CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the procedure of the research in order to find out the answer of the question stated previously in chapter one. This chapter contains research design, research variable, setting, population and sample, instruments, data collection, and data analysis.

3.1 Research Design

In line with the aim and purpose of this research, that is to find out the effectiveness of story grammar strategy to improve students' reading comprehension of narrative text, the design used in this research is quasi-experimental design. The reason of choosing this design is because of there was limited of times and the population did not consist of individual but groups or cluster.

The researcher took two classes or two groups of students. The first group (G1) serves as an experimental group that was given pre-test (T1), treatment (X), and post-test (T2). Meanwhile, the second group (G2) as a control group only got T1 and T2 without treatment (X). The treatments were conducted by using story grammar strategy. In this research the method used is quasi-experimental design with the formula:

$$\underline{G1 \quad T1 \quad X \quad T2}$$
$$G2 \quad T1 \quad T2$$

G1 : Experimental Group   T2   : Post Test

T1 : Pre-Test   G2   : Control Group

X   : Treatments

3.2 Research Variable

In this experiment, the researcher aims to establish a cause and effect relationship between two variables: *the independent variable* and *the dependent variable.*

The dependent variable of this research is the students' reading comprehension of narrative text and the independent variable is the effect of story grammar strategy to the students.

3.3 Setting

This research was held in SMA Negeri 9 Bandung which is located on Jalan LMU I Suparmin 1A Bandung.

3.4 Population and Sample

3.4.1 Population

The population of this research was the 364 tenth grade students of SMA Negeri 9 Bandung. The reason of choosing tenth grade students as a population is because they have been familiar with this kind of text. Moreover, they have more vocabularies that were very useful especially when they were asked to fill the story grammar sheet and write story summary.

3.4.2 Sample

The sample was selected by using cluster random sampling in which the sample is randomly selected. Two classes were taken as the sample. They were X-6 as a control group and X-7 as an experimental group.

3.5 Instrument

The instruments are used to collect data in order to answer the research questions. There were two kinds of instrument in this study; test instrument and non test instrument.

3.5.1 Test Instrument

Test Instruments which are used to collect data are short story, story grammar sheet and story summary.

3.5.1.1 Short Story

The story was taken from *English in Context*, published by Grafindo and *English for a Better Life*, published by Pakar Raya for Grade X which the level of grammatical and vocabulary difficulty was based on the knowledge of the tenth grade students of senior high school. The stories consisted of 500-800 words.

3.5.1.2 Story Grammar Sheet

Story Grammar sheets were given to the students in experimental class. It involves the questions of the element of the story such as: title, author, setting, characters, conflict, events, and conclusion. In the conclusion, they also had to write the moral value of the story.

3.5.1.3 Story Summary

Story summary was chosen to test students' reading comprehension of narrative text. In the story summary, the students had to write the essence of the text given.

Story summary was used as pretest posttest in order to gain the data of students' comprehension on the two groups and to find out the homogenous group. The length of good summary is no more than 1/3 to ¼ the length of the original text. The students' summary writing would be scored as:

Table 3.1

Written Summary Assessment

Aspect	Score	Criteria
Essential content, key concepts and relevant supporting information.	5	• All key concepts are identified accurately. • Supporting information creates an exact explanation of the concepts. • Demonstrates an ability to synthesize information.
	4	• Most key concepts are identified accurately. • Supporting information explains the concepts in a broad way. • Demonstrates an ability to generalize information.
	3	• Most key concepts are identified. • Supporting information explains the concepts. • Combine enough supporting information to explain the concepts.
	2	• Some of key concept are identified • Some of supporting informations explain the concept.
	1	• Topic may be identified, but not key concepts. • Most of supporting information is missing.
Organization of information from the reading selection.	5	• Organization is logical. • Transitions smoothly link each point together. • There is a clearly developed introduction, body, and conclusion. • The source/writer of the information is included.

	4	• Most of information is organized orderly.
		• Introduction, body, and conclusion are indicated clearly.
		• The source/ writer of the information are included.
	3	• Organization is orderly.
		• Some transition words are used to connect information.
		• There is indication of an introductory statement, body, and concluding statement.
		• The source/writer of the information is included.
	2	• Organization is disconnected.
		• Summary lacks an introduction, body, and conclusion.
	1	• Organization is disconnected.
		• There is not an identifiable introduction, body, and conclusion.
Grammar	5	• Sentences connect with natural flow/rhythm and varied in style.
		• Few grammatical errors occur.
	4	• Most of sentences connect accurately.
		• Some grammatical errors occur but not inhibit understanding.
	3	• Sentences are complete, but may be mechanical.
		• Grammatical errors do not make writing hard to understand.
		• Appropriate tense.
	2	• Sentences may be mechanical but fit together.
		• Grammatical errors occur and confuse the meaning.

		• Inappropriate tense.
	1	• Sentences are awkward.
		• Grammatical errors make writing hard to understand.
		• Inappropriate tense.
Diction and Vocabulary	**5**	• Word choice is specific and accurate.
		• Subject specific vocabulary is applied with understanding.
		• Student uses her/his own words in natural way.
	4	• Mostly applying appropriate vocabulary to subject.
		• Student writes mostly in her/his own words.
	3	• Word choice is appropriate to the subject.
		• Some subject specific vocabularies appear in the summary.
		• Student uses his/her own words.
	2	• Some words are not appropriate to the subject.
		• Student copies some of the content from reading selection.
	1	• Word choice is not appropriate to the subject.
		• Word choice is simple.
		• Student may copy much of the content from the reading selection.
Mechanics	**5**	• Most of word and spelling are written correctly.
		• There is not mistake of punctuation.
	4	• Few misword and misspellings occur in the summary.
		• There is not mistake of punctuation.
	3	• Some of misword and misspelling appear in

		the summary.
		• There is not mistake of punctuation.
	2	Some of misword and misspelling and inappropriate punctuation appear in the summary.
	1	Misword, misspelling, and inappropriate punctuation appear in the summary.

Adapted from: http:/Ine.lps.org/school_improvement/summ_rubrics.doc.

3.5.2 Non Test Instrument

Non Test Instrument was given to the experimental group to figure out the response of the students to use of story grammar strategy. It was only given to experimental group.

Non Test Instrument which is used is close questionnaire with Likert scale. The questionnaire has four responses category; they are *Sangat Setuju (SS), Setuju (S), Ragu-ragu (RG), Tidak Setuju (TS) and Sangat Tidak Setuju (STS).*

3.6 Data Collection

3.6.1 Pre-test

The Pre-test was held on November 4th 2008 to both the experimental and control group. Time allocation for the test was 45 minutes. In the pre-test, the students were asked to write summary of the story given.

3.6.2 Treatment.

This is the schedule of the treatment that was given to the experimental group.

3.2 Table

The schedule of the treatment

	Experimental Group		Control Group

No.	Date	Materials	No.	Date	Materials
1.	November 4th, 2008	Pre-test	1.	November 4th, 2008	Pre-test
2.	November 7th, 2008	Treatment 1: General overview about narrative text, story grammar strategy and story summary	2.		
3.	November 12th, 2008	Treatment 2: Story of "Sparrow and Rabbit" and story grammar sheet.	3.	November 12th, 2008	Story of "Sparrow and Rabbit"
4.	November 14th, 2008	Treatment 3: Review Story of "Sparrow and Rabbit" and story grammar sheet.	4.	November 14th, 2008	
5.	November 18th, 2008	Treatment 4: Story of "Golden Pitcher" and story grammar sheet.	5.	November 18th, 2008	Story of "Golden Pitcher"
6.	November 21st, 2008	Treatment 5: Review Story of "Golden Pitcher" and story grammar.	6.	November 21st, 2008	
7.	November 26th, 2008	Treatment 6: Review all text which had been given and story grammar sheet.	7.	November 26th, 2008	
8.	December 3rd, 2008	Post-test	8.	December 3rd, 2008	Post-test
9.	December 5th, 2008	questionnaire	9.	December 5th, 2008	

3.6.2 Post-test

The post-test was held on December 3rd 2008.The procedure of post-test was same as pre-test that the students were asked to write summary of the story given. Besides, the story grammar sheet was also given to the experimental group.

3.7 Data Analysis

The data obtained are analyzed into several statistic processes. First, analyze the experimental and control group's score in the pre-test using t-test formula in order to investigate whether or not the two groups are equivalent. Second, analyze the students' scores of each group in pre-test and post test by using t-test formula in order to investigate whether or not there was a significant improvement in students' scores. The last, analyze the data obtained from questionnaire were by using Likert scale formula.

3.7.1 Data Analysis on Pre-test and Post-test

There are several conditions that need to be fulfilled in analyzing the result of research. Those are the normality of data distribution, the homogeneity of the data and the calculation of t-test.

3.7.1.1 Normality of Distribution Test

Kolmogorov-Smirnov formula in *SPSS 12.0 for Windows* is used to determine whether the scores of each group are normally distributed. The steps of normality distribution analysis are as followed:

a. stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

   H_0 = the scores of the experimental and the control group are normally distributed.

   H_1 = the scores of the experimental and control group are not normally distributed.

b. analyzing the normality distribution using Kolmogorov-Smirnov formula in SPSS 12.0 for Windows.

c. comparing the Asymp Sig. (probability) with the level of significance to test the hypothesis. If the Asymp Sig. is more than the level of significance (0.05), the null hypothesis is accepted; the score are normally distributed.

3.7.1.2 Variance Homogeneity Test

Levene Formula in SPSS 12.0 for Windows was used to analyze the Variance Homogeneity. The steps of Variance Homogeneity are as followed:

a. stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_0 = the variances of the experimental and control group are homogenous.

H_1 = the variances of the experimental and control group are not homogenous.

b. analyzing the normality distribution using Levene formula in SPSS 12.0 for Windows.

c. comparing the Asymp Sig. (probability) with the level of significance to test the hypothesis. If the Asymp Sig. is more than the level of significance (0.05), the null hypothesis is accepted; the variance of the experimental and control group are homogenous.

3.7.1.3 T-test Computation

The steps of T-test computation are as followed:

a. stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_0 = the two samples are from the same population, there is no significant difference between pretest mean of experimental and control group

H_1 = the two samples are from the same population, there is a significant difference between pretest mean of experimental and control group

b. finding the t value with independent sample t-test formula by using SPSS 12.0 for Windows.

The formula for a t-test between two different groups of scores is stated as follows:

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\left[\frac{\sum X_1{}^2 - \frac{(\sum X_1)^2}{N_1} + \sum X_1{}^2 - \frac{(\sum X_2)^2}{N_2}}{N_1 - N_2 + 2}\right] - \left[\frac{1}{N_1} + \frac{1}{N_2}\right]}}$$

In which:

X_1 = the mean of the score of the experimental group

X_2 = the mean of the score of the control group

$\sum X_1$ = the sum of the squares of the experimental group

$\sum X_2$ = the sum of the squares of the control group

$(\sum X_1)^2$ = the square of the sum of the squares of the experimental group

$(\sum X_2)^2$ = the square of the sum of the squares of the control group

N_1 = the total number of scores in the experimental group

N_2 = the total number of scores in the control group

c. comparing t_{obt} and t_{crit}. If the t_{obt} is lower than t_{crit}, the result is not statistically significant at the 0.05 level, the null hypothesis is accepted. Whereas, If the t_{obt} is higher than t_{crit}, the result is statistically significant at the 0.05 level, the null hypothesis is rejected.

3.7.2 Data Analysis on the Experimental and the Control Group Scores

The pretest and posttest scores of each group were analyzed by using the matched t-test to investigate whether or not the difference of the pretest and posttest means is significant. The steps of analyzing the pretest and posttest scores are as followed:

a. stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_0 = there is no significant difference between pretest and posttest scores of students'
comprehension of narrative text

H_1 = there is significant difference between pretest and posttest scores of students'
comprehension of narrative text

b. finding the t value

c. comparing t_{obt} and t_{crit}. If the t_{obt} is lower than t_{crit}, the result is not statistically significant at the 0.05 level, the null hypothesis is accepted. Whereas, If the t_{obt} is higher than t_{crit}, the result is statistically significant at the 0.05 level, the null hypothesis is rejected.

3.7.3 Data Analysis on Questionnaire

The data obtained from questionnaire were analyzed by using Likert scale formula. First, in analyzing data, the researcher should look at the option chosen by the respondent in which every option has their own score. They are as follow:

SS = Sangat Setuju   score 5

S   = Setuju   score 4

RG = Ragu-ragu   score 3

TS = Tidak Setuju   score 2

STS = Sangat Tidak Setuju   score 1

Second, the score of respondent was changed into percentage form. The last, the result of computation were conferred with the following table:

Table 3.3

R% (Percentage of Respondent) Criterion

No.	R%	Criterion
1.	0	None
2.	1 – 25	Small number of
3.	26 -49	Nearly half of
4.	50	Half of
5.	51 – 75	More than half of
6.	76 – 99	Almost of
7.	100	All of

(Kuntjaranigrat in Stiawandi (2006))

The formula for analyzing the questionnaire is drawn as follow:

$$P = \frac{F_0}{n} \times 100\%$$