

## CHAPTER III

### METHOD OF THE RESEARCH

#### A. Research Method

In this research the writer using The True Experimental Pretest-Posttest Control Group Design. A type of true experimental design where test units are randomly allocated to an experimental group and a control group. The experimental group is exposed to a treatment and both groups are measured afterwards.<sup>36</sup> A true experiment is a type of experimental design and is thought to be the most accurate type of experimental research. This is because a true experiment supports or refutes a hypothesis using statistical analysis. A true experiment is also thought to be the only experimental design that can establish cause and effect relationships. There are some criterias that will be explain:

##### 1) Control Group and Experimental Group

True experiments must have a **control group**, which is a group of research participants that resemble the experimental group but do not receive the experimental treatment. The control group provides a reliable baseline data to which you can compare the experimental results. The **experimental group** is the group of research participants

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<sup>36</sup> Insight Association, "Post-Test Only Control Group Design", (7 February 2019), <https://www.insightsassociation.org/issues-policies/glossary/post-test-only-control-group-design>

who receive the experimental treatment. True experiments must have at least one control group and one experimental group, though it is possible to have more than one experimental group.

## 2) Random Assignment

Technically, if subjects are randomly selected and assigned to treatment or control groups, it should not be necessary to pretest them because the groups are, by definition, equivalent due to randomization.

The symbolic representation of this pretest – posttest design is:

R     O<sub>1</sub>     X     O<sub>2</sub>

R     O<sub>3</sub>             O<sub>4</sub>

Note:

R = Randomized, that is, subjects are randomly selected and randomly assigned to the treatment group

O = Observation or testing

X = The treatment<sup>37</sup>

In this design there is two groups which is each groups was choosen by random (R). First group was treated and another group not treated. Treated group (X) named *Experimental Group* and another one is *Control Group*. The effect of treatment is (O<sub>2</sub>- O<sub>1</sub>)

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<sup>37</sup> Ruth Tappen, *Advanced Nursing Research: From Theory to Practice Second Edition*, (New York: United States, 2015), ISBN: 9781284048308, 64.

$(O_4 - O_3)$ . In this research, the effect of treatment will be analyzed with their summarizing value but using different tools and treatments, experimental group using manga and summarizing story procedure, another one not using manga and the summarizing story procedure. If there is a significant difference between Experimental Group and Control Group, it means the treatment is effective.

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

This research was located at MAN 2 Kota Serang, Banten. It is conducted on Tenth Grade students of MAN 2 Kota Serang in academic year 2018/2019. The time of this research is around 2 months starting on April until May 2019.

## **C. Population, Sample, and Sampling Technique**

### **1) Population and Sample**

The population of this research is all students at Tenth Grade MAN 2 Kota Serang. In this research, the writer chooses 2 classes to be observed. The first class is X Bahasa as Experimental Class and the second class is X IPA 1 as Control Class.

### **2) Sampling Technique**

In this research, the writer uses cluster random sampling. Cluster sampling involves obtaining a random sample of clusters from the population, with all members of each selected cluster invited to

participate (a is false). It is necessary to construct a sampling frame listing all clusters in the population. A sample of a fixed number of clusters is selected at random from this list. Each cluster has the same probability of being selected, independently of all others.<sup>38</sup>

The steps to choosing sample are: First, prepare the paper that was written each class to be observed, X Agama, X Bahasa, X IPA 1, X IPA 2, X IPA 3, X IPA 4, X IPA 5, X IPA 6, X IPS 1, X IPS 2, X IPS 3. Second, Put them into box and shake it until 2 paper out. Last, choose one class will be Experimental class, and another one will be Control Class.

#### **D. Instrument**

##### **1. Test**

A test is used to examine someone's knowledge of something to determine what he or she knows or has learned. Testing measures the level of skill or knowledge that has been reached.<sup>39</sup>

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

##### **1) Pre-test**

Pre-test have been given to X class students's. The pre-test took during 90 minutes both experimental and control class. The test has

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<sup>38</sup> Philip Sedgwick, "Cluster Sampling", *Article in BMJ (online*, (January 2014), 1.

<sup>39</sup> IT Learning and Development, Penn State University, "Differences between Testing, Assessment, and Evaluation", (August 8, 2017), <http://tutorials.istudy.psu.edu/testing/testing2.html>

five criteria of writing summary based on AVID Press<sup>40</sup>: They are, condenses (shortens) the original text, includes only the most important information, includes only what is in the passage, written in the summary writer's own words, and the last is well-written.

Procedure of Pre Test:

1. Put 5-7 groups in classroom
2. Give each groups one short story text and paper sheet to write their summarize.
3. After students finished their group work, teacher collect students summarize.
4. Teacher ends the meeting today.

## 2) Post-test

After the treatment that was given to students, teacher give a test to summarize based AVID Press<sup>41</sup>: They are, condenses (shortens) the original text, includes only the most important information, includes only what is in the passage, written in the summary writer's own words, and the last is well-written. Procedure of Post Test:

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<sup>40</sup> AVID Press, *Middle Level Writing with Integrated Reading and Oral Language, Student Guide*, (United States, 2017), ASIN: B004MM9Z8U, 52.

<sup>41</sup> AVID Press, *Middle Level Writing with Integrated Reading and Oral Language, Student Guide*, (United States, 2017), ASIN: B004MM9Z8U, 52.

1. Put 3-5 groups in classroom
2. Give each groups one chapter Manga copy for Experimental class and one short story text for Control class, also paper sheet to write their summarize.
3. Students read the whole story through at first, and then go back to write the summary.
4. It must be between 60 and 80 words long.
5. After students finished their group work, teacher collect students summarize.
6. Teacher ends the meeting today.

## 2. Scoring Scale for Evaluating Student's Writing Skill

This is the scoring scale based on Jacobs et al.s' scoring profile in Sara Cushing Weigle's book<sup>42</sup>:

*Table 3.1*

*The scoring scale for evaluating student's writing skill*

SCORE	LEVEL	CRITERIA
	30-27	EXCELLENT TO VERY GOOD: knowladgeable, substantive, thorough development of thesis, relevan to

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<sup>42</sup> Sara Cushing Weigle, *Assessing Writing*, (Cambridge: Cambridge University Press, 2002), 116.

CONTENT		assigned topic.
	26-22	GOOD TO AVERAGE: some knowledge of subject, adequate range, limited development of thesis, mostly relevant to topic, but lacks detail.
	21-17	FAIR TO POOR: limited knowledge of subject, little substance, inadequate development of topic.
	20-18	EXCELLENT TO VERY GOOD: fluent expression, ideas clearly stated/supprted, succinct, well-organized, logical sequencing, cohesive.

SCORE	LEVEL	CRITERIA
VOCABULARY	17-14	GOOD TO AVERAGE: adequate range, occasional errors of words/idiom form, choice, usage but meaning not obscured.
	13-10	FAIR TO POOR: limited range,

		frequent errors of words/idiom form, choice, usage, meaning confused or obscured.
	9-7	VERY POOR: essentially translation, little knowledge of english vocabulary, idioms, word form, or not enough to evaluate.

SCORE	LEVEL	CRITERIA
LANGUAGE USE	21-18	GOOD TO AVERAGE: effective but simple construction, minor problem in complex constructions, several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured.
	17-11	FAIR TO POOR: major problem in simple/complex construction, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns,



		prepositions, and/or fragments, run-ons, deletion, meaning confused obscured.
	10-5	VERY POOR: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate.

SCORE	LEVEL	CRITERIA
ORGANIZATION	17-14	GOOD TO AVERAGE: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.
	13-10	FAIR TO POOR: non-fluent, ideas confused or disconnected, lack logical sequencing and development.
	9-7	VERY POOR: does not communicate, no organization, or

		not enough to evaluate.
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SCORE	LEVEL	CRITERIA
MECHANICS	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured.
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured.
	2	VERY POOR: no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate.

### 3. Data Analysis

To make an analysis on the data, researcher using T-Test on the research, which is according to Tae Kyun Kim (2015) “T tests are usually used in cases where the experimental subjects are divided into two independent groups, with one group treated with A and the other group treated with B.”

Under the assumption that the two samples display a normal distribution and have an equal variance, the t statistic is as follows:

$$t = \frac{MX - MY}{\sqrt{\left(\frac{\sum X^2 + \sum Y^2}{NX + NY - 2}\right)\left(\frac{1}{29} + \frac{1}{29}\right)}}$$

The degrees of freedom (df) used in this test are :

$$df = nA + nB - 2$$

After the analysis, the result will be:

Ho : There is no significant effect in using Manga as teaching media to improve students writing story summarizing skill at tenth grade senior high school in the academic year of 2018/2019.

Ha : There is a significant effect in using Manga as teaching media to improve students writing story summarizing skill at tenth grade senior high school in the academic year of 2018/2019.

H0 is accepted if t test < t table

Ha is accepted if t test > t table