

CHAPTER III

RESEARCH METHOD

A. The Research Design

This research was a kind of experimental research. According to Cresswell, “experiment is you test an idea (or practice procedure) to determine whether it influences an outcome or dependent variable”.¹ The design of this research was pre-experimental research. Graeme said that pre experimental design are simple and inexpensive to implement and exploratory in nature, but lack control groups to compare with the experimental group.² In other words, there is only one group participate in conducting this research.

In this research, one class of the eleventh grade students at MA HasanahPekanbaru participated. The class got pre-test at the beginning, treatment in the middle and post-test at the end of the research. In line with this idea, Gay said that, this research called the one group pretest-posttest design, involves a single group that is pre-test, expose to a treatment, and post-test. The success of the treatment is determined by comparing pre-test and post-test scores. The design of this reserch can be seen in the following table:

¹Jhon. W. Cresswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, (New Jersey:Pearson aeducation, 2008), p. 299

² Graeme Keith Porte, *Appraising Research in Second Language Learning: A Practical Approach to Critical analysis of Quantitative Research*, (Philadelpia, John Benjamins Publishing Company, 2002), p. 64

Table. III.1
The Research Design
One group pretest-posttest design

Group	Pre-test	Treatment	Post-test
XI science	O_1	X	O_2

XI science : Experimental group

O_1 : Pre-test for experimental group

X : Receiving particular treatment

O_2 : Post-test for experimental group

In addition, the variable relationship of this research can be illustrated as follow:



B. Location and Time of the Research

This research was conducted at MA HasanahPekanbaru,especially at the eleventh grade students. It is located in Jl. Cempedak. This research was conducted fromMarch to April2014.

C. Subject and Object of the Research

Subject of this research was the eleventh grade students of MA HasanahPekanbaru in 2013-2014 academic year. Meanwhile, the object of this research was the effect of using STOP and DARE strategy on students' writing ability on hortatory exposition paragraphs.

D. Population and Sample of the Research

The eleventh grade students at MA Hasanah Pekanbaru was the population of this research, there were two classes of the eleventh grade students at MA Hasanah Pekanbaru, they were XI class of science program and XI class of social program.

Table III.2
The Population of the Eleventh Grade Students
at MA Hasanah Pekanbaru

No	Class	Population		
		Female	Male	Total
1.	XI science	12	8	20
2.	XI social	11	9	20
Total				

Considering the design of this research was pre-experimental, the researcher only took one class as the sample by cluster sampling, the class was XI class of science program. According to gay and Airasian, cluster sampling does not select the individual, but it selects groups. All of the members of selected groups have similar characteristic. Furthermore, Yogesh stated that “in cluster sampling the sample units contain groups of elements (clusters) instead of individual members or items in the population.”³

E. The Technique of Collecting Data

In order to get the data which are needed by researcher, the technique used by the researcher was test. Brown said that “test is a method of measuring of a person’s ability, knowledge or performance in given

³Yogesh Kumar Singh, *Fundamental of Research Methodology and Statistic*, (New Delhi: New Age Internasional Publisher, 2006), p. 89

domain.”⁴ In this research, the test was used to find out the students’ writing ability on hortatory exposition paragraphs. The data of this research were the scores of the students’ writing.

In this research, the researcher gave the test twice. The researcher used written test by giving some topics of hortatory exposition and asked the students to write the hortatory exposition paragraphs based on the topic given.

1. Validity of the Test

A test is a tool to measure the ability, knowledge, achievement or performance of person. It is pertaining to the statement states by Brown that a test is a method to measure a person’s ability, knowledge, or performance in a given domain.⁵ The more explanation is also explained by Brown that one of the criteria for testing a test is validity. A valid test should be appropriate, meaningful, and useful in terms of the purpose of the assessment. The validity has three kinds, they are content validity, criterion validity, and construct validity.⁶

In this research, the researcher used two kinds of validity, the content and the construct validity, to prove the validity of the test. In the first of kinds, the researcher used the materials tested based on the materials that students learned; hortatory exposition. It dealt with the School Based Curriculum (KTSP) applied in students’ handbooks, that is *Look*

⁴H. Douglas Brown, *Language Assessment: Principle and Classroom Practice*, (New York: Pearson Education 2004), p.3

⁵Brown, H. Douglas. *Loccit*

⁶L.R. Gray and Peter Airasian, *Educational Research: Competencies and Application*, (New Jersey: Prentice-Hall Inc, 200) p. 163-167.

Ahead: An English Course for Senior High School Students Year XI, published by Erlangga in 2006. It was clear to explain that the tests taken for this research were valid.

For more clear evidence, the researcher also provided the construct validity to measure whether tests taken for this research was valid or no valid. In measuring the validity of the tests, the researcher used the SPSS 16.0 application to find the validity of the tests.

Table III.3
The Result of the Validity Test

		Rater1	Rater2
Rater1	Pearson Correlation	1	.926**
	Sig. (2-tailed)		.000
	N	40	40
Rater2	Pearson Correlation	.926**	1
	Sig. (2-tailed)	.000	
	N	40	40

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

Based on the table above, it was clear that the validity value was 0.926. Hartono said that if a validity value is 0.900 – 1.000, it can be interpreted that the validity of the test is very high.⁷ It means that the test was valid.

2. Reliability of the Test

Reliability of the test can be measured from the consistency and dependability of the test. In relation to the statement stated by Brown, he stated that a reliable test is consistent and dependable. Of course, the

⁷Hartono, *Statistik Untuk Penelitian*, (Yogyakarta: PustakaPelajar, 2010), p. 87

consistency and dependability of the test can be measured through the scores given; it is one of the ways provided by Brown. There are some factors influencing the reliability of the test result stated by brown, they are: student-related reliability, rater reliability (Inter-rater reliability and Intra –rater reliability), test administration reliability, and test reliability.

In this part, the researcher measured the reliability of the test through the raters' reliability, specifically in inter-rater reliability. The researcher chose inter-rater reliability because the scores gotten from the test was evaluated by two raters, of course, the scores given were different. So that, the researcher wanted to find out the reliability of the test through the scores scored by two raters. The researcher used the SPSS 16.0 application to find the reliability of the test based on Alpha Cronbach technique.

Table III.4
The Result of the Reliability Test

Reliability Statistic	
Cronbach's Alpha	N of Items
.957	2

Inter-Item Correlation Matrix		
	rater1	rate2
rater1	1.000	.926
rate2	.926	1.000

Based on the previous table, it was clear that the reliability value was 0.957. According to Pallant, if cronbach's alpha is above 0.7, so the scale

can be considered reliable with our sample⁸. Then, the SPSS result of reliability test of data which computed by using SPSS 16.0 got the coefficient of correlation of p -value 0.926 for both score 1 and score 2. According to Cohen, the statistical significance of the correlation coefficient can be found and should be 0.05 or higher if reliability is to be guaranteed.⁹ It means that the test was reliable.

3. Normality of the Test

Abell stated that the Kolmogorov-Smirnov Z test was typically used to assess univariate normality.¹⁰ In order to ensure that the data were normally distributed, the researcher used the Kolmogorov-Smirnov Z test. The normal distribution of data was computed by using SPSS 16.

Then the result is shown. Here is the output table:

Table III. 5
The Result of Normality of the Data

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
Post-test	20	71.30	9.044	52	80

⁸Julie Pallant, *SPSS Survival Manual; A Step by Step Guide to Data Analysis Using SPSS for Windows (Version 10 and 11)*, (Philadelphia: Open University Press, 2001), p. 99

⁹Louis, Cohen, et al, *Research Methods in Education*, (New York: Routledge, 2007), p. 146

¹⁰NielAbell, et. al. *Developing and Validating Rapid Assesment Instrument*, (Madison Aenue, New York: Oxford University Press, Inc., 2009), pp. 121

One-Sample Kolmogorov-Smirnov Test

		Posttest
N		20
Normal Parameters ^a	Mean	71.30
	Std. Deviation	9.044
Most Extreme Differences	Absolute	.217
	Positive	.168
	Negative	-.217
Kolmogorov-Smirnov Z		.972
Asymp. Sig. (2-tailed)		.301

a. Test distribution is Normal.

The SPSS result of normality test of data which computed by using SPSS 16.0 got p -value 0.301, t was higher than 0.05.

$$0.301 > 0.05 = \text{data were normal}$$

It could be concluded that the data of students' writing ability scores were normal.

F. The Technique of Data Analysis

In order to find out whether or not there is a significant difference of writing ability between the students who are taught before using STOP and DARE strategy and those who are taught after using STOP and DARE strategy, the data were analyzed by using SPSS version 16. Before scores were analyzed, the researcher tested the score to see whether they were normally distributed. This analyzing was important to decide whether or not parametric and non parametric data analysis could be employed.

After analyzing the scores to see whether they are normally distributed or not, the data were normal. So, the researcher used parametric data analysis.