

## **CHAPTER III**

### **RESEARCH METHOD**

#### **A. Research Design**

This study conducted through simple linear regression quantitative method. According to Ritonga and Setiawan (2011, p. 33) that is a regression analysis is statistic technique to investigated and to arrange model provide about correlation between variables. It means the research will make some technique for get the result from two classes of VII graders in these classes used “Fast Hands game”. Then the goal of the writer is to find out the influence of Fast Hands game to students’ motivation in learning vocabulary.

#### **B. Research Setting**

This research takes place at VII graders of MTs Kebun Bunga Banjarmasin. Jl. Melati IV No.03 Rt.05 Kelurahan Kebun Bunga, Kota Banjarmasin, Kabupaten Banjarmasin Timur. The time takes from July until September.

#### **C. Population and Sample of the Research**

##### **1. Population of Research**

The of Population of this research is all students of VII. VII A graders consist of 21 students (male = 11 and female = 10), VII B graders consist of 16 students (male = 8, and female = 8). The total is 37 students.

Table 3.1 Population of Research

Population of VII	Male	Female
Class A	11	10
Class B	8	8
Total	37	

## 2. Sample of The Research

The technique sampling of this study is saturated sampling (Sampling Jenuh). The Slovin's Formula is given as follows:  $n = N/(1+Ne^2)$ , where  $n$  is the sample size,  $N$  is the population size and  $e$  is the margin of error to be decided by the researcher.

The total population in this research is 37 students. According "Slovin Table"  $n = 37/(1 + 37 \times 0,05^2) = 34$  so, the writer can get sample is 34 students. It means every class get 17 students for sample consist from 10 males and 8 females from VII A graders then 8 males and 8 females from VII B graders. But, the writer will take populasi as a sample for this research.

### D. Research Instrument

In this study, to collect the data the writer uses several of techniques such as questionnaire, test and observation in the class.

#### a) Questionnaire

Questionnaire is collecting data technique which give a written statement or question to respondents and questionnaire is efisien collecting data technique. According to Suharsimi Arikunto (2006, p.151) explain that questionner is numbers of written questions used for collecting the information from respondent it's means the report about personality and etc. On this questionnaire the writer give the question to respondents aimed to find their motivation.

### **b) Observation**

Observation as collecting data technique has specific characteristic compare with other technique, interview and questionner. According to Sutrisno Hadi (1986, p.11) explain that observation is a complex process, an arringed process of any biology and psychology process. The important of two things are process observasion and memory. And the observation's sheet given to teacher and the writer to appreciate their work on play game and to support the questionnaire's data.

### **c) Test**

Test is a tool to measure respondents' intellectual or individuals' behavior. The test given by multiple choice or performance test. Heaton (1975, p. 89) states that the test used must be appropriate in term of our object, the dependable in the evidence provides, and applicable to our particular situation. Test given twice on the first meet and the end. To knowing the result their motivation in learning vocabulary.

In this study, the writer gives students questionnaire and test then observe their activity by observation in the classroom. This study aimed at knowing the influence of fast hands game to students' motivation in learning English (vocabulary) from identify the result of the questionnaire, observation and test. A questionnaire to get data of student's motivation, observation to knowing their interest and activity in learning vocabulary and a test to knowing the influence of fast hands game to students' motivation in learning English.

#### **E. Data Collection**

The data are collected from questionner, observation and test. A questionnaire (close-ended) based on Likert scale that is comprised on 4 scales from strongly disagree to strongly agree was designed in order to get data. There were 10 questions total in number. Question 1 to 10 were based on integrative/intristic motivation and the questions have 5 positive statement and 5 negative statement. An observation based in non participant observation and arranged observation. Before the writer give a test, the writer served 4 until 5 unit laptop to students to play Fast Hands game. The test based on multiple choice provide vocabulary they get from Fast Hands game. In this study. Questionner, observation and test were held to know the Fast Hands game influence to students' motivation in learning vocabulary.

##### **1. Questionnaire**

Questionnaire assessment using Likert scale with 4 alternative answers, where the value 4 for the highest score and the value 1 for the lowest score on the positive statement, the opposite 1 for the highest score and 4 for the lowest score on the negative statement. To determine the range of class, interval class, distance of interval class and mid point of interval, as following :

$$a. R = X_{\max} - X_{\min}$$

$$b. K = 1 + 3,3 \log n$$

$$c. p = \frac{\text{range}(R)}{\text{class}(K)}$$

$$d. \text{mid point} = \frac{1}{2} [\text{lower limit} + \text{upper limit}]$$

Explanation :

R = Range      n = Sample of data

X = Score      p = distance of class interval

K = Classes

Table 3.2 Example of Questionnaires' Sheet

No	Statement	SA	A	SD	D
1	I am happier learning English with media than no media learning				
2	I seldom ask teacher or friends about lesson which I don't understand yet				
3	I am not enthusiastic in learning English activity				
4	I always tried to finish my work as good as possible				
5	I am happier talking with my friends than learning				

	English				
6	I pay attention to my teachers' simulation of playing the game in learning English in front of class				
7	If I got bad score, I will learn hard to get best score				
8	I will give motivation to my friends so that they aren't afraid in learning English				
9	I would rather cheat to my friends than do my own				
10	I am not confident or I can not play Fast Hand game				

Table 3.3 Explanation of Scoring Questionnaire

Official Statement	Score of Positive Statement	Score of Negative Statement
Strongly Disagree	1	4
Disagree	2	3
Agree	3	2
Strongly Agree	4	1

The example of questionnaires' scoring from Sugiyono (2010), as below :

- a. Respondent answer SA (4) =  $15 \times 4 = 60$
- b. Respondent answer A (3) =  $14 \times 3 = 42$
- c. Respondent answer D (2) =  $5 \times 2 = 10$
- d. Respondent answer SD (1) =  $4 \times 1 = 4$

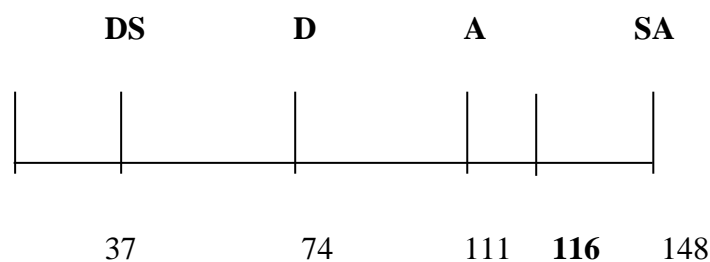
Total score =  $60 + 42 + 10 + 4 = 116$

- a. For higher score SA (4) =  $4 \times 37$  (participant) = 148
- b. For lower score SD (1) =  $1 \times 37$  (participant) = 37

Total score from respondent is 116, then to knowing students' motivation to Fast Hands game by formula :

Score ideal =  $4 \times 37 = 148$  (if the respondents answer SA)

Score from this study = 116. Based on data students agree with Fast Hands game influence their motivation =  $(116 : 148) \times 100\% = 78\%$  from score ideal (100%)



Based on data from 37 participant, the average is 116 close to **AGREE**.

## 2. Observation

Observation sheet divided with the teacher who is teaching in the student learning activities are divided into 3-4 groups due to the limited facilities of the laptop/computer.

Table. 3.4 Example of Observation Sheet

<b>No</b>	<b>Observation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Students active to pay attention the teachers' explanation in learning activity				
2	Students active to discuss and play the game with friends to finished an assignment				
3	Students play game quickly and picture match correctly				
4	Students give their opinion briefly				
5	Students answer questions correctly				

Table 3.5 Explanation of Observations' Score

1	Not Active
2	Enough
3	Active
4	Very Active

- a. The formula of students' activity percentage :

$$= \frac{\text{score}}{\text{maximal score}} \times 100 \%$$

- b. The percentage of qualification :

$$= \frac{\sum f}{\text{sample}} \times 100\%$$

- c. The percentage of aspect

$$= \frac{\sum fx}{\text{qualification} \times \text{sample}} \times 100\%$$

### 3. Test

The writer gives the test after students play and learn vocabulary in Fast Hands game. Questions in the test based on vocabulary in Fast Hands game. The writer gives them multiple choice questions based on vocabulary and the sekunder data is to ask them to play the Fast Hands game and assess them by times and vocabulary they get.

- a. Test 1



The test I content questions about clothes, furniture, stationary, transportation and job. And there are 18 question items

b. Test II

In the test II the question content about animal, body and food. And there are 20 question items

d. Formula of test :

$$r_{xy} = \frac{N \cdot \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \cdot \sum X^2 - (\sum X)^2\} \{N \cdot \sum Y^2 - (\sum Y)^2\}}}$$

Table. 3.6 Explanation of Product Moment Table (r) :

0,8≤r≤1	Very high
0,6≤r≤0,79	High
0,4≤r≤0,59	Enough
0,2≤r≤0,39	Low
0,0≤r≤0,19	Very low

Table 3.7 The Difficulty Index Criteria are Classified of Test

P 0 – 0,30	Difficult
P 0,31 – 0,70	Intermediate
P 0,71 – 1,00	Easy

## F. Data Analysis Procedure

In analyzing the data, the research will use “Linear Regression Statistics” for gets the result, the Influence of Fast Hands game to students’ motivation in Learning Vocabulary. Linear regression statistics was tabulated the results of

students' used fast hands game score to students' motivation score in the form of frequency table. After the frequency distribution was set up, it was summarized which was aimed at finding out koefesion correalation.

Table 3.8 Example of Agreement Linear Regression

X	Y	X <sup>2</sup>	Y <sup>2</sup>	XY

$$b = \frac{n \sum xy - \sum x \cdot \sum y}{n \sum x^2 - (\sum x)^2} \text{ atau } b = r_{xy} = \frac{S_y}{S_x}$$

$$a = \frac{\sum x^2 - \sum Y - \sum X \sum (XY)}{n \sum Y^2 - (\sum X)^2} \text{ atau } a = Y - bX$$

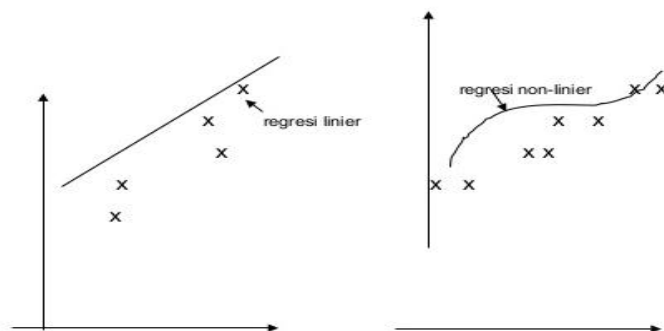
$$Y = a + bx$$

Y = dependent variable

X = independent variable

a = konstanta

b = koefisien variable independent



1. Correlation Coefision

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{[n(\sum X^2) - (\sum X)^2]^{\frac{1}{2}}[n(\sum Y^2) - (\sum Y)^2]^{\frac{1}{2}}}$$

2. Determinan coefision ( $r^2$ )

- a. 0 : No correlation between variables
- b.  $> 0 - 0,25$  : Low correlation
- c.  $> 0,25 - 0,5$  : Enough correlation
- d.  $> 0,5 - 0,75$  : Strong correlation
- e.  $> 0,75 - 0,99$  : Very strong correlation
- f. 1 : Perfect correlation

(Sarwono:2006)

3. Validity and Reability of data, analysis technique by Karl Pearson was used; therefore it often called by Person correlation technique.

a. Validity

Validity is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. It is rare, if nearly impossible, that an instrument be 100% valid, so validity is generally measured in degrees. As a process, validation involves collecting and analyzing data to assess the accuracy of an instrument. There are numerous statistical tests and measures to assess the validity of quantitative instruments, which generally involves pilot testing. The formula that used is :

$$r_{xy} = \frac{N \cdot \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \cdot \sum X^2 - (\sum X)^2\} \{N \cdot \sum Y^2 - (\sum Y)^2\}}}$$

$r_{xy}$  : correlation between variable X and Y

X : questions' score

Y : total of questions' score

N : number of students

#### b. Reliability

Reliability is a measure of the stability or consistency of test scores. In determining reliability of data, Alpha Cronbach formula was used :

$$r_{11} = \left[ \frac{k}{k-1} \right] \left[ 1 - \frac{\sum \sigma_i^2}{\sigma^2} \right]$$

#### 4. Significant Hypothesis (t-test)

$$t = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

t = value  $t_{hitung}$

r = correlation coefficient between X variable and Y

n = Total respondent

$r^2$  = correlation coefficient square between X variable and Y