

## CHAPTER III

### RESEARCH METHODOLOGY

#### A. The Method of Research

Experimental research is one of the most powerful research methodologies that researchers can use. Of the many types of research that might be used, the experiment is the best way to establish cause and effect relationships among variables. Yet experiments are not always easy to conduct<sup>1</sup>.

Quantitative data can be analyzed and displayed in many different ways some familiar ways of reporting numerical data include percentages and proportions. Such data can also be provided in helpful graphic displays such proportions<sup>2</sup>.

From the definition above can be understood, the author will be using quantitative research. The study will be intended to find out the influence of Whole Brain Teaching Method to their speaking ability. However, further finding should be explored in order to determine whether or not they were

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<sup>1</sup> Jack R Fraenkel, Norman E wallen. *How to design and evaluate research in education.*( United States : McGraw Hill, 2006). Page 267

<sup>2</sup>David Nunan, Kathleen M. Bailey. *Exploring Second Language Classroom Research a comprehension guide* (Canada: SherriseRoehr, 2009). Page 372

interested in the material selections and the teaching strategies. For this purpose, then, descriptive statistical analysis was applied. In this case, the sample's response were calculated to find out the dominant responses representative.

The research use quasi experimental method because experimental research is strategy of investigation conceived as to solve the research problem. This research uses quasi experimental design of time-series design, and the form of the design.

## **B. Research Variables**

This research consists of two variables are: Whole Brain Teaching as (X) variable, while Speaking ability as (Y) variable.

## **C. The Place and Time of Study**

In this research the researcher take place at SMPN 17 Serang. It is located at Jl. KesawonKaligandu, Serang. The time of the research is around 3 weeks start at 19 April 2018 until 5 May 2018.

## D. Population and Sample

### 1. Population

Population is simply a group of individuals who share a certain characteristic. We all belong simultaneously to multiple populations, the most inclusive of which is the human race<sup>3</sup>.

In this research writer take the students' of second grade of SMPN 17 Serang as the population of this research. There are seven class in VIII and every class have 30 students', and the total population of this research is 210 students'.

### 2. Sample

In this research, the researcher take two classes as sample are class VIII G as a class experiment with a number of 30 students and class VIII F as the control class with the number of 30 students. Then, it can be seen that this sample amounted to 60 students. The if total its subject is more may be take 20-30%. Because, the subject second grade at SMPN 17 Serang more than

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<sup>3</sup> David Nunan, *Exploring Second language Classroom language Classroom research*,(SherriseRoehr 2009) page 64

200 subject. The researcher take 25% as sample of researcher or 60 students.

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

For collecting the data, the writer will conduct pretest and posttest.

#### a. Pretest

Pretest was employed before the treatment that was given to the experimental groups and control groups. Pretest was done to know students' the speaking ability.

#### b. Posttest

Posttest was employed in the end of the program of the research. Post test was done in both groups, experimental groups and control groups. The test was used to know the students' speaking ability after the treatment.

### **F. The Research Instrument**

#### 1. Observation

The researcher used the observation checklist to make it more systematic. Containing list of students'

activities and response or happening which might happen. Observation is intended to see and to know about the condition of class and students. Process of teaching and learning, the students' motivation, to see their difficulties, their problem, and their understanding about the material given that can be seen from their attitude, behavior, and response.

Before doing the research, the writer does the observation directly to the school that becomes the place of this research and also to population who becomes object of this research. The object of this research consists of the students activity.

The purpose of this observation is to get some factual information about teaching learning activities and how is the students' response in learning English.

In this study, researchers used direct observation of the study site in class VIII F and VIII G, students motivation, process of learning and teachers competence at SMPN 17 Serang.

## 2. Lesson Plan

Lesson plan is used for treatment process. The purpose is to make systematical learning process.

## 3. Rubric of Speaking assessment

Concerning with the validity of the test, Hughes proposed criteria of how to measure oral test, the description likely mention in the following the table:<sup>4</sup>

Table 3.1

The criteria students' score

<b>Weighting Table</b>							
Proficiency Description	1	2	3	4	5	6	(A)
Accent	0	1	2	2	3	4	
Grammar	6	12	18	24	30	36	
Vocabulary	4	8	12	16	20	24	
Fluency	2	4	6	8	10	12	
Comprehension	4	8	12	15	19	23	
<b>Total</b>	<b>16</b>	<b>33</b>	<b>50</b>	<b>65</b>	<b>82</b>	<b>99</b>	

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<sup>4</sup>Arthur Hughes, *Testing for Language Teachers*, (Cambridge : Chambridge University Press, 1989), p.111

- Accent
  1. Pronunciation frequently unintelligible
  2. Frequent gross errors and very heavy accent make understanding difficult, require frequent repetition
  3. “Foreign accent” requires concentrated listening and mispronunciation lead to occasional misunderstanding and apparent errors in grammar and vocabulary.
  4. Marked “foreign accent” and occasional mispronunciation which do not interfere with understanding
  5. No conspicuous, but would not be taken for native speaker
  6. Native pronunciation, with no trace of “foreign language”
- Grammar
  1. Grammar almost inaccurate phrases
  2. Constant errors showing control of very few major patterns and frequently preventing communication

3. Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding
  4. Occasional errors showing imperfect control of some patterns but no weakness that cause misunderstanding
  5. Few errors with no pattern of failure
  6. No more than two errors during the interview
- Vocabulary
    1. Vocabulary inadequate for even the simplest conversation
    2. Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc.)
    3. Choice of word sometimes inaccurate, limitation of vocabulary prevents presentation of some common professional and social topics
    4. Professional vocabulary adequate to presented special interest: general vocabulary permits presented of any nontechnical subject with some circumlocutions.



5. Professional vocabulary broad and precise. General vocabulary adequate to cope with complex practical problems and varied social situations
  6. Vocabulary apparently as accurate and extensive as that of an educated native speaker
- Fluency
    1. Speech so halting and fragmentary that conversation is virtually
    2. Speech is very slow and uneven except for short or routine sentences
    3. Speech is frequently hesitant and jerky: sentences may be left completed
    4. Speech is occasionally hesitant, with some unevenness cause by rephrasing and grouping for words
    5. Speech is effortless and smooth, but perceptibly non-native in speech and evenness
    6. Speech on all professional and general topics as effortless and smooth as native speaker

- Comprehension
  1. Understand too little for the simplest type of conversation
  2. Understand only slow, very simple speech on common social and touristic topics requires consonant repetition and rephrasing
  3. Understand careful somewhat simplified speech when engaged in a dialogue, but may require considerable repetition and rephrasing
  4. Understand quite well normal educated speech when engaged in a dialogue, but requires occasional repetition or rephrasing
  5. Understand everything in normal educated conversation except for very colloquial or low frequency items or exceptionally rapid or slurred speech
  6. Understand everything in both formal and colloquial speech to be expected of an educated native speaker.

When the data has been collected, then it will be analyzed by these following steps:

- a. Collecting and submitting the data (Students test sheet)
- b. Scoring and analyzing the students test sheet
- c. Classifying the students test sheet
- d. Computing the percentage of students

Here is the description of scoring:

Letter	Score	Description
A	81-100	Very good
B	65-80	Good
C	51-64	Fair
D	41-50	Poor
E	0-40	Very poor

### G. The technique of Analyzing Data

Having got the data from pre-test, they were analyzed and processed by using statistic calculation of T-test formula with significance degree 5% and 1%.<sup>15</sup>

The formula as follows:

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

$$SE_{MD}$$

To : Test observation

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<sup>15</sup>Sugiyono, *Statistik Penelitian* (Bandung :Alpabeta, 2004), lampiran.

MD : Mean of differences; the average score from the differences gained scores variable and II variable, which are calculated with the formula;

$$MD = \frac{\Sigma D}{N}$$

$\Sigma D$  : Total score between I variable (X variable) and II variable (Y variable). And D is gained

With formula;  $D = X - Y$

N : Number of cases

$SD_D$  : The standard deviation from differences between score of X variable and Y variable,

Which is gained with the formula;

$$SD_D = \sqrt{\frac{\Sigma D^2}{N} - \left[ \frac{\Sigma D}{N} \right]^2}$$

$SE_{MD}$  : The standard error from mean of differences that is gained with the formula;

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

df : Degree of freedom with formula:  $N - 1$ .