

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research is an experimental research. Gay (2003:234) says that experimental research typically consist of two groups, they are experiment group and control group. In this research Scamper technique is independent variable and student's achievement is dependent variable.

The experimental group was teach Scamper technique in writing and the control group was taught with conventional technique.

After doing treatment five topics, researcher gave writing test. Writing test was done to know student's writing ability after treatment. The result would be known by comparing experimental group and control group.

The design of research can be figure out by this formula (Creswell, 1994:132)

Group A 0 _____ X _____ 0

Group B 0 _____ 0

Where:

A: Experimental Group

B: Control Group

X: Using Scamper Technique

0: Pos-test

B. Population and Sample

1. Population

Gay (1987:102) says that population is a group to which the researcher can the results of the study to be generalize sampling is the processes of selecting a number of individuals for a study in such a way that the individuals represent the large group from which they are selected. In research's population is class VIII Junior High School Luhak Nan Duo.

Table 3.1
The Number of the Students at VIII Class
Of Junior High School Luhak Nan Duo at Academic Years
2017/2018

Class	The Number of students
VIII. 4	26 Students
VIII. 5	25 Students
VIII. 6	24 Students
VIII. 7	26 Students

There are 101 students classified into four classes are assumed to have the similar ability in writing. The fact was supported by the students' score in writing.

To know the normality and homogeneous of the data, the researcher uses the aid of computer program called by SPSS (Statistical

Product and Service Solution). The table below shows the result of normality and homogeneity test.

Table 3.2
Test of Normality of Variance

Class	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
value VIII.4	.117	24	.200(*)	.948	24	.240
VIII.5	.140	25	.200(*)	.967	25	.581
VIII.6	.154	26	.115	.896	24	.013
VIII.7	.212	26	.004	.910	26	.026

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Table 3.3
Test of Homogeneity of Variance

	Levene Statistic	df1	df2	Sig.
value Based on Mean	1.263	3	97	.291
Based on Median	1.143	3	97	.336
Based on Median and with adjusted df	1.143	3	93.369	.336
Based on trimmed mean	1.215	3	97	.309

After knowing the normality and homogeneous test by using SPSS, the researcher found that all classes are normal homogeneity as population. The four classes had the significant of normality and homogeneous more than 5% (0.05). Based on the graphics Q-Q Plot, if the data around and near with the line, it means that the data is normal.

2. Sample

The sample is taken by cluster sampling. Gay (1987:110) says that cluster sampling is sampling in which group, not individuals. The

researcher uses this sampling technique because it was hard for her to regroup the existed group. Hence, the writer took the sample classically.

The researcher take class VIII.5 and VIII.6 as the sample, beside that the students in both of class they were taught by the same teacher and material.

C. Place and Time of Research

The research can be held in the second year students of Junior High School Luhak Nan Duo. The treatments were given for six times, after giving treatment the researcher gave both classes post test in order to know the students' writing ability. And to see whether the use of Scamper Technique give significant effect to students' writing ability, the researcher compared the result of pretest and posttest of both classes.

D. Instrument

Instrument is a tool to collect data from sample. There are two instruments that used in this research and each of them is used in different stages. The instruments in this research is test only.

1. Writing test

According to Gay (1987), validity was the most important quality of a test. It was degree to which a test measure and consequently, permitted appropriate interpretation of test scores. However, Arikunto (2006) says "A test has had validity if could be measures the specific purpose related with material that students have learned".

There are 5 components in the profile of writing are adopted by Jacobs (1981):

a) Content

The measure of the content of written product is not easy to do. In order to make the teacher or evaluator simple to count it, he applies several descriptors: knowledge, substantive, through development of thesis, relevant to assigned topic.

b) Organization

In organization there are descriptors that have to take in good written text. They are fluent expression, ideas clearly / supported, succinct, well-organized, logical sequencing, cohesive.

c) Vocabulary

The good writers have to enrich their vocabulary for their writings' quality. But it is not enough without choose the correct vocabulary to the text. So, Jacobs (1981) states vocabulary into four descriptors: sophisticated range, effective word / idiom choice and usage, word form mastery and appropriate register.

d) Language use

As like the vocabulary, in writing evaluation, language use consists of eight descriptors: effective complex constructions,

agreement, tense, number, word order / function, articles, pronouns and prepositions.

e) Mechanics

Mechanics are descriptors about the spelling, punctuation, capitalization, paragraphing and handwriting in written product.

E. Procedure of the research

This research was held in Junior High School Luhak Nan Duo. This research was equipped by Scamper techniques in teaching. The research is conducted in two classes. They are experimental class and control class. As mentioned before the experimental group is the class teach by using scamper technique, while control class is the class is teach without Scamper technique. The topics of the lesson are based on the recent curriculum. The chosen topic is based on the consideration that in teaching the topic, the teacher can use recount text.

To obtain the achievement in this research, the researcher will divide the procedure of this research into three points:

1. Preparation steps

The researcher collected the data that relate with preparation steps:

- a. Planning learning in experimental class
- b. Determining learning material
- c. Determining population and sample
- d. Preparing learning design

e. Preparing research instrument

2. Application steps

In addition, the research procedures is experimental class can be seen in the following table:

Table 3.4

Procedure of Doing Research

No	Learning Activities	Time	Teacher's Activities	Students' Activities
1	<p>Pre-Teaching</p> <p>Aperception</p> <p>Greetings</p> <p>Checking students attendance list.</p> <p>Asking students about last material.</p>	10 minutes	<p><i>Good morning my dear students?</i></p> <p><i>How are you?</i></p> <p><i>I'm not bad</i></p> <p><i>Who is absent today?</i></p> <p><i>Ok good!</i></p> <p><i>Well, before we continue the lesson today, did you still remember about last topic that you learned?</i></p>	<p><i>Morning Miss,</i></p> <p><i>Fine, thank you, and you?</i></p> <p><i>Nobody's absent today</i></p> <p><i>Miss.</i></p> <p><i>Making announcement text Miss.</i></p>

<p>Encouraging students to speak English by asking question.</p> <p>Teacher introduces learning objective to students.</p> <p>The teacher writes a topic of the lesson on the whiteboard.</p> <p>2. Whilst-Activity Exploration (Building Knowledge of the Field)</p> <p>The teacher introduces the topic.</p>		<p><i>Ok good!!</i></p> <p><i>Have you ever been holiday?</i> <i>For example : go to Bali, Jogja atc.</i></p> <p><i>What places have you visited?</i></p> <p><i>Base on your statement, guess what we are going talk today?</i></p> <p><i>Good.</i></p> <p><i>Exactly, we are going to talk about recount text (visited Jogja for the first time).</i></p> <p><i>Ok my dear, recount text is not only tell about my personal experience, but</i></p>	<p><i>Yes Miss</i></p> <p><i>Bukit Tinggi</i> <i>Miss</i></p> <p><i>Tell about</i> <i>Holiday Miss.</i></p> <p><i>Students see the topic in the whiteboard "recount text" (visited Jogja for the first time).</i></p> <p><i>The students listen the teacher explanation.</i></p>
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	<p>Teacher asks the students about recount text?</p> <p>The teacher discussed with the students about the structure and relevant vocabularies in written form.</p> <p>Elaboration (Modeling of the Text)</p> <p>The teacher involves the students to explain purpose, generic structure and language features of the text.</p>		<p><i>also re-tell about past. So recount text is a text that telling the reader about one story, action or activity of the past.</i></p> <p><i>What do you thing about recount text my dear?</i></p> <p><i>What else?</i></p> <p><i>We have to use simple past tense (was, went, stayed, etc).</i></p> <p><i>Please anybody some of you, who can to identify the text?</i></p> <p><i>The purpose of recount is...</i></p> <p><i>The generic structure of recount is...</i></p> <p><i>The language use of recount is...</i></p>	<p><i>Recount text is a text that telling the one story, action or activity.</i></p> <p><i>Recount text is tell past event.</i></p> <p><i>The students listen the teacher explanation.</i></p> <p><i>Some of students identify</i></p> <p><i>The purpose of recount is...</i></p> <p><i>The generic structure of recount is...</i></p> <p><i>The language use of recount is...</i></p>
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	<p>The teacher gives the students examples of the text and explain how to write the text.</p> <p>After that, in order to make sure that they have understood in writing text, ask them to write the text.</p> <p>Confirmation (Joint Construction of the Text)</p> <p>The teacher represent about SCAMPER</p>		<p><i>Ok. My students pay attention to this text! (visited Jogja for the first time).</i></p> <p><i>Ok, my dear students! Do you understand about recount text?</i></p> <p><i>Ok. Students I will explain about SCAMPER, the word "S" Substitute, remove some part. "C" Combine, join, affiliate, or force together two or more elements. "A" Adapt, change some part of your problem. "M" Modify, consider many of the attribute of the thing you're working on and change them. "P" Put to other use Modify the intention of the subject. "E" Eliminate, arbitrarily remove any or all</i></p>	<p><i>The students attentionto the text.</i></p> <p><i>Yes, miss</i></p> <p><i>The students listen the teacher explanation.</i></p> <p><i>Students sit their chair and write their own perception.</i></p>
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	<p>The teacher divides the students into the small group.</p> <p>The teacher encourages students to use the Scamper</p> <p>Ask the member of the group to write a short draft of the recount text.</p>		<p><i>elements of your subject, simplify, reduce to core functionality. "R" Rearrange, similar to Reverse, modify the order of operations or any other hierarchy involved.</i></p> <p><i>Ok. Students I'm going to divide you into pair. Please find your friend after I call your name.</i></p> <p><i>Have you ever been holiday? I want to ask each you to tell your holiday in written form. And make the recount text minimal 3 paragraph. And please you look the vocabulary, generic structure, and example to help you to organize you text.</i></p> <p><i>Ok, time is up!</i></p> <p><i>Please present your drafting with your friend.</i></p> <p><i>Ok, students now you fill blank SCAMPER in this paper</i></p>	<p><i>Students sit the pair.</i></p> <p><i>Students sit their chair and write their own perception.</i></p> <p><i>Students present their draft with</i></p>
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	<p>After finished, have students present to their group a short draft of their work.</p> <p>The teacher asks students to answer the questions on blank Scamper.</p> <p>After the students finished, ask them to collect their paper.</p> <p>Independent Construction</p> <p>Then researcher chooses several students to share their recount text to their friend in front of the class.</p> <p>Teacher gives feedback or comment on students writing.</p>		<p><i>If you finish please collect your paper</i></p> <p><i>Who want to share your written in front of the class, I will give plus for the three member first.</i></p> <p><i>Ok, give plus to your friend.</i></p> <p><i>I think that good, but there some mistake in your language such as...</i></p>	<p><i>their friend.</i></p> <p><i>Students give fill blank SCAMPER in this paper.</i></p> <p><i>Students collect their paper.</i></p> <p><i>Students share their written text on the class.</i></p> <p><i>Students listen their teacher</i></p>
3	<p>Post-Teaching Activity</p> <p>Teacher and students review and conclude the lesson</p>	5 minutes	<p><i>So, recount text is a</i></p>	<p><i>Students</i></p>

	<p>Give reflection</p> <p>The teacher tells about the next material</p> <p>Close the lesson</p>		<p><i>text that telling about...</i></p> <p><i>So, how do you feel after learning this material?</i></p> <p><i>The next meeting we will discuss about my trip to Borobudur Temple, please understand it.</i></p> <p><i>Because time is over, let's say hamdalah.</i></p> <p><i>See you next time</i></p>	<p><i>conclude the material.</i></p> <p><i>Enjoy miss</i></p> <p><i>Yes miss</i></p> <p><i>Say hamdalah</i></p> <p><i>See you too</i></p>
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3. Finishing Steps

- a. Giving test to experimental class
- b. Processing data
- c. Taking conclusion from technique of data collection

F. Technique of Data Collection

1. Test

The data of this research is the students' score on their writing tests. These scores were from the post-test. They are applied to the experimental and control class.

2. Technique of Data Analysis

1) Writing test

Technique of data analysis in this research is statistical procedure. It gives a way to analyze the differences between the groups. To analyze the students' score test, the researcher used T-test mean a statistical procedure used to determine whether both of groups are in the same ability or not. T-test formulas develop which is presented as follow:

- a. This formula is applied to decide mean of students' test score in experimental and control group;

$$\bar{X}_1 = \frac{\sum F_1 x_1}{\sum F_1} \text{ (Experimental group)}$$

$$\bar{X}_2 = \frac{\sum F_2 x_2}{\sum F_2} \text{ (Control group)}$$

- b. This formula is used to decide standard deviation of experimental group;

$$= \frac{n_1 \times \sum F_1 x_1^2 - (\sum F_1 x_1)^2}{n_1 (n_1 - 1)}$$

- c. This formula is used to decide standard deviation of control group;

The formula of T-test is as follows (Sudjana 1996)

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

With:

$$s^2 = \frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1 + n_2 - 2} + X$$

Where:

t : The value of t calculated /observer/ obtained

\bar{X}_1 : Mean score of experimental sample

\bar{X}_2 : Mean score of control sample

n_1 : The number of subject of experimental group

n_2 : The number of subject of control group

S_1^2 : Standard deviation of experimental group

S_2^2 : Standard deviation of control group

The T table was employed to see whether there was significant difference between the mean score of both experimental and control group.

The value of obtained was consulted with the value of t table at the degree of freedom $(n_1-1) + (n_2-1)$ and the level of confidence of $95\% = 0,05$

If the value of obtained is less than the value of t table, the null hypotheses was accepted. On the contrary, if the value of t - obtained is equal or bigger than the value of t table, the alternative one is not accepted.