

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research was an experimental research. According to Gay, the experimental research is the only type of research that can be tested hypotheses to establish the use and affect of relationship.¹ The design of the research was a quasi experimental research non-equivalent control group design, which is intended to find out the influence of using adverb charade game to increase students' interest in speaking English. Quasi experimental design is experimental situation in which the researcher assigns, not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment.²

This research consisted of two groups. One was an experimental group and the other one was a control group. The experimental group was treated by using Adverb Charade Game while the control group was not treated by using Adverb Charade Game. There were two variables involved in this research, one was an independent variable (Adverb Charade Game) and the other one was a dependent variable (speaking interest).

¹L.R Gay and Peter Airasian. *Educational Research: Competencies for Analysis and Application. Sixth Edition* (New Jersey: Pearson Education International, 2000), p.367.

²John W. Creswell. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. Third Edition* (New Jersey: New Education, 2008), p.645.

Table III. 1
Research Design for Quasi Experimental

Select Experimental Group	Pre Questionnaires	Experimental Treatment	Post Questionnaires
Select Control Group	Pre Questionnaires	No Treatment	Post Questionnaires

B. Location and Time of the Research

This research was conducted of the second year students at SMP Negeri 20 Pekanbaru. It is located on Abadi street, Pekanbaru. This research was conducted on August 2013.

C. Subject and Object of the Research

The subject of this research was the second year students of SMP Negeri 20 Pekanbaru. The object of this research was using Adverb Charade Game and students' interest in speaking.

D. Population and Sample

1. Population

Population is total number of subjects.³ The population of this research was the second year students of SMP Negeri 20 Pekanbaru. They were all about 353 students divided into nine classes. They were assumed to have the same level of proficiency and the same background.

³M. Syafii S, *From Paragraph to a Research Report: A Writing of English for Academic Purposes* (Pekanbaru: LBSI, 2011), p.127.

Table III. 2
The Total Population of the Second Year Students at SMP Negeri 20
Pekanbaru

Class	Male	Female	Total
VIII ¹	19	21	40
VIII ²	19	21	40
VIII ³	18	22	40
VIII ⁴	18	22	40
VIII ⁵	18	22	40
VIII ⁶	16	22	38
VIII ⁷	15	22	37
VIII ⁸	19	21	40
VIII ⁹	18	20	38
Total	160	193	353

2. Sample

Sample is the part of population or subjects chosen and determined as the sources of data or information that need in research project.⁴ Based on the design of the research above, the population was large enough to be all taken as sample of the research. Furthermore, the writer used cluster sampling to choose the classes taking the sample. So the writer selected two classes of students to be taken as sample. VIII³ was as an experimental class and VIII¹ was as a control class because they were homogeneous and had same characteristics both of them.

⁴Ibid., p.128.

E. Technique of Collecting Data

To determine the students' speaking interest, the writer used questionnaire. There are two kinds of questionnaire in this research; they are pre-questionnaire and post-questionnaire. This questionnaire consists of some questions for the respondents. It would be twenty items that were representative statements of students' interest.⁵

According to Rensis Likert as quoted in Marguerite et al, Likert scale is the mostwidely 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 dealt with the respondents' opinion in answering the following options:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

F. The Validity and the Reliability of the Questionnaire

1. The Validity of the Questionnaire

According to Hughes, a test is said to be valid if it measures accurately what it is intended to measure.⁷ According to Gay, validity is the appropriateness of the interpretations made from the test score. Furthermore, Gay says that there are three kinds of validity. They are content validity, criterion-related validity, and construct validity.⁸ In this research, the writer

⁵Riduwan, *Belajar Mudah Penelitian untuk Guru, Karyawan, dan Peneliti Pemula* (Bandung: Alfabeta, 2004), p.87.

⁶Marguerite G. Lodico, Dean T. Spaulding and Katherine H. Voegtler, *Methods in Educational Research from Theory to Practice* (San Fransisco: Jossey Bass, 2006), p.107.

⁷Arthur Huges, *Testing for Language Teachers* (Cambridge: Cambridge University Press, 2003), p.26.

⁸ Gay, Airasian op,cit., p.161.

used construct validity. It was tested through factor analysis, by correlating between instruments item score and total score.⁹ To measure the validity of questionnaire used in this research, the writer distributed the questionnaire in other class as try out class that was VIII.2 class. After that, the writer used computer to know the validity of questionnaire items.

Table III.3
Recapitulation of Research Instrument Validity

Number of Item	t Test	t Table	Validity	Classification
1	0.690	0.304	Valid	Used
2	0.804	0.304	Valid	Used
3	0.813	0.304	Valid	Used
4	0.614	0.304	Valid	Used
5	0.712	0.304	Valid	Used
6	0.728	0.304	Valid	Used
7	0.721	0.304	Valid	Used
8	0.702	0.304	Valid	Used
9	0.619	0.304	Valid	Used
10	0.517	0.304	Valid	Used
11	0.459	0.304	Valid	Used
12	0.823	0.304	Valid	Used
13	0.772	0.304	Valid	Used
14	0.678	0.304	Valid	Used
15	0.697	0.304	Valid	Used
16	0.704	0.304	Valid	Used
17	0.719	0.304	Valid	Used
18	0.694	0.304	Valid	Used
19	0.413	0.304	Valid	Used
20	0.566	0.304	Valid	Used

Based on the table above, it was found that all of items in questionnaire were valid.

⁹ Sugiyono, *Statistika untuk Penelitian* (Bandung: Alfabeta, 2012), p. 352.

2. The Reliability of the Questionnaire

According to Gay, reliability is the degree to which the test consistently measures whatever it is measuring.¹⁰ Reliability of the research instrument was tested through test-retest by trying out the instrument several times with the same instrument, the same respondent, and different time.¹¹ The reliability was measured from the coefficient correlation of the first try out and the next try out. In determining the reliability of questionnaire, the researcher used the software SPSS 16 version to calculate it.

Table III.4
Reliability of Research Instrument

		Correlations	
		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	.713**
	Sig. (2-tailed)		.000
	N	40	40
VAR00002	Pearson Correlation	.713**	1
	Sig. (2-tailed)	.000	
	N	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, it can be seen that the score obtained is 0.713; the r-table is compared by getting the degree of freedom (df) 38. Then, the score obtained (0.713) compared to r-table of product moment at significance level of 5% and 1% ($0.304 < 0.713 > 0.393$). It means that the questionnaires were reliable.

¹⁰ Gay, Airasian op.cit., p.175.

¹¹ Sugiyono op.cit., p.354.

G. Technique of Data Analysis

In order to find out whether or not there is a significant difference between using and without using Adverb Charade game toward students' speaking interest, the data were analyzed statically. In analyzing the data of students' speaking interest by using Adverb Charade, the writer gives the criteria as follows:¹²

1. 0% - 20% = very low
2. 21% - 40% = Low
3. 41% - 60% = Enough
4. 61% - 80% = strong
5. 81% - 100% = very strong

In order to analyze the data, the writer used the score of post-questionnaire of the experimental group and control group. The score was analyzed by using Chi Square Test formula to know the difference of data frequency. The data were analyzed by using formula as follows:¹³

$$\sum \frac{fo-ft^2}{ft}$$

X^2 = Chi Square

F_o = Observation Frequency

F_t = Expected Frequency

¹²Riduwan, *Skala Pengukuran Variabel-variabel Penelitian* (Bandung: Alfabeta, 2005), p.15.

¹³ Anas Sudijono, *Pengantar Statistik Pendidikan* (Jakarta: Raja Grafindo Persada, 2008), p. 298.

The table of chi square has the function to see if there is a significant difference among the frequency of experimental and control group. The chi square-obtained value is consulted with the value of chi square-table by using degree of freedom. The formula of degree of freedom is as follows:¹⁴

$$df = (c-1)(r-1)$$

Where:

df : the degree of freedom

c : the number options of questionnaire

r : the number of class sample

If the writer has consulted the chi square-obtained value with chi square-table by using degree of freedom, the writer can conclude that if $x^2_o < x^2_t$, H_0 is accepted. It means that there is no difference between using and without using Adverb Charade Game to increase students' interest in speaking. If $x^2_o > x^2_t$, H_a is accepted. It means that there is a significant difference between using and without using adverb charade game to increase students' interest in speaking.

¹⁴Ibid., p. 300.