

CHAPTER III

RESEARCH METHODOLOGY

A. Research Method

The research is conducted experimental research; where according to David Nunan “experimental is a procedure for testing a hypothesis by setting up a situation in which the strength of the relationship between variables can be tested”.¹ Such as a teaching method and test scores on a formal test of language proficiency. Its conclusion experiment is an activity which intend in planning and conducting certain to with a purpose to use problems.

There were three kinds of experimental research, such as:

A true experiment consist of a control and experiment groups to which subjects have been randomly assigned, and in which all subjects are tested before and after the intervention or treatment under investigation has been administered to the experiment group. A pre-experiment may have pre and post treatment tests, but lacks of a control group. A quasi experiment has both pre-and posttest, and experiment and control group, but no random assignment of subject.²

And in this case, the writer takes a quasi-experiment has both pre and post tests, and experiment and control group. “Quasi-experimental designs do not include the use of random assignment. Reseachers who employ these designs rely instead on other techniques to control (or at least reduce) threats to internal validity.”³

¹ David Nunan, *Research Method in Language Learning*, (New York: Cambridge University Press, 1992), p. 230

² Ibid., 231.

³ Jack R. Frankel, and Norman E. Wallen, *How to Design and Evaluate Research in Education 7th Ed*, (New York, Mc Grow-Hill: 2009), p. 271.

B. Population and Sample

Population is all the subject of research, population is “All cases, situation, or individuals who share one more characteristic”. Population of this research is the tenth grade student of SMA Ma’arif Cilegon. There are two classes in tenth grade. The amount of them are 60 students.

Sample is a subject of individuals or case from within a population. The sample of this research is Class A and Class B.

C. The Location of the research

The researcher takes this research in SMA Ma’arif Cilegon. The location on Jl. Pabean No 04 Kel. Tegal Bunder Kec Purwakarta Kota Cilegon.

D. The Research Instrument

Research instrument is a facility that used by researcher in collecting data, researcher uses research instrument to know the students’ skill. Test is a method of measuring person’s ability or knowledge a given domain.

Researcher using authentic materials as a source of learning, and use cookbooks as a learning medium. Researcher copying recipes from cookbook and distributed to the each person in the class. By doing so, students can find generic structures, and the use of imperatives in a few sentences in the recipe.

E. Data Collection and Data Analysis

1. Data Collection

a) Observation

Observation is the first step in doing research before the writer observers to the location where the research was carried out. The purpose of this observation is asking permission of the head master to do research at his place, by observation the writer can know the situation of the population and sample directly is available or not.

b) Interview

Interview is “the elicitation of data by one person from another through person-to-person encounters”.⁴ Interview is a way of collecting data in which researcher asks the information directly by interview two or more pupils and to the lecture of English, interview is conducted to find out the real condition of students in teaching learning English.

c) Test

Test “is a method of measuring a person’s ability, knowledge, or performance in a given domain”.⁵ It is an instrument a set of techniques, procedures, or items that requires performance on the part of the test taker. “A test measures individual’s ability, knowledge, or performance”.⁶

The writer uses test to get the data and information from the students’ value. In this research, the writer gives the students two test. The test consists of pre-test and post-test.

1. Pre – Test

⁴ Nunan., *loc. cit.*

⁵ H. Douglas Brown, *Language Assesment Principle and Classroom Practices*, (New York: Longman, 2004), 4thed, p. 3

⁶ Ibid.

Pretest group which students are instructed to write a procedure text without the use of authentic material. Students are given a topic or title to write procedure text. Then the students write procedure text from their topic.

2. Post – Test

Posttest administrated after treatments to find out what are the aspects of writing skills are improved by using of authentic material. It could be seen from the average scores of pretest and posttest.

F. Data Analyzing

The last way of the research methodology is analyzing the data. To find out the difference of test using authentic material and to find out the effectiveness of the test not use the authentic material for students writing skill, in analysis the data comprises following :

1. Checking the name and identify of respondent.
2. Checking the content of instrument data collecting.
3. Scoring the items use objective answer by writing test.

Table 3.1 Instructional Procedure Rubrik⁷

	Needs Improvement <i>Below the</i>	Satisfactory <i>Approaching the Standard</i>	Very Good <i>Meets the Standard</i>	Excellent <i>Exceeds the Standard</i>
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⁷ Studylib, “Instructional Procedure Rubric”, (2016),
<http://studylib.net/doc/7644951/procedural-text-rubric>

	<i>Standard</i>			
<i>Purpose</i>	Does not state the benefits of the invention. <i>and / or</i> Does not explain what the invention is designed to do.	Attempts to explain the benefits of the invention. Description lacks clarity.	States how the invention will benefit us and describes what the invention is designed to do.	Provides several examples of how the invention will benefit us and describes what the invention is designed to do in detail.
<i>Equipment & materials used</i>	Key equipment and materials not listed.	Lists most of the equipment and materials used to make the invention.	Lists all equipment and materials used to make the invention.	Lists all equipment and materials used to make the invention including the quantities.
<i>Method</i> *Orders the steps logically. *Writes each step on a new line.	Includes 1 element. Fragmented	Includes 2 elements. Lacks	Includes 3 elements. Logical	Includes all 4 elements. Logical and

<p>*Each step includes sufficient detail.</p> <p>*Uses diagrams or images.</p>	<p>Important steps are missing.</p>	<p>coherence</p> <p>Steps are unclear.</p>	<p>Lacks coherence</p>	<p>coherent</p>
<p><i>Language Features</i></p>	<p>Language not clear.</p> <p>Sentence beginnings repetitive.</p> <p>Present tense not evident.</p> <p>Little evidence of linking words or technical terms.</p>	<p>Attempts to use clear language.</p> <p>Some variety in sentence beginnings.</p> <p>Present tense used.</p> <p>Some evidence of linking words and technical terms.</p>	<p>Clear language used.</p> <p>A variety of sentence beginnings used.</p> <p>Present tense used.</p> <p>Linking words and technical terms used.</p>	<p>Clear and precise language used.</p> <p>A variety of action words used as sentence beginnings.</p> <p>Present tense used.</p> <p>Linking words and technical terms used consistently.</p>
<p><i>Spelling, Punctuation</i></p>	<p>Many grammatical,</p>	<p>A few grammatical</p>	<p>Almost no grammatical,</p>	<p>No grammatical,</p>

<i>and Grammar</i>	spelling, or punctuation errors.	spelling, or punctuation errors.	spelling or punctuation errors.	spelling or punctuation errors.
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Based on the content above, the researcher evaluated the aspects of procedure text writing based on the purpose, audience, equipment and material used, method, language features, and spelling punctuation and grammar. The lowest score was 0 and the highest score was 100.

4. Determining the class interval

After collecting the data, the researcher analyzed them in order to find out whether there was an improvement in the students' writing achievement or not after the treatment. The researcher used repeated measure T-test to find out the improvement of the treatment effect.

- a. Determining mean of (pre test) variable X_1 (treatment class):

$$M_1 = \frac{\sum x_1}{N_1}$$

- b. Determining mean of (post test) variable Y_1 (treatment class):

$$M_1 = \frac{\sum y_1}{N_1}$$

- c. Determining mean of (pre test) variable X_2 (control class):

$$M_1 = \frac{\sum x_2}{N_2}$$

- d. Determining mean of (post test) variable Y_2 (control class):

$$M_1 = \frac{\sum y_2}{N_2}$$

- e. Determine deviation score variable X_1 with formula: $X_1 = X_1 - M_1$
- f. Determine deviation score variable X_2 with formula: $X_2 = X_2 - M_2$
- g. Determine degree of freedom with formula : $Df = N_1 + N_2$
- h. Determining the significantly using t – test and comparing the result of t–test with t table:

$$t_0 = \frac{M_1 - M_2}{\sqrt{\left\{ \frac{\sum X_1^2 + \sum X_2^2}{N_1 + N_2 - 2} \right\} \left\{ \frac{N_1 + N_2}{N_1 \cdot N_2} \right\}}}$$

M_1 = Gained score of the experiment class

M_2 = Gained score of the control class

$\sum X_1^2$ = Sum of square deviation of experiment class

$\sum X_2^2$ = Sum of square deviation of control class

N_1 = Samples of students of experiment class

N_2 = Samples of students of control class

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⁸ Darwyan Syah, *et al.*, *Pengantar Statistik Kependidikan*, (Jakarta: Haja Mandiri, 2011), 105.