

CHAPTER III

METHODOLOGY OF RESEARCH

A. Research Method

This research is an experimental research that consists of two variables. They are independent variable (X) that refers to the use of electronic dictionary, and (Y) refers to students' Writing ability as dependent variable. Experimental research is a research method that the hypothesis which has the form of cause and effect relations by manipulating dependent variable during manipulating time, the writer has to control extraneous variables, perhaps the transitional that occurred really as an effect of manipulating which is not caused by other variable. This research was designed as a quasi-experimental research which was intended to find out the effectiveness of electronic dictionary in descriptive text toward students' writing ability.

B. Place and Time of research

This research was conducted on the first semester in the academic year 2015/2016. It was conducted in SMPN 1 Pontang, which was located on Jl Ciptayasa KM 12 Pontang kec

serang prov. Banten. Researcher use the method of electronic dictionary because student have never learnt to use the electronic dictionary, this method good for improving motivation learn the student in ability write.

C. Population and Sample

Population is all cases, situation or individuals who share one of more characters.¹ This research was conducted on the first semester in the academic year 2015/2016. It was conducted in SMPN 1 Pontang, which was located on Kota Pontang. There are 100 students of firstgrade students that are divided into 7 classes. So the writer takes two classes as sample of this research.

According to Arikunto, sample is sub group of research population as individual. Dealing with the research, the writer determine research sample by using clustering purposive sample by taking students of VII C and VII F as the sample which groups, with 25 students each. One group of VII F as a control class and VII C as an experiment class.

¹ David Nunan, *Research Methods in Language Learning*, (New York: Cambridge University Press, 1992), p.231

D. Technique of Data Collection

In completing the data, writer used a technique to get the authentic data as follow:

1. Observation

Observation is data collecting technique through observing from the field. The writer observed the class to know the situation and see interaction between English Teacher with the students while the teaching-learning process.

2. Test

Test is question or practice of knowledge skill measure, intelligence ability, or the trace for an individual or group. According to Arikunto, test is instrument or procedure in order measuring a structure and measuring.²

- a. Pre- test

Pre-test was used to collect the data about students' writingskill before getting treatment for experimental class and before getting no

²SuharsimiArikunto, *ProsedurPenelitian*(Jakarta: RinekaCipta Press, 2010), 272.

treatment for control class. The test was administered to the second grade students at SMPN 1 Pontang

b. Post- test

Post-test was used to collect the data about students' writing ability after getting treatment for experimental class and after getting no treatment for control class. The test was administered to the second grade students at SMPN 1 Pontang. Then, the writer took the total score from the result of the writing descriptive test.

E. Technique of Data Analyzing

The data of the research were picked from students' pre-test and post-test score of quasi-experimental research. The writer analyze the data by using t-test. To know whether the result of the research was statistically significant.

According to H. Douglas Brown, there are five aspects of writing scoring³:

1. Content

Level	Criteria
30-27	Excellent to very good knowledgeable, substantive, thorough development of thesis, relevant to 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.
16-13	Very poor: does not show knowledge of subject, nonsubstantive, not pertinent, or not enough to evaluate.

³ H. Douglas Brown, *Language Assessment Principles and Classroom Practice*, (San Francisco: Longman, 2004). p.246.

2. Organization

Level	Criteria
20-18	Excelent to very good fluent expression, ideas clearly stated/suported, succinct, well-organized, logical scquencing, cohesive.
17-14	Good to averange somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing and development
13-10	Fair to poor non-fluent, ideas confused or disconnected, lacks logical sequencing and development.
9-7	Very poor: does not communicate, no organization, or not enough to evaluate.

3. Vocabulary

Level	Criteria
20-18	Excelent to Very Good: shopisticated range, effective word/idiom choice and usage, word form matery, appropriate register.
17-14	Good to averange adeuaterange, occasional errors of word/idiom form, choice, usage but

	meaning not obscured.
13-10	Fair to poor: limited range, frequent errors of word/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.

4. Language use

Level	Criteria
25-22	Excelent to Very Good: effective complex constructions few errors of agreement, tense, number, word order/function, articles, pronuns, preposition.
21-18	Good to averange eeffective but simple constructions, minor problems 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 problems in simple/complex constructions, frequent errorrs of negation, agreement, tense, number,

	word order/function, articles, pronouns prepositions and/or fragments, run-ons, deletions, meaning confused or obscured.
10-5	Very poor: virtually no mastery of sentence constructions rules, dominated by errors, does not communicate, or not enough to evaluate.

5. Mechanics

Level	Criteria
5	Excellent to very good: demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing.
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.

The data were analyzed by using the formula as follows:

- a. Investigate students' worksheets, give and describe score in table.

- b. Determine mean of variable X with formula;

$$MX = \frac{\sum dx}{N}$$

- c. Determine mean of variable Y with formula:

$$MY = \frac{\sum dy}{N}$$

- d. Determine how big percentage of the average score increase variable X by formula:

$$\% = \frac{MX}{MX + MY} \times 100\%$$

- e. Determine how big percentage of the average score increase variable Y by formula:

$$\% = \frac{MY}{MY + MX} \times 100\%$$

- f. Determine standard deviation X

$$\sum X^2 = \sum X^2 - \frac{(\sum X)^2}{N}$$

- g. Determine standard deviation Y

$$\sum Y^2 = \sum Y^2 - \frac{(\sum Y)^2}{N}$$

- h. Analyze the result by using the calculation of the t test

$$t_0 = \frac{Mx - My}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right)\left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

Where:

t_0 = $t_{\text{observation}}$

MX = the mean of the experiment class

MY = the mean of the control class

$\sum X^2$ = sum of square deviation of experiment class

$\sum Y^2$ = sum of square deviation of control class

N_x = samples of students of experiment class

N_y = samples of students of control class

N = the number of cases

After computing t_{test} , it is necessary to obtain the degree of freedom that is used to determine whether the t_{table} is significant or not. The t_{observed} value is consulted with the value of t_{table} by using degree of freedom. The formula of degree of freedom is as follows:

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

where:

df: degree of freedom

N_x : the number of students in experimental

N_y : the number of students in control