

### CHAPTER III

#### RESEARCH METHODOLOGY

##### A. Research Design

This research was an experimental research. According to Gay, the experimental research is method of research that can truly test hypotheses concerning cause and effect relationships.<sup>1</sup> The design of this research was quasi-experimental design, according to Cresswell, quasi-experimental design is experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment.<sup>2</sup> The type of quasi-experimental design of this research was nonequivalent control group design. It allows the writer to use original classes as sample group, namely experimental and control class, both the groups treated by different treatment, and both the groups were given pre and post test.

The writer took two classes, one was the experimental group and the other one was control group. Both the experimental and control group received a post test, the experimental group received the treatment while the control group not. The experimental group was treated by using Strip Story activity and control group was not treated by it. There were two variables involved in this research, one was an independent variable (Strip Story technique) and the

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

<sup>2</sup>John W. Cresswell, *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (New Jersey: Pearson Education, 2008), p. 645.

other one was a dependent variable (motivation of students in speaking English). The non equivalent control group design can be seen as below:<sup>3</sup>

O <sub>1</sub>	X	O <sub>2</sub> (Experimental Group)
O <sub>3</sub>		O <sub>4</sub> (Control Group)

O<sub>1</sub> and O<sub>3</sub> = Pre Questionnaires

O<sub>2</sub> and O<sub>4</sub> = Post Questionnaires

X = Treatment by using Strip Story Technique

## B. Location and Time of the Research

This research was conducted at Junior High School 20 Pekanbaru. It is located on Abadi Street, Arengka, Pekanbaru. It was conducted on August until September 2013.

## C. Subject and Object of the Research

The students of the second grade at Junior High School 20 Pekanbaru were the subject of this research, while the object was the effect of using Strip Story toward motivation of students in speaking English.

## D. Population and Sample of the Research

The second grade of Junior High School 20 Pekanbaru was the population of this research. The total number of the second grade was 354 students that spread out in nine classes.

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<sup>3</sup>Louis Cohen, Lawrence Manion and Keith Morrison, *Research Methods in Education* (New York: Routledge, 2007), p. 283, <http://library.nu.com> (accessed September, 2011).

**Table III.1**  
**The Total Population of Second Grade Students at Junior High School 20**  
**Pekanbaru**

No.	Class	Male	Female	Total
1	VIII.1	19	21	40
2	VIII.2	19	22	41
3	VIII.3	18	22	40
4	VIII.4	18	22	40
5	VIII.5	18	22	40
6	VIII.6	16	22	38
7	VIII.7	15	22	37
8	VIII.8	19	21	40
9	VIII.9	18	20	38
Total		160	194	354

The population of second grade students was large enough to be all taken as sample of the research. Based on the design of the research, the writer took only two classes as the sample of this research by using cluster sampling. So VIII.5 class as an experimental class and VIII.4 class as a control class, those were as the sample of the research with number 80 students; 40 students for the experimental class and 40 students for the control class.

**Table III.2**  
**The Sample of Second Grade Students at Junior High School 20**  
**Pekanbaru**

No	Class	Male	Female	Total
1	VIII.4	18	22	40
2	VIII.5	18	22	40
Total		36	44	80

## E. Technique of Collecting Data

The instrument used in conducting this research was questionnaire. Questionnaire is written ratings of items or answers to questions.<sup>4</sup> The questionnaires were made from the indicators of motivation of students in speaking English. One indicator consisted of four questions. To determine the motivation of students in speaking English, it can be seen from the students' score in questionnaire. There were two questionnaires used in collecting the data of students' motivation, namely Pre and Post questionnaire. These questionnaires consisted of some questions for the respondents. It was twenty items that were representative statements of students' motivation.<sup>5</sup>

This research used scale to get the score, according to 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. 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.<sup>6</sup>

According to cresswell, to collect the data on an instrument or a checklist needs some system for scoring the data. Scoring data means that the researcher assigns a numeric score (a value) to each response category for

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<sup>4</sup>Dale H. Schunk, Paul R. Prinrich and Judith L. Meece, *Motivation in Education: Theory, Research, and Applications* (New Jersey: Pearson Prentice Hall, 2010), p. 13.

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

<sup>6</sup>Marguerite G. Lodico, Dean T. Spaulding and Katherine H. Voegtle, *Methods in Educational Research: From Theory to Practice* (San Fransisco: Jossey Bass, 2006), p. 107.<http://bookfi.org> (accessed April, 2013).

each questions on the instruments used to collect data.<sup>7</sup> In Setiyadi Likert stated that in giving the score for each category is depended on the researcher. For or questionnaire that has five categories the writer gave the score from 1 until 5: score 5 for always, score 4 for often, score 3 for sometimes, score 2 for seldom, and score 1 for never.<sup>8</sup>

### 1. Validity of Questionnaire

Validity refers to the extent to which the results of the procedure serve the uses for which they were intended.<sup>9</sup> The instrument is said to be valid if it measures accurately what it is intended to measure.<sup>10</sup> According to Sugiyono the instrument validity of questionnaire sufficiently fulfills the construct validity.<sup>11</sup> It was determined by using factor analysis, by correlating between instrument item score and total score.

To measure the validity of questionnaire used in this research, the writer distributed the questionnaire in other group as try out group that was VIII.8 class. After that, the writer used computer to know the validity of questionnaire items. The table below shows the recapitulation of questionnaire's validity:

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<sup>7</sup>Cresswell, op. cit., p. 83

<sup>8</sup>Setiyadi, Ag. Bambang, *Metode Penelitian untuk Pengajaran Bahasa Asing: Pendekatan Kuantitatif dan Kualitatif* (Yogyakarta: Graha Ilmu, 2006), p. 59.

<sup>9</sup>Evelyn Hatch and Hossein Farhady, *Research Design and Statistics for Applied Linguistics* (Los Angeles: Newbury House Publishers, inc., 1982), pp. 250-251.

<sup>10</sup> Sugiyono, *Statiska untuk Penelitian* (Bandung: Alfabeta, 2012), p. 348.

<sup>11</sup>Ibid., p. 350.

**Table III.3**  
**Recapitulation of Research Instrument Validity**

Number of Item	t Test	t Table	Validity	Classification
1	0.421	0.304	Valid	Used
2	0.564	0.304	Valid	Used
3	0.577	0.304	Valid	Used
4	0.407	0.304	Valid	Used
5	0.402	0.304	Valid	Used
6	0.500	0.304	Valid	Used
7	0.547	0.304	Valid	Used
8	0.633	0.304	Valid	Used
9	0.718	0.304	Valid	Used
10	0.493	0.304	Valid	Used
11	0.650	0.304	Valid	Used
12	0.611	0.304	Valid	Used
13	0.485	0.304	Valid	Used
14	0.658	0.304	Valid	Used
15	0.657	0.304	Valid	Used
16	0.453	0.304	Valid	Used
17	0.630	0.304	Valid	Used
18	0.780	0.304	Valid	Used
19	0.686	0.304	Valid	Used
20	0.613	0.304	Valid	Used

Based on the recapitulation above, the writer concluded that there were 20 items of 20 questionnaires were valid. It means that all of twenty questionnaires of instrument can be used in this research.

## **2. Reliability of Questionnaire**

Reliability can be defined as the extent to which a test produces consistent results when administrated under similar conditions.<sup>12</sup> The instrument is said to be reliable if it is used repeatedly to measure the same object will produce the same data.<sup>13</sup> To know the reliability of questionnaire, writer used Test-retest (stability) where the instrument was tried out twice at same respondents and different time. The respondents

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<sup>12</sup>Hatch and Farhady, op. cit., p. 244

<sup>13</sup> Sugiyono, loc. cit.

were the try out group that was VIII.8 class. The table below is the score correlation between first try out and second try out:

**Table III.4**  
**Reliability of Research Instrument**

Correlations		Try Out 1	Try Out 2
Try Out 1	Pearson Correlation	1	.802**
	Sig. (2-tailed)		.000
	N	40	40
Try Out 2	Pearson Correlation	.802**	1
	Sig. (2-tailed)	.000	
	N	40	40

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

Based on the table above, it was found that the score obtained was 0.802. Then, it compared to r-table of product moment by getting the degree of freedom (df) 38 at significance level of 5% and 1% ( $0.304 < 0.802 < 0.393$ ). So, it can be concluded that the questionnaires of this research were reliable.

## F. Technique of Data Analysis

In order to find out whether or not there is a significant difference between the motivation of students in speaking English after using Strip Story and before using Strip Story, the data were analyzed statistically. The writer analyzed the data by using SPSS version 16. In finding the percentage, the writer used the following formula:<sup>14</sup>

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

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<sup>14</sup>Anas Sudijiono, *Pengantar Statistik Pendidikan* (Jakarta: PT. Raja Grafindo Persada, 2008), p. 43.

Where: P = Percentage

F = Frequency

N = Total frequency/Students

In analyzing the data of the motivation of students in speaking English by and without using Strip Story, the writer gave the criteria as follows:<sup>15</sup>

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 Paired Sample T-test formula:

Paired Sample T-test:<sup>16</sup>

$$t = \frac{D}{\frac{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N-1}}{N}}$$

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<sup>15</sup> Riduwan, *Skala Pengukuran Variabel-variabel Penelitian* (Bandung: Alfabeta, 2005), p. 15.

<sup>16</sup>ibid