

## CHAPTER III

### RESEARCH METHOD

#### A. Research Design

This research is a kind of an experimental research. According to Gay and Airaisian, experimental research is “the only type of the research that can test hypothesis to establish cause-effect relationship.”<sup>32</sup> The design of this research is quasi-experimental design. According to Gay and Airasian quasi-experimental research is the researcher has to agree to keep the students in existing classroom while doing the research.<sup>33</sup> This design of research uses non-equivalent control group design.

Two classes became samples in this research. Where, one is called the experimental class, while another is the control class. Both of the classes were given a pre-test and a post-test. Only the experimental class received the treatment by using Collaborative Writing Approach. However, the materials taught to each group were similar. The design of the research can be illustrated as follows:<sup>34</sup>

#### Table III.1

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<sup>32</sup> L.R. Gay and Peter Airasian, *Educational Research Competencies for Analysis and Application Sixth Edition*, (New Jersey: Prentice Hall, Inc., 2000), p. 367

<sup>33</sup> Ibid, p. 394

<sup>34</sup> John W. Creswell. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research: Third Edition*. (New Jersey: Pearson Education International, 2008), p. 313-314

### Nonequivalent Control Group Design

Class	Pre-Test	Treatment	Post-Test
Experimental	O <sub>1</sub>	X	O <sub>2</sub>
Control	O <sub>3</sub>	-	O <sub>4</sub>

## B. Subject and Objective of the Research

### 1. Subject of the research

The subject of this research was the third year students of State Junior High School 2 Kampar in 2013/2014 academic year.

### 2. Object of the research

The object of this research was the effect using collaborative writing approach toward writing ability on narrative paragraphs at the third year students at State Junior High School 2 Kampar.

## C. Time and Location of the Research

### 1. Time of the research

This research was conducted within two months from February to Maret 2014.

### 2. Location of the research

This research was conducted at State Junior High School 2 Kampar. It is located on Jalan Pekanbaru-Bangkinang Km.45, Padang Mutung, Kampar Regency

## D. Population and Sample

### 1. Population

The population of this research was the third year students at State Junior High School 2 Kampar. The total of population is 65 students which consist of there classes. The population can be shown as follows

**Table III.2**

**The Total Population of Third Year Students at State Junior High School 2 Kampar**

No	Class	Men	Women	Total
1.	IX.1	9	12	21
2.	IX.2	13	9	22
3.	IX.3	13	9	22
<b>Total</b>	<b>3 Classes</b>	<b>36</b>	<b>30</b>	<b>65</b>

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Based on the research design, the writer took two classes of them as the sample by using cluster sampling. 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.<sup>35</sup> The writer used lottery to choose two classes from three classes. One of the classes became the experimental class and another became the control class. The experimental class was IX.2 and the control class was IX.1.

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<sup>35</sup> L.R. Gay, *Loc.it.* , p. 129

**Table III.3**  
**The Total Sample of the Research**

<b>No.</b>	<b>Group</b>	<b>Class</b>	<b>Men</b>	<b>Women</b>	<b>Total</b>
1	Experimental	IX.2	13	9	22
2	Control	IX.1	9	12	21
<b>Total</b>					<b>43</b>

#### **E. Technique of Collecting Data**

To find out the effect of using collaborative writing approach toward the students' writing ability on narrative paragraphs of the third year students at State Junior High School 2 Kampar, the writer administered the written test to assess students' writing ability on narrative paragraphs. The test would be done into two stages. The first was pretest done before doing the treatment. The second was posttest done after doing the treatment.

The data of this research were obtained from pre-test and post-test. The data were collected through the following procedures:

- a. The students were given pre-test and post-test in written test.
- b. The writer used two raters to score students' writing ability.
- c. The writer collected and summed up score from raters to get each student's score.

The students' ability in writing paragraphs was measured by using writing assessment used by ESL Composition.

## F. Validity and Reliability of the Test

### 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 stated by Brown that a test is a method to measure a person's ability, knowledge, or performance in a given domain.<sup>36</sup> The more explanation explained also by Brown that one of 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.<sup>37</sup>

In this research, the writer used two kinds of validity, the content and the construct validity, to prove the validity of the test. In the first of kinds, the writer used the materials tested based on the materials that they learned; narrative text. It dealt with the School Based Curriculum (KTSP) applied in students' handbooks. One of English in Focus; for Grade IX Junior High School (SMP/MTs).<sup>38</sup> It was clear to explain that the tests taken for this resresearch were valid.

For more clear evidence, the writer also provided the construct validity to measure whether tests taken for this research are valid or no

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<sup>36</sup> Brown, H. Douglas. *Language Assesment: Principles and Classroom Practice*. (New York: Pearson Education 2004), p. 3.

<sup>37</sup> Gay, L.R., and Peter Airasian. p. *Loc. Cit.*, p. 163-167.

<sup>38</sup> Artono Wardiman, dkk. *English in Focus; for Grade IX Junior High School (SMP/MTs)*, (Pusat Perbukuan Departemen Pendidikan Nasional, 2008)

valid. In measuring the validity of the tests, the researcher used the SPSS 19.0 application to find the validity of the tests. The steps are as follows:

- a. Open SPSS 19.0,
- b. 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
- c. Press menu analyze, then press correlate, then press Bivariate
- d. Move Scores columns to variable, then press Ok

Then the result will be shown. Here was the output table:

**Table III.4**

**The Result of the Validity Test**

		Rater 1	Rater 2
Rater 1	Pearson Correlation	1	,67**
	Sig. (2-tailed)		,00
	N	86	86
Rater 2	Pearson Correlation	,67**	1
	Sig. (2-tailed)	,00	
	N	86	86

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

Based on the table above, it was clear that the validity value was 0.67. According Hartono, the score of validity values is 0.40 – 0.70, it

can called adequate<sup>39</sup>. It show that the validity value in the table above include in 0.40 – 0.70, 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. Relation to the statement stated by Brown, he stated that a reliable test is consistent and dependable. Of course, the 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 tried to measure the reliability of the test through the rater reliability, specifically in inter-rater reliability. The writer chose inter-rater reliability because the scores gotten from the test is evaluated by two raters, of course, the scores given were different. So that, the writer wanted to find out the reliable of the test through the scores scored by two raters. The writer used the SPSS 19.0 application to find the reliability of the test based on Alpha Cronbach technique. The steps are as follows:

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<sup>39</sup> Hartono, Statistik Untuk Penelitian, (Yogyakarta: Pustaka Pelajar, 2010), p. 87

- a. Open SPSS 19.0,
- b. 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,
- c. Press menu *analyze*, then press *scale*, then press *Reliability Analysis*
- d. Move *Scores columns* to *items*, then press *Ok*

Then the result will be shown. Here was the output table:

**Table III.4**

**The Result of the Reliability Test**

Cronbach's Alpha	N of Items
.71	2

Based on the previous table, it was clear that the reliability value was 0.71. According Pallant if cronbach's alpha above 0.7, so the scale can be considered reliable with our sample<sup>40</sup>. It means that the test was reliable.

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<sup>40</sup> Julie 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

## G. Technique of Analysis Data

There are two variables in this research; independent variable (X) and dependent variable (Y). In analyzing the data, the writer used score of pre-test and post-test of experimental and control class. This score was analyzed statistically. In this research, the writer used these formula:

### 1. Independent sample T-test

The t-test for independent sample was used to determine *the first* and *second* formulation of the problem, whether there is probably a significant difference between the means of two independent sample.<sup>41</sup>

$$t_0 = \frac{M_x - M_y}{\frac{SD_x}{\sqrt{N-1}} + \frac{SD_y}{\sqrt{N-1}}}$$

$t_0$  = The value of t - obtained

$M_x$  = The Mean score / Average of students' experiment class.

$M_y$  = The Mean score / Average of students' control class.

$SD_x$  = Standard deviation of experiment class.

$SD_y$  = Standard deviation of control class.

$N$  = Number of students.

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<sup>41</sup>Gay, L.R., and Peter Airasian. p. *Loc. Cit.*, p. 484

## 2. Paired sample t-test or nonindependent sample t-test

For analyzing the post-test and pre-test score (*the third formulation*), writer used Paired-Sample T-test or non-independent sample T-test, as follows:

$$t = \frac{\bar{d} - \mu d}{\frac{S_d}{\sqrt{n}}}$$

Where:

t : The value of t

$\bar{d}$  : Mean

$\mu d$ : Mean different

$S_d$  : Standard deviation

The writer used Independent Sample T-Test and Paired-Sample T-Test to analyze the data of the research through SPSS version 19.0.