CHAPTER III

METHODOLOGY OF RESEARCH

A. Research Method

To investigate the effectiveness of DWA strategy in increasing students' writing skill in recount text, an experimental study would be suitable to the purpose of the research. In this research, the researcher uses quantitative design to achieve the purpose. It means the method and instrument involve numerical measurement and then statistical quantification was conducted.

The researcher use time series of experimental method. Experiment is a produce for testing a hypothesis by setting up a situation in which the strength of relationship between variables can be tested.[1]

Experimental study itself can be defined as an objective, systematic, and controlled study to predict or control the phenomena[2]. Thus, the purpose of experimental research is to test causality relationship between the variables.

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[1] David Nunan, *Research Methods in Language Learning,* (New York: Cambridge University Press, 1992), p. 230.
[2] A. R. Syamsudin, Damaianti, M. S., S. V., *Metode Penelitian Pendidikan Bahasa*, (Bandung: PT Remaja Rosdakarya. 2011)

There are three types of experiment such as:[3]

1. Pre-experiment: may have pre- and post treatment tests, but lack a control group

2. Quasi-experiment: has both pre- and post test and experimental and control groups, but no random assignment of subject

3. True-experiment: has both pre- and post tests, experimental and control groups, and random assignment of subject.

In this research the writer uses **quasi experiment** research (pre test-post test non-equivalent-group design) to conduct the study. Pre test-post test non-equivalent-group design is an experimental design had two groups; the first group obtain treatment, while the second group is control. In the design, the treatments' group (experimental group) and controls' group before obtain treatment have pre test. This pre test used to guaranteed that two groups before obtain the different treatment is same and if different, the different can be restrained.[4] In this experimental design no carrying out of random.

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[3] David Nunan, *Op Cit.,* p. 41
[4] Rony Kountur, *Metode Penelitian Untuk Penyusunan Skripsi dan Tesis,* Jakarta: PPM, 2007, p. 136.

The writer takes one class as an experiment class; the class is given pre-test; second, the treatment students practice using DWA strategy, and third, students are given post test to measure the treatment is effective or no. And takes one class as a control class; the class given pre test; second, the control students practice using placebo or usual method.

The design of quasi can be represented as follows:

R_1 O_{1a} X O_{1b}

R_2 O_{2a} O_{2b}

R_1 : Experiment Group

R_2 : Controlled Group

O_{1a} : Pre test

X   : Treatment

O_{1b} : Post test

O_{2a} : Pre test

O_{2b} : Post test

------   : The groups are not randomly formed.[5]

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[5] Kountur, *Ibid.*, p. 136

The writer conduct 6 meetings, 3 time meetings in experiment class and 3 time meetings in control class. In the experiment class consist of introduction, pre test, gives the lesson using DWA strategy, and post test to know whether there is effectiveness or no.

Several steps of this research:

1. The researcher giving the pre test.

2. The researcher implementing the treatment.

3. The researcher giving the post test.

4. The researcher compares the outcome pre test and post test.

B. Research Place and Time

The writer did the research at SMPN 5 Kota Serang which located at Jl. Warung Jaud number 57 Kasemen, Serang. The subject in this research is the student second grade of SMPN 5 Kota Serang. She conducted this research from 02nd August up to 30th September 2016. It began by observation of SMPN 5 Kota Serang from 02nd August. Then, from 28th August to 30th September 2016, the writer held an experiment by using Directed Writing Activity (DWA) as strategy in learning recount text.

C. The Population and Sample

a. Population

According to David Nunan, "population is all cases, situations, or individuals who share one or more characteristic".[6] The population of this research is the second grade students of SMPN 5 Kota Serang. There are ten classes in the second grade consist 410 students in academic year 2016-2017.

b. Sample

Sample is a subset of individuals or cases from within a population.[7] There are ten classes of second grade in SMPN 5 Kota Serang. The researcher chooses VIII D and VIII G classes as a sample from the second class. Class VIII D consist of 40 students as experimental class and class VIII G consist of 40 students as controlled class. The researcher chooses VIII D and VIII G classes because their schedule time is appropriate with the schedule time of the researcher.

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[6] *Ibid.,* p. 231
[7] *Ibid.,* p. 232

D. The Research Instrument

Every researcher needs some instrument to collect data. In this research, the data will be gotten through two instruments. The instruments that used by the researcher consist of pre test and post test. Pre test and post test are research instruments that use as an instrument to know the result from experimental class and control class.

The pre test is administered before the treatment to get data on the students' prior knowledge, while post test given after the last treatment to get data on the impact of using DWA to develop students' skill in writing recount text.

Pre test is question to evaluate the subject that using the conventional method in teaching to both of classes. Post test is question to evaluate the subject that using DWA Strategy on recount text in experiment class and conventional method in control class.

E. Technique of Collecting Data

1. Observation

Observation is the way and technique data collecting in which the researcher collects systematically to see and observe directly to the subject of the research. The researcher does the observation to get information about the existence and condition of the school from teacher and the headmaster of the school also from the students. Beside it, the researcher can collect information that happened in the class since learning, and it is focused in how far the effectiveness of DWA strategy in students' writing recount text.

2. Test

Test is any procedure for measuring ability, knowledge, or performance.[8] Test is used to measure the students' mastery in writing recount text. It was done twice; pre-test and post-test:

a. Pre-test

The pre test is aimed to know the students mastery in writing recount text before the treatments carried out.

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[8] Jack C Richards and Richard Schmidt, *Longman Dictionary of Language Teaching and Applied Linguistics*, 3rd Ed., (London: Pearson Education Limited, 2002), p. 546

Before the teacher taught new material by using DWA, the teacher asked students to make a recount composition about their unforgettable holiday. Pre-test was given to the experimental and control classes in same way. This result of the test became the evaluation before the use of DWA in teaching recount text is applied in the class.

b. Post-test

Post-test was given to the experiment class and control class. It was given in order to know students' achievement after they were taught by using DWA (experimental class) and without DWA (control class). In this case, students were asked to make writing about their interesting experience based on the correct order of generic structure. The result of the scoring then is compared with pre-test. In this case, the researcher knows how far is the effectiveness of using DWA in teaching recount text.

To score writing test, the writer used assessment of Jacobs in Sara Cushing Weigle's book. In the Jacobs scale, scripts are rated on five aspect of writing: content, organization,

vocabulary, language use, and mechanics.[9] This is specific criteria:[10]

SCORE	LEVEL	CRITERIA
CONTENT	30 – 27	Excellent to very good: knowledgeable, substantive, through 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: doesn't show knowledge of subject, not-substantive, not pertinent, or not enough to evaluate.

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[9] Sara Cushing Weigle, *Assessing Writing,* (Cambridge: Cambridge University Press, 2002), p. 116.

ORGANIZATION	20 - 18	Excellent to very good: fluent expression, ideas clearly stated/supported, succinct, well-organized, logical sequencing, cohesive.
	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, lacks logical sequencing and development.
	9 – 7	Very poor: doesn't communicate, no organization, or not enough to evaluate.
VOCABULARY	20 - 18	Excellent to very good: sophisticated, range, effective word/idiom choice and usage, word form mastery, appropriate register.
	17 - 14	Good to average: adequate range, 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.
LANGUAGE USE	25 – 22	Excellent to very good: effective complex constructions, few errors of agreement, tense, number, word order/functions, articles, pronouns, prepositions.
	21 – 18	Good to average: effective 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 errors of negation, agreement, tense, number, word order/functions, 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, doesn't communicate, or not enough to evaluate.
MECHANIS M	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, hand writing illegible, or not enough to evaluate.

F. Technique of Data Analyzing

To analyze the data, the researcher will apply the following steps:

1. The result of pre test in experiment and control class.

2. The result of post test in experiment and control class.

3. Statistical approach for quantitative data.

    1) Collecting and scoring the students' test sheet.

    Table Analysis:

No	Initial Name	Pre-Test X	Post-Test Y
1			
2			
...			
30			
Total Score			
Average			

(The Score of Pre test/Post test)

No	Initial Name	X	Y	D=(X-Y)	D^2=(X-Y)

1					
2					
...					
30					
Total Score					
Average					

(The Deviation Table of Pre test/Post test)

    2) To interpret the students score

To analyze the data use t-test, there are several steps in analyzing the result of the test[11].

1. Determine the standard deviation, as follow:

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

2. Determining mean of difference (MD) to get the result of the pre test and post test:

[11] Supardi, Darwansyah, Pengantar Statistik Pendidikan, Jakarta: Diadit Media, 2009, p. 139-140.

$$M_D = \frac{\sum D}{N}$$

3. Determining the mean of differences (SE_{MD}) between X variable and Y variable, by formula:

$$SE_{MD} = \frac{SD_D}{\sqrt{N-1}}$$

4. Determining the degree of freedom:

$$Df = N_1 + N_2 - 2$$

5. Determining the result of to:

$$t_o = \frac{M_D}{SE_{MD}}$$