

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This Research is Experimental research. According to Gay and Airasian, Experimental research is “the only type of the research that can test hypotheses to establish cause and effect relationship”.¹ In this research the researcher used quasi-experimental research design with nonequivalent control group design. Nonequivalent experimental research is one of the most widespread experimental designs in educational research that involves an experimental group and a control group, both are given a pretest and posttest.²

In this research, the researcher took two classes. In the experimental class, the researcher gave students pre-test at the beginning of the teaching learning to identify students’ writing ability. Experimental class was treated by using author’s chair strategy. And the last, there was a posttest at the end of of the teaching learning processes in order to determine the effect of using author’s chair strategy on students’ writing ability.

¹ Gay, LR and Peter Airasian. *Educational Research Competencies for Analysis and Application: Six Editions* (New Jersey: Prentice-Hall, Inc, 2000), p. 367

² Jhon W. Cresswell. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* . New Jersey: Pearson Education. 2008.p. 367

According to Campbell and Stanly, the design of this research can be illustrated as follows:³

Table III.1

Nonequivalent Control Group Design

<i>Class</i>	<i>Pre-test</i>	<i>Treatment</i>	<i>Post-test</i>
<i>Experiment</i>	<i>O₁</i>	<i>X</i>	<i>O₂</i>
<i>Control</i>	<i>O₃</i>		<i>O₄</i>

Where:

O: Students' writing ability in narrative paragraph in pre-test and post-test of experimental and control classes.

X: Teaching writing by using author's chair strategy.

B. Location and the Time of the Research

The research was conducted at the eighth grade students of State Junior High School 10 Tapung located at Tapung sub district Kampar regency. The research was done on May 2014.

C. Subject and Object of the Research

The subject of the research was the eighth grade students of State Junior High School 10 Tapung Kampar regency. The object of this research was the use of author's chair strategy and students' writing ability in narrative paragraph.

³Donald T. Campbell and Julian C. Stanley. *Experimental and Quasi-Experimental Design for Research*. (United States of America: Houghton Mifflin Company, 1963).p. 47

D. Population and Sample of the Research

1. Population of the Research

The population of this research was the eight grade students of State Junior High School 10 Tapung Kampar regency in 2013-2014 academic years. There were four classes. The numbers of the eight grade students of State Junior High School was 103 students.

Table III.2

**The Total Population of the Eight Grade Students of
State Junior High School 10 Tapung
Kampar Regency 2013/2014**

No	Class	Number of Students
1	VIIIA	25
2	VIIIB	25
3	VIIIC	25
4	VIIID	28
Total		103

2. Sample of the Research

Because the total population of the eight grade of State Junior High School 10 Tapung was large enough to be taken as sample, the researcher took the sample by using random sampling technique in this research, especially cluster random sampling technique. Gay and Airasian note random sampling is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being

selected for the sample.⁴ Cluster sampling randomly select the groups, not individuals.⁵

In this research, the researcher took only two of four classes as the samples of this research by using lottery. So, there were four lotteries because there were four classes of the eight grade of State Junior High School 10 Tapung. Then, the researcher decided to take the first lottery as an experimental class and the second lottery as the control class.

Table III.3

The Total Sample of the Research

No	Class	Male	Female	Total Number of Student
1	VIIIA	13	12	25
2	VIIIC	14	11	25
	Total	27	23	50

The table showed the total sample of the research. In experimental class, there were 25 students, 13 students were male while 12 students were female. Then, in control class, there were 25 students, 14 students were male while 11 students were female. So the total number of sample were 50 students, 27 students were male and 23 students were female.

⁴L.R Gay and Peter Airasian. *Educational Research: Competencies for Analysis and Application*. (USA: Prentice Hall, 2000). p.123

⁵*Ibid.*

E. Technique of Data Collection

In this research, the researcher used writing test as the technique of collecting data. The students were tested by asking them to write a narrative paragraph. The test was given twice, before and after the treatment called by pretest and posttest. The pre-test was done in order to identify students' writing ability before being taught by using author's chair strategy and the post-test was done in order to know the significant difference of using author's chair strategy on students' writing ability in narrative paragraph.

According to Hughey, to assess the score of writing ability, there are five components involved, each focuses on an important aspect of writing and weighted according to its approximate importance for written communication: Content, Organization, Vocabulary, Language use and Mechanics.⁶

Table III.4
ESL Composition Profile

Score	Level	Criteria
Content	30-27	<i>Excellent to Very Good:</i> Knowledgeable, substantive, through development of thesis, relevant to assigned topic
	26-22	<i>Good to Average:</i> Some knowledgeable of subject,adequate range, limited development of thesis, mostly relevant to topic, but lacks details
	21-17	<i>Fair to Poor:</i> Limited knowledge of subject, little substance, inadequate development of topic
	16-13	<i>Very Poor:</i> Does not show the knowledge of subject, non substantive, not pertinent, not enough to evaluate

⁶ Jane B. Hughey. *Op.cit.* pp.139-140

Organization	20-18	<i>Excellent to Very Good:</i> Fluent expression, ideas clearly stated or supported, well organized, logical sequencing, cohesive
	17-14	<i>Good to Average:</i> Somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	13-10	<i>Fair to Poor:</i> Non fluent, ideas confused or disconnect, lacks logical sequencing and Development
	9-7	<i>Very Poor:</i> Does not communicate, no organization, not enough to evaluate
Vocabulary	20-18	<i>Excellent to Very Good:</i> Sophisticated range, effective word or idiom choice and usage, word form mastery, appropriate register
	17-14	<i>Good to Average:</i> Adequate range, occasional errors of word or idiom form, usage but meaning not obscured.
	13-10	<i>Fair to Poor:</i> Limited range, frequent errors of word or idiom form, choice, usage, meaning confused or obscure.
	9-7	<i>Very Poor:</i> Essentially translation , little knowledge of English vocabulary, idioms, word form, or not enough to evaluate
Language Use	25-22	<i>Excellent to Very Good:</i> Effective complex construction, few errors of agreement, tense, number, word order or functions, articles, pronouns, prepositions
	21-18	<i>Good to Average:</i> Effective but simple constructions, minor problem in complex constructions, several errors of agreement, tense, number, word order of functions, articles, pronouns, preposition but meaning never obscured
	13-10	<i>Fair to Poor:</i> Major problems in simple or complex constructions, frequent errors of negation, agreement, tense, number, word order or functions, articles, pronouns, prepositions and or fragments, deletions, meaning confused or obscured
	9-7	<i>Very Poor:</i> Virtually no master of sentence construction rules, dominated, by errors, does not communicate, not enough to evaluate
	5	<i>Excellent to Very Good:</i> Demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing
	4	<i>Very Good to Average:</i> Occasional errors of spelling,

Mechanics	3	punctuation, capitalization, paragraphing, but meaning not obscured <i>Fair to Poor:</i> Frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured.
	2	<i>Very Poor:</i> No mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, pr not enough to evaluate.

Then the score was interpreted into the following category:⁷

Tabel III.5
Scoring Guide

No	Score	Frequency	Percentage	Categories
1	80-100		%	Very Good
2	66-79		%	Good
3	56-65		%	Enough
4	40-55		%	Less
5	30-39		%	Fail
Total			100	

F. Technique of Data Analysis

To find out whether there was a significant effect of using author's chair strategy on students' writing ability in narrative paragraph at the eight grade of State Junior High School 10 Tapung Kampar Regency, the data were analyzed statistically. In analyzing the data, the researcher used score of pretest and posttest

⁷Suharsimi Arikunto. *Dasar-Dasar Evaluasi Pendidikan : Edisi Revisi*. (Jakarta: Bumi Aksara, 2009). p. 245

of experimental and control classes. In order to answer this research questions, writer analyzed the data by using t-test formula through SPSS 16 version.

After computing t-test, it was necessary to obtain the degree of freedom used to determine whether the t-score was significant or not. The t-obtained value was consulted with the value of t-table at the degree of freedom. The formula is as follows:⁸

$$df = (N_x + N_y) - 2$$

Where:

df : the degree of freedom

N_x : the number of students in experimental class

N_y : the number of students in control class

Statistically, the hypotheses are:

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 author's chair strategy on students' writing ability in narrative paragraph.

H_o is accepted if $t_o < t\text{-table}$ or there is no a significant effect of using author's chair strategy on students' writing ability in narrative paragraph.

⁸ Hartono. *Statistik Untuk Penelitian*. Jogyakarta: Pustaka Pelajar. 2008
p. 212

G. Realibility and Validity of the Test

The tests used in testing students' writing ability should be valid and reliable. The test can be valid if it measures accurately what it is intended to measure⁹. In this research, the researcher used content validity to know the validity of writing ability test. Content validity is partly a matter of determining if the content that the instruments contains is an adequate sample of the domain of content it is supposed to represent.¹⁰ Thus, the test was given based on the material studied by the students. Content validity was used by the researcher in the test, because students were asked to write about the topics related to the material.

Besides, reliability is the degree to which a test consistently measure whatever it is measuring.¹¹ According to Cohen, reliability in quantitative research is essentially a synonym for dependability, consistency, and replicability over time, over instruments and over groups of respondents.¹² It is clear that reliability is used to measure the quality of the test scores and the consistency of the test.

In obtaining the reliability of the test, the researcher used inters rater reliability. It was because in this research the researcher used two raters to

⁹Arthur Hughes. *Testing For Language Teacher*. (United Kingdom: Cambridge University Press, 2003). p.26

¹⁰ Fraenkel Jack R. & Norman E. Wallen. *How to design and evaluate a research in education*. (New York: McGraw-Hill Companies Inc, 2006). p. 153

¹¹ L.R. Gay and Peter Airisian. *Op.cit*. p.169

¹² Louis Cohen, et al. *Research Method in Education*. (New York: Routledge, 2007). p.146

measure students' score in writing 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.¹³

In this research, the researcher used inter-rater reliability. It was because there were two raters involved in order to assess the students' writing ability. Then, the writer applied SPSS 16 application to find the reliability of the test based on Alpha Cronbach technique. The steps are as follows:

- a. Open SPSS 16,
- b. Open new file,
- c. Enter the data based on the group of variable. In the first column, fill the all of scores from first rater and in the second column, fill the all of scores from second rater,
- d. Press menu analyze, then press scale, then press Reliability Analysis,
- e. Move Scores columns to items, then press Ok.

¹³ H. Douglas Brown. *Language Assessment: Principles and Classroom Practices*. (New York: Pearson Education Inc. 2003),p.21

Then the result will be shown in the output table. The output can be seen as follows:

TABLE III.5
Result of the Reliability Test

Cronbach's Alpha	N of Items
.761	2

Based on the table above, it was clear that the reliability value was 0.761. Based on Siregar's writing, the tests will be able to be called as the reliability tests if the score of r11 is higher than 0.614. The comparison between r11 and 0.6 can be written as follows:

$$0.761 > 0.6$$

It shows that the score of r11 was higher than 0.6, it means that the test was reliable.

¹⁴ Siregar Syofian. *Statistika Parametrik untuk Penelitian Kuantitatif: Dilengkapi dengan Perhitungan Manual dan Aplikasi SPSS Versi 17*. (Jakarta: Bumi Aksara. 2013). p.90.