

## CHAPTER III

### RESEARCH METHODOLOGY

This chapter presents the methodology of the research. It covers the elaboration statement of the problem, research design, the research site and participants, the data collection techniques, the research procedure, and the data analyses. The method is applied to find out whether the use of visual media in English instructional process has a relationship with the students' participation in classroom.

#### 3.1 Research Design

Since the main purpose of the research is to find out whether there is any correlation between the use of visual media and students' participation, this research used correlational research design. It is based on the purpose of this study, in which tried to “describe and measure the degree of association (or relationship) between two or more variables” (Creswell, 2012, p. 358). Furthermore, Fraenkel, Wallen & Hyun explained that a correlational design describes the degree to which two or more quantitative variables are related, and it does so by using a correlation coefficient (2012, p. 331) and the major purpose of correlational research is “to clarify our understanding of important phenomena by identifying relationships among variables”( 2012, p. 329).

Thus, this correlational study is a suitable method to gather and organize the data to get the understanding of the relationship between the use of visual media by teacher in classroom and students' participation in detailed description.

#### 3.2 Research Site and Participants

The study was conducted in one of Junior High School in Bandung. The participants were the eighth grade students. The participants were chosen because the students of junior high school are mainly kids in early adolescence that needs special instructional, curricular and administrative changes (Armstrong, 2006). Because their biological event puberty fundamentally has disrupts impact to their

development of cognitive aspect, social and emotional lives (Armstrong, 2006), so that they need different way with new innovation in instructional. Thus, visual media is one of different way as a tool which use in instructional process. Furthermore, students in junior high school have more energy to be active in classroom and their participation is important to build their critical thinking.

### **3.3 Data Collection**

In collecting the data, there were two techniques employed, which were questionnaire, observation. These data collection techniques are explained below.

#### **3.3.1 Students' Participation Scoring During Lesson Using Visual media**

The instructional process with the use of visual media is conducted in order to observe students' participation while the visual media is used during the instructional process. According to Creswell observations are "those in which researcher take field notes on the behavior and activities of individuals at the research site" (Creswell, 2009, p. 181).

The researcher observed the students' behavior, participation, interest and motivation during the visual media is used in the process of teaching and learning. The observation will use an observation sheet and students' participation rubric as a guide in scoring students' participation.

#### **3.3.2 Questionnaire**

This method is used to collect data about the use of visual media in classroom. Students gave information about the use of visual aids which were used in the classroom. The questionnaire is also conducted to discover whether the visual media has a correlation between the students' participation score or not.

This questionnaire is translated into Indonesian language to make the students easier in understanding each statement that provided in the questionnaire. It is delivered to the students to obtain students' response toward on the use of visual media for their participation in classroom. The questionnaire used Likert's 4 points scale, ranged from "Strongly Agree" (SA), "Agree" (A), "Disagree" (D), and "Strongly Disagree" (SD). This study do not use "Neutral" (N) choice,

because the researcher think that students in junior high school are unstable, they do not know the real meaning of neutral in the question. Sometimes people do not fill questionnaire seriously and just choose “Neutral” item to finish it. Moreover, Thomas (2013, p. 213) said that “to remove the tendency for some people to over-choose the middle option, this middle option is sometimes removed, making a four points scale”.

**Table 3.1 Data Collection**

<b>No.</b>	<b>Technique</b>	<b>Activity</b>	<b>Source</b>	<b>Expected Results</b>
<b>1</b>	Student’s participation scoring during lesson using visual media (4 times)	Observing students’ participation by giving visual media during teaching and learning process using observation sheet and students’ participation rubric	Students’ participation rubric	Score of students’ participation
<b>2</b>	Questionnaire	Delivering questionnaire	Students’ questionnaire results,	Students’ scores for the use of visual media by teacher in classroom

### **3.4 Time Allocation**

This study was conducted in one of junior high school in Bandung for four weeks. First of all, the observation was conducted to assist students’ participation. It was held until 4 times to get students’ participation when teacher used visual media in classroom. After the lesson and students’ participation scoring was conducted, the questionnaire was administered at the end of the meeting.

### **3.5 Trying Out the Instrument**

The purpose of trying out the instrument is to make sure that the items are valid and reliable before it is administered to the participants. The try-out was administered to 90 students of eighth grade, and the results were analyzed by using IBM SPSS 21. Each step will be further explained as follows.

### 1. Validity of The Instrument

Validity is defined as referring to the appropriateness, correctness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect (Fraenkel, Wallen & Hyun, 2012, p. 148). Validation is the process of collecting and analyzing evidence to support such inferences. In short, validity is the degree to which a test measures what is supposed to be measured. Here are the steps to measure the instrument validation:

- If r-result is bigger than r-table ( $r\text{-result} > r\text{-table}$ ), so the item is valid. But the item will be considered as invalid if the correlation between the item and r result is less than r table ( $r\text{-result} < r\text{-table}$ ).
- Comparing r-result with r-table (0.207).
- Concluding the comparison. (Sugiyono, 2011)

Based on the result of the questionnaire, all the r-result from each question is bigger than the t-table (0.207). It proved each item of the questionnaire is valid.

**Table 3.2 The Result of Validity Test on The Use of Visual Media in Classroom**

Items of questions	r-result	r-table	Result
Item 1	0,462	0,207	Valid
Item 2	0,215	0,207	Valid
Item 3	0,568	0,207	Valid
Item 4	0,532	0,207	Valid
Item 5	0,345	0,207	Valid
Item 6	0,447	0,207	Valid

Item 7	0,250	0,207	Valid
Item 8	0,382	0,207	Valid
Item 9	0,540	0,207	Valid
Item 10	0,285	0,207	Valid
Item 11	0,605	0,207	Valid
Item 12	0,490	0,207	Valid
Item 13	0,385	0,207	Valid
Item 14	0,560	0,207	Valid
Item 15	0,441	0,207	Valid
Item 16	0,468	0,207	Valid
Item 17	0,485	0,207	Valid
Item 18	0,496	0,207	Valid
Item 19	0,611	0,207	Valid
Item 20	0,558	0,207	Valid
Item 21	0,542	0,207	Valid
Item 22	0,498	0,207	Valid
Item 23	0,542	0,207	Valid
Item 24	0,610	0,207	Valid
Item 25	0,412	0,207	Valid
Item 26	0,341	0,207	Valid
Item 27	0,419	0,207	Valid
Item 28	0,490	0,207	Valid
Item 29	0,312	0,207	Valid
Item 30	0,514	0,207	Valid

## 2. Reliability of The Instrument

Reliability refers to the consistency of the scores obtained—how consistent they are for each individual from one administration of an instrument to another and from one set of items to another (Fraenkel, Wallen & Hyun, 2012, p. 154). Testing the reliability of the instruments is intended

for convincing that the instrument will yield the same results even though carried out in different classes.

One of the methods to check the reliability of an instrument is Alpha-Cronbach method. In this method, the  $r$  result is shown as alpha, and if the alpha is more than the criterion (0.06), as well as having positive value, the instrument is reliable.

**Table 3.3 Reliability Statistics**

Cronbach's Alpha	N of Items
0,878	30

Based on the reliability test, it was found that the Cronbach's Alpha of the data fell at 0,878 (see table 3.2). The alpha was bigger than criterion (0,06), so the instrument used in this study was reliable.

### **3.6 Data Analysis**

Data analysis includes data analysis on questionnaire, and observation of students' participation.

#### **3.6.1 Recapitulating Students' Participation Score from Observation and Questionnaire**

After the researcher gets the scores of students' participation, the researcher recapitulates the score from the first meeting until the fourth meeting in a table to easier researcher analyze the data. The scores of students' participation was the average of students' participation from all meetings. The result of the questionnaire also will be recapitulated in a table. Furthermore, after getting students' participation scores, the scores will be analyze to know the level of students' participation when visual media is used in classroom. The scores gained are then analyzed using Pearson's Product-Moment Correlation to answer research question. Before going to the analysis, the normality of distribution of data will be tested because the data that will be analyzed should have a normal distribution of data (Sugiyono, 2013, p. 241).

### 3.6.2 Measuring the Relationship between The use of visual media and Students' Participation

A Pearson's Product-Moment Correlation was run to determine the relationship between the use of visual media by teacher and student's participation.

The formula of the Pearson correlation coefficient is a measure of the variance of data points from a regression line that is shared by the values of two factors (X and Y) divided by the total variance measure:

$$r = \frac{\text{variance shared by X and Y}}{\text{Total variance measured}}$$

$r$  = correlation coefficient

X = Variance of X

Y = Variance of Y

(Privitera, 2011, p. 245)