	SCORE			
		1	2	3	4
1	Content				
2	Organization a. Thesis b. Arguments c. Reiteration				
3	Vocabulary				
4	Grammatical Features a. Action Verbs b. Transition Words c. Present Tense				
5	Spelling and Punctuation				
	<b>Total</b>				
<b>Maximum Score</b>		<b>20</b>			

Explanation of score:

- 1 = incompetent
- 2 = competent enough
- 3 = competent
- 4 = very competent

$$\text{Final score} = \frac{\text{Total Score}}{\text{maximum score}} \times 80$$

## 1. The Validity and Reliability of the Test

The quality of the instrument is very important. Every test, whether, it a short, informal test, or a public examination should be as a valid as the test constructor that can make it. So, the writer used a number of procedures to ensure the data that had been collected, was valid and reliable.

### a. Validity

Validity is the most important idea to consider when preparing or selecting an instrument for use. According to Louis Cohen, validity is an important to effective research. Validity is thus a requirement for quantitative and qualitative/ naturalistic research.<sup>4</sup>To know the validity of the test, the writer used content validity. Content validity examines the degree to which an instrument measures the intended content area covered by the measures (for example, curriculum, a personality trait a set of behavior).<sup>5</sup> Content validity was used by the writer in this test, in which the students were asked to write about the topics related to their materials. Thus, validity was specific to the interpretation being made and being tested to the group.

### b. Reliability

Gays says that reliability is the degree in which a test consistently measure whatever it is measuring.<sup>6</sup> In addition, Brown says that

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<sup>4</sup> Louis Cohen, Lawrence Manion and Keith Morrison, *Research Methods in Education 5<sup>th</sup> Edition*. (New York: London, 2000). p. 121.

<sup>5</sup> Marguerite G.Lodico, *Methods in Educational Research from Theory to Practice*, San Francisco:Jossey-Bass, 2010). p. 93.

<sup>6</sup>*Op.Cit*, p. 169.

reliability has to do with accuracy of measurement.<sup>7</sup> In obtaining the reliability of test, the writer used inters reliability. In this research, the research used two raters to score the students' writing ability on report paragraph. Brown says that inter rater reliability occurs when two or more scores yield inconsistent scores of the same test, possibly for lack of attention to score criteria, inexperience, inattention or even preconceived biases.<sup>8</sup> Thus, reliability was expressed numerically, usually as a reliability coefficient obtained by using correlation.

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<sup>7</sup>H. Douglas Brown. *Language Assessment: Principles and Classroom Practices*, (New York: Pearson Education inc, 2003), 19-27

<sup>8</sup>*Ibid.*, p. 21

**Table III. 4**  
**The Rater 1 and Rater 2 Scores of Students' Writing**  
**Ability on Report Paragraph**

Students	Rater 1	Rater 2
1	64	65
2	64	69
3	55	45
4	60	65
5	71	71
6	62	63
7	50	49
8	67	65
9	69	67
10	54	54
11	62	59
12	69	64
13	58	61
14	61	62
15	67	68
16	67	65
17	65	61
18	63	64
19	60	61
20	56	51
21	70	69
22	60	55
23	60	54
24	55	59

Based on table III.4, it can be seen that the scores both rater 1 and rater 2. The score of rater 1 can be correlated to rater 2. To know the reliability of the test, the writer used product moment formula through SPSS 16.0 Version.

**Table III. 5**  
**Correlations of Score of Rater 1 and Rater 2**

		rater1	rater2
rater1	Pearson Correlation	1	.790**
	Sig. (2-tailed)		.000
	N	24	24
rater2	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	
	N	24	24

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on the table III.5, it can be seen that  $r$  calculation was 0.790. To correlate to  $r$  table, firstly, the writer obtained the degree of freedom (df). The df was 46. Because df=46 was not found, the writer took df= 50 to be correlated either at level 5% and 1%. At the level 5%,  $r$  table is 0.273 and at level 1%,  $r$  table is 0.354.

**Table III.6**  
**Interpretation Product Moment Correlation<sup>9</sup>**

r calculation ( $r_o$ )	r table ( $r_t$ )
0.790	0.273 (5%) 0.354 (1%)

Based on the table III.6, the writer concluded that ( $r_o$ ) was higher than ( $r_t$ ) either at 5% and 1%. Thus, there was a significant correlation between score of rater 1 and rater 2. In other words, the writing test was reliable, because the reliability of writing test was moderate relationship.

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<sup>9</sup>Hartono, *Statistic Untuk Penelitian*, Jogjakarta : Pustaka Belajar, 1998, p. 87.

## F. The Technique of Data Analysis

In analyzing the data, the writer used scores of posttest of experimental class and the control class. These scores were analyzed statistically by using independent sample T-test from SPSS 16.0 Version.

The t-table was employed to see the whether there is significant effect between the mean score of both experimental and control group. The t-obtained value is consulted with the value of t-table at the degree of freedom (df)= (N1+N2)-2 statically hypothesis:

$H_a$  :  $t_o > t\text{-table}$

$H_o$  :  $t_o < t\text{-table}$

$H_a$  is accepted if  $t_o > t\text{-table}$  or there is a significant effect of Using Magnet Summaries Strategy toward ability in writing report paragraph.

$H_o$  is accepted if  $t_o < t\text{-table}$  or there is no significant effect of Using Magnet Summaries Strategy toward ability in writing report paragraph.