CHAPTER III

RESEARCH METHODOLOGY

This chapter focuses on the process of conducting the research. These include Research Design, Research Site, Research Participants, Research Instruments, Research Procedure, Data Collection Technique, and Data Analysis.

3.1 Research Design

The design of the research was a quasi-experimental, a type of research design which includes experimental and control groups without random sampling (Hatch and Lazarraton, 1991). It was conducted in order to find out the significance of using story-telling technique to improve the students' speaking ability by analyzing the result of the tests as quasi-experimental design (Hatch and Farhady, 1982; Hatch and Lazaraton, 1994; Dornyei, 2007). In sum, this quasi-experimental design was used to test the *Null*-Hypothesis (H_0); there is no difference in speaking ability between the experimental and control group and both groups were from the same populations. Storytelling technique was used in teaching the experimental group, while control group was taught by using conventional technique. To support the data from the treatment, the questionnaire and interview were also employed in this study to see the attitudes from the students after being taught using storytelling technique.

In this study, there were two groups of grade VIII of a Madrasah Tsanawiyah. One group was given the experimental treatment while the other did not (Hatch and Farhady, 1982: 22 and Fraenkle and Wallen, 2007: 273). Both of groups' speaking ability was tested using the storytelling test. In the treatment activity, the experimental group was taught by using storytelling technique, while the control group was taught normally by using conventional technique. The treatment was conducted in six meetings, each lasted for 90 minutes. After the treatment has been done, the posttest was given to both the experimental and control groups.

In order to support the validity of the research, the questionnaires and interviewed were administered at the end of the program. The questionnaires and interviewed were used to get the data of students' attitudes toward the use of storytelling in teaching speaking in the classroom to answer the second research question. The attitudes covered the students' feelings toward the implementation of storytelling technique and the effects of the story and the technique to their knowledge improvement and speaking skill.

3.2 Research Site

This study was conducted at a Madrasah Tsanawiyah in Bandung. The school has 12 classes. There are 5 classes of VII grade, 5 classes of VIII grade and 5 classes of IX grade. The number of students for each class is 32 students. The reason of choosing this school is considering the accessibility of the researcher to carry out the

research. Convenience factor should be taken into consideration to support the researcher to carry out the research (Alwasilah, 2009).

3.3 Population and Sample

3.3.1 Population

Population can be defined as a group to whom the results of the study are generalized (see Fraenkel and Wallen, 2007: 93). Based on the focus of the study, the population of this research was the students of a *MTs* in grade VIII. The students were taken as the population since speaking (narrative) can be found at the grade eight in the draft of curriculum 2006.

3.3.2 Sample

The sample of this study was taken from the sample through purposive sampling which sample was taken based on certain consideration, as Fraenkle and Wallen (2007: 100) state that "on occasion, based on previous knowledge of a population and the specific purpose of the research, investigators use personal judgment to select a sample. Researchers assume they can use their knowledge of the population to judge whether or not a particular sample will be representative". Two of the classes from the VIII grade were chosen as the sample. The total number of the students from the two classes was 64 students. From those two classes, one class was chosen as the experimental group and another class was chosen as the control group. Two classes were chosen to be an experimental and control group based on

the result of the summative test of the last semester. These two classes had similar achievements. To keep their privacy and confidential real identities, their names were disguised.

3.4 Materials and Teaching Procedures

3.4.1 Materials

3.4.1.1 Material for Treatment

Hutchinson and Waters (1987: 108) categorize some elements in designing materials. First, *input*, it can be a text, dialogue, video recording, diagram or any others. Second, *content focus*, language is used as a mean of conveying information and feelings about something. Third, *language focus*, it is to enable the learners to use language, how it works and practices putting it back together again. The last, *task*, learners use the content and language knowledge they have built up through the unit. Regarding these, the materials were designed related to those elements which were arranged in the lesson plan.

The materials used to gather the data in this study were the materials to conduct a treatment in the form of lesson plan. The materials for the experimental class and the control class were the same. They were taken from internet.

Two stories were used for six meetings to both the experimental and control group of this study. The stories were retrieved from internet. They were chosen on the basis of topic, length and the interest of the students.

3.4.1.2 Materials for Pre-test and Post-test

Both pre-test and post-test were in series of pictures form a natural basis for narration (Hughes, 2003). These were used since the students were tested to check their speaking ability in telling the story based on the pictures given. The tests were held in 90 minutes. The pre-test was given in the first meeting in order to find out the starting point of the students' speaking ability before the treatments were conducted. Meanwhile, the post-test term was conducted at the end of the teaching learning process in order to find out the effect of the use of the storytelling technique to the students' speaking ability.

3.4.2 Teaching Procedures

The teaching speaking procedure for the experimental and control groups were carried out in the same procedure by using pre-activities, whilst-activities and post-activities. The main activities were begun with the teacher's presentation and ended with individual task for each student (see lesson plans for experimental and control groups in Appendices 1 and 2).

Although both the experimental and control groups got the same procedures, each group were treated with different teaching methods. The experimental group was taught by using the storytelling technique and the control group was taught by using conventional technique.

Reading activities ware implemented to both experimental and control groups before they move to speaking activities. The following table shows a brief sample of classroom activities for experimental and control groups.

Table 3.1

The Sample of Teaching Procedures

No	Experimental Group (Storytelling Technique)	Control Group (Conventional Technique)
1	**Pre activities** • The T greets the students. • The T asks something about the story that had been discussed in previous meeting. • The T tells the objective of the lesson and explains the activity that Ss will do. • The T and the O still divide Ss into 8 groups, each of which consists of 4 persons.	**Pre activities** • The T greets the students. • The T asks something about the story that had been discussed in previous meeting. • The T tells the objective of the lesson and explains the activity that Ss will do. • The T and the O still divide Ss into 8 groups, each of which consists of 4 persons.
2	**Whilst activities** • The T presents a song which related to the topic • The T and the O sing the song together to get the Ss relax and set a good atmosphere. • The T tells the story in front of the class. • The T does questions and answer with the students related to her performance. • The T encourages and asks the Ss in each group to tell the story in turn (practice in small group), but before that they rehearse alone. • The T gives the Ss opportunity to ask something related to their activity.	**Whilst activities** • The T asks the Ss to discuss the story to identify the generic structure of the narrative text. • The T asks questions. For example, the questions are: - What is the title of this story? - Who is/are the characters? - Where did it happen? - When did it happen? - What happened to the main characters? - What are the events? - How was the ending? sad/happy? Etc • The T gives the Ss opportunity to ask something related to their activity.
3	**Post activities** • The T asks the students how they find about the activity and their Experience toward the activity. • The T encourages and gives advice to develop their motivation and confidence. • The T gives the Ss time to prepare themselves or act out the story. • The T asks students to practice the story again at home and explains that they will perform a story individual in front of the class.	**Post activities** • The T asks the students how they find about the activity and their Experience toward the activity. • The T asks the students to find another story and identify the generic structure.

3.5 Research Instruments

Fraenkle and Wallen (2007: 113) defined instrumentation as the whole process of preparing to collect data in a research. There were three kinds of instruments which were employed in this research. They were recording, speaking test, questionnaire, and interview.

The score of the students' tests were used to know the effectiveness of storytelling technique to improve students' speaking ability. They were collected through speaking test, pretest and posttest which were conducted to both experimental and control groups. The speaking test for pretest had similar level of validity, reliability, and level of difficulty with the speaking test for posttest. The scoring system used in the test was adapted from Hadley, 2001 (Cited in Razak, 2009). It was in the form of rubrics for speaking ability testing which covered Communication, Accuracy, Fluency, Vocabulary, and Pronunciation.

The questionnaire and interview were conducted to obtain data or information about the students' response to the implementation of the technique. Before the instruments were administered, the validity and reliability were done.

Scarvia et al (1975) as cited in Arikunto (2007) stated that a test is valid if it measures what it has to be measured. To obtain a valid result, this study employed logical validity test in which the test was arranged based on the careful reasoning and in the line with the teaching objective (Arikunto, 2007). Since the study

conducted to measure the speaking ability, the test was in the form of oral test. The advisors were also asked to look at the content and format of the instrument and judge whether or not it is appropriate (Fraenkle and Wallen, 2007). In terms of the reliability of the test, the interrater reliability was used in which raters are required to make judgments on the language produced by the students. Interrater reliability is essentially a variation of the equivalent forms type of reliability in that the scores are usually produced by two raters and a correlation coefficient is calculated between them (Brown J.D., 1988 cited in Razak, 2009). The English teacher at the school was asked to be a rater accompanying the researcher in giving scores to the oral interview test. The scores of the two raters then be calculated using correlation analysis.

The try out of the instrument was done on September 20th 2011 to class VIII B which has equal ability to the class VIII C and VIII E as subjects of the study. The process of scoring was done by the researcher and the English teacher in the school as the interrater to make sure that the score results were objective. The score result was calculated using Correlation Analysis (Pearson Product Moment). The result of the computation using Correlation Analysis is shown in the following table.

Table 3.2

Correlation Analysis of Pre-test Try Out

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.958**
	Sig. (2-tailed)		.000
	N	32	32
Izur	Pearson Correlation	.958**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.958).

Table 3.3

Correlation Analysis of the Post-test Try Out

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.942**
	Sig. (2-tailed)		.000
	N	32	32
Izur	Pearson Correlation	.942**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.942).

The questionnaires and interview were also validated by consulting to the expert to have logical validity and it can be stated to be valid, i.e. they are understandable by many other people (Newman, 2003). And for the interview, the advisors were also asked to look at the content and format of the instrument and judge whether or not it is appropriate (Fraenkle and Wallen, 2007). In terms of reliability, the questionnaires were analyzed for their internal consistency. For the affective measurement and performance test scored using more than two choices like Likert-Scales.

3.6 Variable and hypotheses

The characteristics of this study including the variabels and hypotheses are shown in the following table:

Table 3.4
The Characteristics of the Study

Null Hypothesis (H_o)	There is no difference between speaking ability of experiment and control groups.
Research Hypothesis (H_i)	There is a significant difference between speaking ability of experimental and control groups.
Significant Level	0.01; two-tailed
Design	Pre-test – post-test control group design
Dependent Variable	Speaking ability
Measurement	Score (interval)
Independent Variabel	Storytelling
Measurement	1. Treatment to the experimental group 2. Treatment to the control group
Statistical Procedure	Independent t-test

3.7 Research Procedure

Some procedure were arranged to make the study runs in a well organized way. The first, the try-out of the instrument was done to test its validity and reliability of the test items. Second, the pretest was given to both experimental and control groups. The results of the test were collected and analyzed as the preliminary data about the students' speaking ability. Third, both the experimental group and the control group got a treatment. However, they got different treatment. The experimental group got Storytelling technique for their speaking. The control group got the conventional one. The conventional means, the teacher teach the story using the usual way of teaching speaking conducted in the classroom. Fourth, the posttest was given to the experimental and control groups to find out whether both groups make different result or not. Fifth, the questionnaire and interview were conducted to the experimental group.

Table 3.5
The Description of Research Procedure

No	Date/Meeting	Materials for Treatment		Time Alocation (minutes)
		Experimental Group	Control Group	
1	September, 20th,2011	Conducting Try-out		2 x 45
2	October, 3th, 2011	Pre-test		2 X 45
3	October, 4th,2011 Meeting 1	Lion and Mouse (Reading Session)	Lion and Mouse (Reading Session)	2 X 45
4	October, 10th,2011 Meeting 2	Lion and Mouse (Grouping Storytelling)	Lion and Mouse	2 X 45
5	October, 11th,2011 Meeting 3	Lion and mouse (Individual Storytelling)	Lion and Mouse	2 X 45
6	October, 17rd,2011 Meeting 4	Little Mermaid (Reading Session)	Little Mermaid (Reading Session)	2 X 45
7	October, 18th,2011 Meeting 5	Little Mermaid (Grouping Storytelling)	Little Mermaid	2 X 45
8	October, 24th,2011 Meeting 6	Little Mermaid (Individual Storytelling)	Little Mermaid	2 X 45
9	October, 25th,2011	Post-test		2 X 45
10	October, 31st,2011	Questionnaire and Interview		-

3.8 Data collection technique

Several data collection techniques were employed to this research to obtain deep and comprehensive analysis;

3.8.1 Recording

Recording was used to record the students' voice when they tell a story in the test. The researcher used a tape recorder or another kind of recorder like MP4. It was done to make the students' utterances in the speaking test –telling a story individually– easy to be analyzed and contrasted to the scoring rubric.

3.8.1 Tests

The tests were conducted to participants to find out their improvement in speaking ability statistically.

3.8.1.1 Pre-test

The pre-test was conducted to identify the initial skill of the students in speaking. It was given to both experimental and control group at the first meeting before the treatment given. The test was in the form of oral test.

3.8.1.2 Post-test

The post-test was principally conducted similarly as the pre-test. It was used to measure the effectiveness of storytelling technique in improving students' speaking ability. It was given after the treatment has been done.

3.8.2 Questionnaire

The questionnaire was conducted to obtain data or information about the students' attitudes toward the implementation of the technique to answer the second research question. The questionnaire consisted of 11 close questions which covered 3 aspects; they were the students' feelings toward the use of story in English, the effects of the story and the implementation of storytelling technique to their knowledge improvement and speaking skill. The questionnaires were written in *Bahasa Indonesia* to avoid misunderstanding of students. The form of the questionnaire was Likert Scale with the options of Strongly Agree, Agree, Uncertain, Disagree, and Strongly Disagree. At the end of the questionnaire, an open-ended questionnaire was also provided for the students to write about their comments on the technique which were not covered by the close-ended questionnaire.

The questionnaire consisted of 11 statements. The statements covered three issues: the first issue was on the students' feeling toward reading the story (statements number 1-2), the second issue was on the students' feeling of the usefulness of story (statements number 3- 5), and the third issue was on the students' feeling to the implementation of the technique (statements number 6-11). In addition, an open-ended questionnaire asked the students to give suggestion or opinion about the implementation of the technique.

3.8.3 Interview

The interview also conducted to obtain comprehensive data along with triangulating the data taken. This interview revealed the students' attitudes toward the implementation of the storytelling in teaching speaking. The interview items were open-ended questions using semi-structured interviews, in which had aim to reveal specific information which could be compared and contrasted with information gained from the test and questionnaire (Dawson, 2009). In this case, face-to-face or one-to-one interviews (Cresswell, 1994: 150) were conducted. A one-to-one interview was done after the questionnaires had been already answered by the respondents. The interview was in the form of informal conversation to the students. The interview was done at school. The interview was conducted in order to support the data to answer the second research question.

3.9 Data Analysis

The results of this study were based on the recording, tests, questionnaires and interview.

3.9.1 Recording

The recording of the students' voice in telling the story tests were scored based on the speaking score rubrics.

3.9.2 Score Data Analysis of the Tests

This quantitative analysis was used to see whether this technique was effective to improve students in speaking ability. There were two tests (pre- and

post-tests) that were applied. Since this research employed with quasi-experimental design, the result of pre-test was used to seek the homogeneity of participants using *t-test* (Hatch and Farhady, 1982; Hatch and Lazaraton, 1994; Dornyei, 2007) to compare means of pre-test score to seek whether the participants is homogeny or not.

While the result of post-test was compared to seek the significant different between two groups or it is known as intact group design (Hatch and Farhady, 1982; Arikunto, 1993; Hatch and Lazaraton, 1994; Dornyei, 2007). The schematic representation of this design is

$$\frac{G_1(experimental)\ x\ T_1}{G_2(Control)\qquad\quad T_1}$$

Where G_1 is experimental group, G_2 is control group, x is treatment and T_1 is post-test

The post-test score was analyzed using two-tailed another *t-test* to seek the significance of the program by testing the *Null*-hypothesis that has been presented above, since *t-test* aims to compare two means of different groups (Hatch and Farhady, 1982; Hatch and Lazaraton, 1994; Dornyei, 2007).

The interrater was used to make sure that the scoring in speaking test was objective. The score results from two raters in both tests, pre-test and post-test, were calculated using Correlation Analysis (Pearson Product Moment). The results of the computation using Correlation Analysis are shown in the following table:

Table 3.6

Correlation Analysis of Control Group Pre-test

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.984**
	Sig. (2-tailed)		.000
	N	32	32
Izur	Pearson Correlation	.984**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.984).

Table 3.7

Correlation Analysis of Pre-test Experimental Group

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.963**
	Sig. (2-tailed)		.000
	N	32	32
Izur	Pearson Correlation	.963**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.963).

Table 3.8

Correlation analysis of Post-test Control Group

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	32	32
izur	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.995).

Table 3.9

Correlation Analysis of Post-test Experimental Group

Correlations

		Yetty	Izur
Yetty	Pearson Correlation	1	.988**
	Sig. (2-tailed)		.000
	N	32	32
Izur	Pearson Correlation	.988**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

Explanation:

On the metric Correlation table, the correlation coefficient value between the score from the first rater and the second rater is high (0.988).

Since the results of the correlation computation were significant, so the scoring was objective.

The procedure compared the means of the experimental and control groups to find out their significant difference. If any, there might be a possibility that the means score of the two groups are different. The significant difference can be seen after the t-value has been obtained. The formula is:

t_{obs} = Difference between two sample means
Standard error of differences between means

$$t_{observe} = \frac{\bar{x}_e - \bar{x}_c}{s(\bar{x}_e - \bar{x}_c)}$$

with

$$s(\bar{x}_e - \bar{x}_c) = \sqrt{\left(\frac{Se}{\sqrt{n1}}\right)^2 + \left(\frac{Sc}{\sqrt{n2}}\right)^2}$$

While S_e is obtained from: $Se = \sqrt{\frac{\sum Xe^2}{N-1}}$

While S_c is obtained from: $Sc = \sqrt{\frac{\sum Xc^2}{N-1}}$

Explanation :
- $\bar{X}_e$: Means score of experimental group
- $\bar{X}_c$: Means score of control group
- $s(\bar{X}_e - \bar{X}_c)$: Standard error of differences between means
- Se : Standard deviation of experimental group
- Sc : Standard deviation of control group

The statistical analysis was used to compare the performance of both the students of experimental and control groups and to find out whether the means of the groups are truly different. It was intended to see if there was an influence of using storytelling in teaching speaking. Meanwhile, after the $t_{observed}$ was found, the

following step was to consult the value against the *t*-critical value in the *t* distribution table and to find out the degree of freedom with the formula $df = (n_1 - 1 + n_2 - 1)$ (Hatch and Farhady, 1982: 112).

The hypotheses testing was conducted to see whether H_o is accepted or rejected. Hatch and Farhady (1982) argue that the test alternative hypotheses (H_1) will be accepted if:

a. Mean of pre-test score is higher than that of pre-test score of the two classes
b. Mean of pre-test score of the experimental class is not different from that the control class.
c. Mean of post-test score of experimental class is higher than that of the control class.

To test null hypotheses (H_o), there are also some considerations should be fulfilled. It will be received if:

a. There is no significant difference between mean of the post-test score and pre-test score either of the experimental and control class.
b. There is no significant difference between mean of pre-test score of the two classes.
c. There is no significant difference between mean of post-test score of the two classes.

3.9.3 Questionnaire

The close questions data from questionnaires were analyzed by calculating it in percentage using frequency base with the following formula:

$$\frac{\text{Number of students choosing certain option}}{\text{Total number of the students (32)}} X100\ \%$$

The data from open-ended questions were analyzed qualitatively. They were transcribed and summarized based on the classification.

3.9.4 Interview

The interview data was recorded and transcribed to be analyzed using coding and categorizing (Heigham and Croker, 2009). This type of data analysis made as sense of data by systematically looking through it, clustering or grouping similar idea and labeling them. After being transcribed and categorized, the data were presented in the discussion to explore students' attitudes toward the implementation of the storytelling technique in teaching speaking.