CHAPTER III

RESEARCH METODOLOGY

This chapter provides the research methodology in order to answer the research question as follows.

1. What isstudents' perception on reading strategies for improving reading comprehension?

This chapter includes research design, site and participant, data collection methods, and data analysis of the research.

3.1 Research Design

The qualitative and quantitative approaches are employed in this study. The purpose of qualitative approach is to understand, describe and explain beliefs, behaviors and meaning in context-specific settings (Wu and Volker, 2009).Alwasilah (2008: 92) claims several characteristics of a qualitative research: (1) the focus of the research is 'quality', (2) the aim is description, findings and understanding, (3) the settings are natural, (5) the sample is small and purposive, and (6) the data collections consist of researcher as the main instrument, interviews and observations. The interviews wereconducted to find information about students'perception on reading strategies to collect the information in the survey.Data collected from interview were analyzed by using descriptive qualitative analysis method. Descriptive described the findings found in research, interpretation explained the meaning of finding, and theory combined the findings and meaning.

A quantitative approach is a type of educational research in which the researcher decides what to study; asks specific, narrow questions; collects quantifiable data from participants; analyze these numbers using statistics; and conducts the inquiry in an unbiased, objective manner (Fischler, 2014). The obtained data were analyzed by using Pearson Moment Correlation Formula, but if the obtained data was abnormal another appropriate formula will be used. Correlation study was used to find whether there is any relation between one variable to another and how strong the relation is without controlling the sample (respondents) since there is no treatment or experiment t the respondents.

3.2 Sites and Respondents

This research was conducted in one of the junior high schools in Bandung (SMP N 15 Bandung). The subject of the research was class 9^{th}(9C) in the school. In conducting the research, the respondents were chosen by using simple random technique of sampling. It means all of students have an equal probability to be chosen as a sample. As Gay's recommendation (cited in Nurmaya, 2003) that for correlation study the minimum sample is 30 subjects, while the present research took 32 students as sample of respondents. In this study, researcher decided to do the research in the site with reasons that the respondent is well behave and the site is easily accessible for researcher to do the research.

3.3 Data Collection methods

Data Collection is an important aspect of any type of research study. Survey or questionnaire, interview, observation and document analysis are several methods that can be employed to collect data (Alwasilah, 2002). There are several techniques to collect the data such as observation methods, document review in gaining the information. There are several steps:

1. Data of reading strategies obtained from questionnaire
2. Data of reading achievement obtained from reading comprehension test
3. The result of interview

3.3.1 Questionnaire

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. A distinction can be made between questionnaires and questions that measure separate variables (preferences, behaviors and facts), and questionnaires with questions that are aggregated into either a scale or index (latent traits, attitudes and an index) (Mellenbergh, 2008). The researcher will gather information from the respondent by use a closed-ended question which is the respondent has to pick an answer from a given number of options. Paper and pencil questionnaire administration, where the items are presented or paper is needed for the researcher to do the research. It consists of 15 statements about strategies in reading which partially adopted from Strategy Inventory of Language Learning (SILL) version 7 develop by Oxford (1996)

combine with theories of reading strategies from Brown (2001) (cited in Aeny 2009). The classifications of questionnaire items were using reading technique (items 2, 3, 4, 5), arranging and planning learning (item 1), creating structure for input and output (item 6), guessing intelligently (items 7, 14), receiving and ending messages (item 8), analyzing and reasoning (items 9, 11) creating mental linkages (item 10), empathizing with others (item 12). The scoring was adopted from SILL, where respondent will get score based on the statement they choose, one point means that the respondents never use that kind of reading strategy, two points means that they rarely use the strategy, three points means that they apply strategy occasionally, four points means that they use the strategy frequently, and five points means that respondent always use the strategies. The form of questionnaire consisted of fifteen positive statements with the frameworks as follows.

Table 3.1 The Aspects of Questionnaire

No.	Statement in questionnaire	Items Number	Total
1.	I know my purpose in reading English text	1	1
2.	When reading a text, I read it loudly	2	1
3.	When reading a text, I read it silently	3	1
4.	I read the whole text quickly to get an idea/main idea of the text	4	1
5.	I read carefully to answer the questions about the text	5	1
6.	I make a note or highlighting the certain point in a text that I consider important	6	1
7.	I guess the meaning of new words that I do not know what it means	7	1
8.	I read the questions before reading text	8	1
9.	I read the title and figure out the contents of the text	9	1
10.	I tried to guess the meaning of words that I do	10	1

	not know based on the meaning of the entire text		
11.	I translate every word in the text into Indonesian to understand the main ideas of the text	11	1
12.	When I read the English text, I think about the purpose of the author in writing text	12	1
13.	I reread parts of the text that I do not understand	13	1
14.	I'm trying to understand a sentence by understanding the connecting word first	14	1
15.	When reading English text, I connected what I have already known with the text that I read	15	1

Last, the questionnaire calculated and classified based on Oxford Classification (cited in Aeny 2009). She classified the category into:

Table 3.2 The Criteria of Frequency Level of Reading Strategies

Criteria	Frequency	Score
Very high	Always or almost always	4.50-5.00
High	Usually	3.50-4.49
Medium	Sometimes	2.50-3.49
Low	Rarely	1.50-2.49
Very low	Never or almost never	1.00-1.49

3.3.2 Interview

Interview resemble everyday conversation, the interview is used as an instrument to gather the information. The researcher used open-ended interview in order to gain the information. The interviews were conducted once in SMP Negeri 15 Bandung. The respondents were class 9th(IX C), there were thirty two respondents. The interviewers were asked to explain their perception towards reading, their reading comprehension, and their difficulties in reading, and their reading strategies. The steps to analyze the interview data were recording students' statements on reading strategies then describing the recording. The next step categorizing the data based on some aspects. The aspects were students' interest towards reading, the most favorite reading text, motivation to read, aims and advantages of reading, students' comprehension on the text, students' effort in understanding the text, the characteristic of difficult text, the existing reading strategies which students had already known, motivation to use reading strategies, and the applied reading strategies.

3.3.3 Reading Test

The reading test was conducted to measure students' reading comprehension. The test was conducted at once. The time allocated for respondent to finish the test was 90 minutes. The test was in form of multiple choices consist of twenty numbers test which developed based on standard of competence for third grade junior school. The test was taken from (BSE) English in focus book for the evaluation. During the test students were asked to find specific information from the passage.

In this way, the scores were processed to the scale of 0 to 100. In addition, the processed scores would be used sequentially from the highest to the lowest. Harris (1969: 134) suggests that the measurement of students' achievements can be interpreted by using some criteria.

Table 3.3 The Measurement of Students' Achievement

Criteria of Mastery Grade	Grade
91-100	Excellent
81-90	Very good
71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very poor

3.3.4 Testing the instruments

A test considered to be a good test when the test is valid and reliable. Therefore the validity and reliability must be tested. The validity was used to measure whether the reading test represent certain things to be measured as stated by Anderson et al (cited inAeny, 2009) 'a test is valid if it measures what it purpose to measure while, reliability was used to measure the level of consistency of the test as Anderson et al (cited in Aeny, 2009) restate the reliable measure is one that provides consistent and stable indication of the characteristic being investigated.

Each item of data was calculated in terms of difficulty index and discriminating power index. Difficulty index was used to find whether each item of the test is easy, moderate or difficult. While discriminating power index was used to discover the significance of the test

item in determine respondents reading skill. It also can be able to determine the ability of high achiever and low achiever students.

➢ The formula of difficulty index:

$$P = \frac{B}{T}$$

P = difficulty index

B = total number of the right answer

T = number of sample

➢ The range of difficulty index
- $0.00 \leq P \leq 0.30$……….Difficult
- $0.30 \leq P \leq 0.70$……….Moderate
- $0.70 \leq P \leq 1.00$………..Easy

➢ The formula of discriminating power index

$$D = \frac{B_u}{J_u} - \frac{B_l}{J_l} = P_u - P_l$$

D = discriminating power index

J_u = number of respondent in upper group

J_l = number of respondent in lower group

B_u = number of respondent in upper group answering right

B_l = number of respondent in lower group answering right

P_u = number of respondent in upper group answering wrong

P_l = number of respondent in lower group answering wrong

➢ Classification of discriminating power index
- D = 0.00 – 0.20 – poor
- D = 0.20 – 0.40 – satisfactory
- D = 0.40 – 0.70 – good
- D = 0.70 – 1.00 – excellent
- D = negative – very bad and suggested not to be used

3.3.5 Validity and Reliability

A good test when the test is valid and reliable. Therefore, the validity and reliability of the related questionnaire need to be measured.

a. Testing Validity

To calculate the validity of reading test, each item of the test was analyzed and calculated by using Pearson Product Moment Correlation Formula:

$$r_{xy} = \frac{n\ xy - x\ y}{n\ x^2 - x\ ^2(n\ y^2 - y\ ^2}$$

(Arikunto, 2008 cited in Aeny, 2009)

X = score item for each number

Y = total score

n = number of samples

$\sum x$ = the totaling of x

$\sum y$ = the totaling of y

$\sum xy$ = the totaling of x times y

Table 3.4 The Criteria of Validity

Correlation Coefficient	Validity Criteria
$0.80 \le r_{xy} \le 1.00$	Very High
$0.60 \le r_{xy} \le 0.80$	High
$0.40 \le r_{xy} \le 0.60$	Moderate
$0.20 \le r_{xy} \le 0.40$	Low
$0.00 \le r_{xy} \le 0.20$	Very Low

(Arikunto, 2008 cited in Aeny, 2009)

b. Testing Reliability

The reliability of the reading test was analyzed by using Split-half Method. The obtained data were separated equally become two parts based on the item number of the test. After that, the obtained data calculated by using Pearson Product Moment Correlation. After the formula gained, Spearman-Brown formula then used to gain the data.

$$r_{11} = \frac{2r_{\frac{1}{2}\frac{1}{2}}}{(1 + r_{\frac{1}{2}\frac{1}{2}})} \text{where}$$

(Arikunto, 2008 cited in Aeny, 2009)

r_{11} = coefficient reliability

$r_{\frac{1}{2}\frac{1}{2}}$ = correlation coefficient for each half the test item

Table 3.5 The Reliability Level Based on the Alpha Value

Reliability Coefficient	Criteria
$0.80 \leq r_{11} \leq 1.00$	Very High
$0.60 \leq r_{11} \leq 0.80$	High
$0.40 \leq r_{11} \leq 0.60$	Moderate
$0.20 \leq r_{11} \leq 0.40$	Low
$0.00 \leq r_{11} \leq 0.20$	Very Low

(Arikunto, 2008 cited in Aeny, 2009)

3.4 Data Analysis

In this study, the data were gained through interview, survey questionnaire and with the aim of getting the fullest evaluation from students' perception on reading strategies. The evaluation of the datawas carried out in accordance with the following steps:

1) Survey questionnaire: was used to collect data that relates to the students'perception on reading strategies for improving reading comprehension.

2) Interview: The steps to analyze the interview data were recording students' statements on reading strategies then describing the recording. The next step categorizing the data based on some aspects. Data collected from interview were analyzed by using descriptive qualitative analysis method.

3) Reading test: the reading comprehension test was used to measure students' reading comprehension

There are many different ways to analyze the qualitative data. After having the data from the video recordings, interviews and questionnaires, the researcher analyzed the data employing the following steps adopted from Dornyei (2008.)

3.4.1   Questionnaires

In this study, the data obtained from the questionnaire were analyzed by using a Likert scale formula. The students' answers were counted by changing their answer into the form of score based on the Likert scale.

Table 3.6 Likert Scale Score

	Always	Often	Sometimes	Seldom	Never
Score	5	4	3	2	1

(Adopted from Sugiyono, 2008: 135 cited on Hardiani : 2011)

The average scores of each strategy and the overall average were calculated in finding what types of strategies mostly used by students. The highest average scores on each strategy showed which groups of strategy the students mostly used in reading, while the overall average showed how often the students used strategies for reading.

To find the average value or mean the formula used:

$$X = \frac{\sum x}{N}$$

(Adopted from Sugiyono, 2008: 135 cited on Hardiani : 2011)

X = Average

∑x = total Score

N = Number of Subjects

Furthermore, the responses were classified based on the criteria for evaluating the frequency of strategy use formulated by Oxford as follow.

Table 3.7 The Criteria of the Frequency Level of Reading Strategies

Criteria	Frequency	Score
Very high	Always or almost always	4.50-5.00
High	Often	3.50-4.49
Medium	Sometimes	2.50-3.59
Low	Seldom	1.50-2.49
Very low	Never or almost never	1.00-1.49

3.4.2 Reading comprehension test

The reading comprehension test was used to measure students' reading comprehension. To obtain the score of the test, this study employed a simple formula.

$$\frac{CA}{N} \times 100$$

CA = Number of correct answers

N = Number of the total items

In this research, normality test was carried out by Kolmogorov-Smirnov (cited on Hardiani, 2011) formula using SPSS. The decision of normality in this research comes upon the level of significance at 0.05. Therefore, since the distribution of students reading comprehension score greater than 0.05, it can be said that the data was normally distributed. If the data normally distributed, it means that the sample represents the while population. On the contrary, if it is not normally distributed, it only works at the sample.

The normal distribution score hypothesis for reading strategies and reading comprehension are as follows:

H_o: the reading strategies score and reading comprehension score are normally distributed.

H_a: the reading strategies score and reading comprehension score are not normally distributed.

3.4.3   Analyzing Correlation between Students Reading Strategies and Their Reading Comprehension

After the data of students' reading strategies and reading comprehension test were gained, the data were analyzed by using Pearson Moment Correlation Formula. The data were analyzed by using Pearson Moment Correlation Formula through computerization which known as SPSS.

The Pearson Moment Product Correlation Formula

$$r_{xy} = \frac{n \quad xy - \quad x \quad y}{n \quad x^2 - \quad x \quad {}^2(n \quad y^2 - \quad y \quad {}^2}$$

X   = independent variable

Y   = dependent variable

n   = number of samples

$\sum x$ = the totaling of x

$\sum y$ = the totaling of y

$\sum xy$ = the totaling of x times y

After the correlation coefficient gained through analyzing Pearson Product Moment Correlation, the previous finding interpreted based on Sugiyono'scorrelationreference (cited in Aeny, 2011). For correlation, the null hypothesis is that $r = 0$ -- that there is no relationship between the variables. The hypotheses concern whether or not there exists a non-zero correlation in the population.

$$H_o: \rho = 0 \text{ (no population correlation)}$$
$$H_1: \rho \neq 0 \text{ (there is a real correlation)}$$

$$H_o: \rho \leq 0 \text{ (no positive population correlation)}$$
$$H_1: \rho > 0 \text{ (there is a real positive correlation)}$$

- If the absolute value of the obtained r is less than the r- critical, then retain the null hypothesis and conclude that there is no linear relationship between the two variables, in the population represented by the sample.
- If the absolute value of the obtained r is greater than the r-critical, then reject the null hypothesis and conclude that there is a linear relationship between the variables in the population represented in the sample.

Table 3.8 Sugiyono's Correlation Reference

Coefficient interval	Correlation
0. 00-0. 199	Very low
0. 20-0. 399	Low
0. 40-0. 599	Almost low
0. 60-0. 799	Strong
0. 80-1. 000	Very strong

3.4.4 Interview

The interviewers were asked to explain their perception towards reading, their reading comprehension, and their difficulties in reading, and their reading strategies. The steps to analyze the interview data were recording students' statements on reading strategies then describing the recording. The next step categorizing the data based on some aspects. Data collected from interview were analyzed by using descriptive qualitative analysis method. Descriptive describes the findings found in research, interpretation explains the meaning of finding, and theory will combine the findings and meaning. The next step categorizing the data based on some aspects. The aspects were students' interest towards reading, the most favorite reading text, motivation to read, aims and advantages of reading, students' comprehension on the text, students' effort in understanding the text, the characteristic of difficult text, the existing reading strategies which students had already known, motivation to use reading strategies, and the applied reading strategies.

3.4.5 Transcribing the data

Qualitative research data is generally converted into textual form, producing hundreds of pages of transcripts. The recording gained from the observation and interview will transcribe to know the data thoroughly about students' perception on reading strategies.

3.4.6 Pre-coding and Coding

After transcribing all the data, the researcher read through all the texts to get the same general sense of the data, reflected on them, and noted down some thoughts. This is called pre-coding. The process of coding is highlighting the texts and giving it label, so the researcher could easily identify, retrieve and group data.

3.4.7 Growing ideas

To develop the main theme of the study, researcher tried to grow ideas by preparing memos, interview profile, and data display. From this, the researcher was helped in meeting the research questions with the answers, discovered the phenomena of the techniques in presenting reading comprehension.

3.4.8 Interpreting the data and drawing conclusion

Next the researcher interpreted the data based on the research questions that had been formulated. Qualitative study intends to widen the range of possible interpretations of the phenomenon. The findings and discussions were presented to illustrate the objective of the

study. In the end, conclusions were drawn, and the researcher also gave some suggestions for the future.