

CHAPTER III

RESEARCH METHODOLOGY

A. The Research Design

The design of this research was an experimental research, the experimental method is the only method of research that can truly test hypotheses concerning cause and effect.¹ The design of this research was Quasi Experimental design, which used nonequivalent control group design. Furthermore, Creswell says that the writer can intact group experimental and control treatments, give a pre-questionnaire to both of groups, hold experiment activities with the experimental group only, after that give a post-questionnaire to assess the effect between two group.²

This research consisted of two variables, they were independent variable that refers to the use of Stand-Up Hand-Up Pair-Up (SUHUPU) strategy and dependent variable refers to motivation in learning speaking. In conducting the research, two classes of the second year students were involved. The first class was an experimental class and the second class was a control class. An experimental class was taught by using Stand-Up Hand-Up Pair-Up (SUHUPU) strategy, meanwhile control class was not taught by using Stand-Up Hand-Up Pair-Up (SUHUPU) strategy.

¹ L. R. Gay Peter Airasian, *Educational Research Competencies For Analysis And Application Sixth Edition*. New Jersey: Pearson Education, 2000. P. 367.

² Jhon W. Creswell. *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research*. New Jersey: Pearson Education .2008. p. 299.

In working with intact nonequivalent groups, the non-equivalent control group design is shown below.³

Table III.1
Nonequivalent Control Group Design

Group	Pre-Questionnaire	Treatment	Post-Questionnaire
Experiment	0	X	0
Control	0		0

Where:

O = Questionnaire

X = treatment by using SUHUPU strategy

Questionnaire

Questionnaire was the questions that were related to the research. This technique was used to collect data or to get more information about students' motivation in teaching speaking process. The questionnaire was given to the students in order to get data from students' motivation by using SUHUPU strategy.

B. The Time and the Location of the Reasearch

This research was conducted on April up to May, 2014 at MTs Hasanah Pekanbaru. It was located on Jalan Cempedak Pekanbaru.

C. The Subject and The Object of The Research

The subject of this research was the second grade students of MTs Hasanah Pekanbaru and object of this research was Stand-Up Hand-Up Pair-Up (SUHUPU) strategy on students' motivation in speaking English.

³ Bruce W Tuckman. *Education Research: fifth edition*. New York: Harcourt brace collage publisher. P. 141

D. The Population and The Sample

1. Population

The population of this reasearch was the second grade students of MTs Hasanah Pekanbaru. There were five classes of the second year students. It is totaled 154 students. The following table is the details.

Table III. 2
The Total Of Population Of The Second Year Students Mts
Hasanah Pekanbaru in 2013-2014

No	Class	Total
1	VIII ^A	33
2	VIII ^B	28
3	VIII ^C	33
4	VIII ^D	33
5	VIII ^E	33
Total		154

2. Sample

Sample is part of the population that we research⁴. Because the design of the research was one group pretest-posttest, so the technique sampling used in this research was cluster sampling. Gay stated in Wakhit, cluster sampling randomly select groups, not individual⁵. Then based on limitation of the research, the researcher took only two classes after doing cluster sampling. Therefore, the writer took two classes (experimental class and controll class) that had the same chance as sample in this research. The VIII^C was as a control group and VIII^D was as an experimental class.

⁴ Suharsimi Arikunto. *Prosedur Penelitian Suatu Pendekatan Praktek* (Jakarta:Rineka Cipta, 2002) p. 109.

⁵ Wakhit Sunani. *The Effect of Using Humor Strategy Toward Speaking Ability of The Second Year Students At SMPN 2 Singingi District Kuantan Singingi Regency (unpublished)*.

E. The Technique of Collecting Data

Questionnaire

In this research, the technique of collecting data was questionnaire. Questionnaire was used to collect the data of Y variable. to determine the students' motivation in learning speaking, it can be seen from their score in the questionnaire. The data were provided from the reseacher's questions. In this research, the reseacher gave some questions. Those were given to the students to be answered. The questions were related to the students' motivation. It was twenty items that were representative of the statement of students' motivation.

According to Rensis Likert , Likert Scale is the most widely used scale in survey research and certainly the one that has found its way into popular culture.⁶ The classic use of the Likert scale was to pose questions or items to participants and have them respond using an agreement scale by selecting a number that best represented their response. It deals with opinion in answering the following options:⁷

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

F. The Technique of Data Analysis

In this research, there were three formulations of the problems that the writer tried to find out the result of the research. The reseacher used some techniques to analyze the data and to find out the information about students'

⁶ Marguirite G.Lodico, Dean T. Spaulding and Kathrine H Voegtle, *Methods in Educational Research from Theory to Practice* (San Fransisco: Jossey Bass) p.107.

⁷ Bambang Setiyadi. *Metode Penelitian untuk Pengajaran Bahasa Asing Pendekatan Kuantitatif dan Kualitatif*. (Yogyakarta: Graha Ilmu) p.59.

motivation in learning speaking toward both experimental class and control class as well as the effect of using Stand-Up Hand-Up Pair-Up (SUHUPU) strategy toward students' motivation in learning speaking. The researcher did the following computation on the questionnaires of the students' motivation in learning speaking for both classes. In analyzing the data, the researcher used SPSS v. 16, the researcher analyzed the data through the following procedures:

1. To find out the level of the students' motivation in learning speaking, the researcher used the following formula:⁸

$$P = \frac{F}{N} \times 100\%$$

P: Percentage

F: Frequency

N: Number of Students

The interpretation of the formula above is as follows:⁹

0% - 20%	: Very Low
21% - 40%	: Low
41% - 60%	: Enough
61% - 80%	: Strong
81% - 100%	: Very Strong

2. Independent Sample T-Test

It was used to compare mean of post questionnaire between the two groups (Experimental and Control classes). The formula:¹⁰

⁸ Anas Sujiono. *Pengantar Statistik Pendidikan*. Jakarta: PT Raja Grafindo Persada. P. 41

⁹ Ridwan. *Skala Pengukuran Variabel- Variabel Penelitian*. Bandung: Alfabeta. P. 15

In giving the score to each student in questionnaire the resacher used the following formula:¹¹

$$S\bar{X}_1 - \bar{X}_2 = \frac{\sqrt{\frac{\sum x_1^2 + \sum x_2^2}{n_1 + n_2 - 2}}}{n_1} + \frac{1}{n_2}$$

The t_{table} was employed to see if there is a significant difference between the mean score both experimental and control group. The $t_{obtained}$ value was consulted with the value of t_{table} at the degree of freedom $(df)=(N1+N2)-2$ statically hypothesis:

$$H_a: t_o > t_{table}$$

$$H_o: t_o < t_{table}$$

H_a is accepted if $t_o > t_{table}$ or there is an effect of using Stand-Up Hand-Up Pair-Up (SUHUPU) strategy towards students' motivation in learning speaking.

G. Validity and Reability of The Questionnaire

1. Validity

Before using the questionnaire as the instrument to obtain the information about the students' motivation in learning speaking., the researcher did a try out for testing the validity and the realibility of the quetionnaire items. The validity of the items can be interpreted by using

¹⁰ Sumanto. *Pembahasan Terpadu Statistika dan Metodologi Riset*. (Yogyakarta: ANDI), p. 216.

¹¹ Panitia Pelaksan. *Buku Pedoman Program Pengalaman Lapangan* Pekanbaru: Fakultas Tarbiyah dan Keguruan Universitas Islam Negeri Sultan Syarif Kasim Riau, 2012), p. 22.

factor analysis by correlating between scores of each item and its total scores. It can be done by using product moment correlation¹², as follows:

$$r_{xy} = \frac{N \sum xy - \sum x \sum y}{\sqrt{(N \sum x^2 - \sum x^2)(N \sum y^2 - \sum y^2)}}$$

Each item of the instrument was counted to the correlation coefficient with its total scores, the next step is as follows:

$$t_{\text{test}} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

In try out, the reasecher gave students 25 items or questionnaire. These items represented 10 indicators of the students' motivation in learning speaking. The try out was done to the second grade students of VIII^A at MTs Hasanah Pekanbaru. The class was not the class used in research process. The result of the try out can be seen as follows:

¹² Hartono, *Analisis Item Instrument (Analisis Tes Hasil Belajar Dan Instrumen Penelitian)*, (Pekanbaru: Zanafa Publishing, 2010), p.85.

Table III.3
Recapitulation Of The Research Instrument Validity

NUMBER OF ITEMS	df	t Table	t Test	Validity
1	31	1.697	2.321	Valid
2	31	1.697	1.802	Valid
3	31	1.697	1.887	Valid
4	31	1.697	1.985	Valid
5	31	1.697	1.578	Invalid
6	31	1.697	3.724	Valid
7	31	1.697	3.310	Valid
8	31	1.697	2.851	Valid
9	31	1.697	4.599	Valid
10	31	1.697	1.377	Invalid
11	31	1.697	1.566	Invalid
12	31	1.697	2.505	Valid
13	31	1.697	1.959	Valid
14	31	1.697	2.453	Valid
15	31	1.697	5.126	Valid
16	31	1.697	5.599	Valid
17	31	1.697	2.826	Valid
18	31	1.697	3.117	Valid
19	31	1.697	2.209	Valid
20	31	1.697	4.315	Valid
21	31	1.697	1.389	Invalid
22	31	1.697	1.566	Invalid
23	31	1.697	6.917	Valid
24	31	1.697	3.353	Valid
25	31	1.697	1.983	Valid

Based on the result of the try out, there were twenty (20) items of questionnaire that were valid. And there were five (5) items that were not valid. Because of twenty items have been representative of ten (10) indicators of motivation thus the reaseacher took only 20 valid items only. And these valid items were used as the instrument to collect the data of students' motivation in learning speaking.

2. Reability

The good quality of instrument is determined by the instrument of reliability. According to Brown, a reliable test is consistent and dependaple.¹³ It was used to measure the quality of the test scores and the consistency of the test. Reliability is thus a measure of accuracy, consistency, dependability, or fairness of scores resulting from administration of a particular examination. If reliability is associated with accuracy measurement it follows that reability will increase as error of measurement is made to diminish, the reseacher quantified reliability so that the reaseacher could be aware of the amount of error present in the measurement and the degree of confidence possible in score obtained from the questionnaire.

To obtain the reliability of the test given, the writer used Cronbach Alpha formula as follows:¹⁴

$$r_{11} = \frac{k}{k-1} \left(1 - \frac{\sum S_i^2}{S_t^2} \right)$$

Reliability Analysis

To know if the questionnaire is reliable or not, the value r_{11} must be compared with r product moment.

$$1. S_i = \frac{\sum X_i^2 - \frac{(\sum X_i)^2}{N}}{N}$$

$$\sum X_i = 16.15$$

¹³ Brown, H. Douglas. *Language Assessment Principles and Classroom Practices*. California: Longman. 2003. P.20.

¹⁴ Hartono, *Op.Cit.*,p.102.

$$2. S_t = \frac{\sum X_t^2 - \frac{(\sum X_t)^2}{N}}{N}$$

$$S_t = \frac{168095 - \frac{2345^2}{33}}{33}$$

$$S_t = \frac{168095 - 166637.121}{33}$$

$$S_t = \frac{1457.879}{33} = 44.178$$

$$3. r_{11} = \frac{k}{k-1} \left(1 - \frac{\sum S_1}{S_t} \right)$$

$$r_{11} = \frac{33}{33-1} \left(1 - \frac{16.15}{44.178} \right)$$

$$r_{11} = 1.031 \left(1 - 0.365 \right)$$

$$r_{11} = 1.301 \times 0.635$$

$$r_{11} = 0.654$$

The value of r_{11} must be higher than r table. From the calculation above the value of r_{11} was 0.654. The the r_t at 5 % level of significance was 0.349. So, it can be concluded that $0.654 > 0.349$. In other words, the instrument was reliable because the value of r_{11} was higher than r_t .