

## **CHAPTER III**

### **METHODOLOGY**

This chapter discusses the method of the study which is related to the research design. This study was intended to investigate strategies for reading which were employed by postgraduate students in social and natural sciences, differences and similarities of strategies used by social science and natural science students, and the reasons using those strategies. The discussion in this chapter focuses on research site, participants, data collection, and data analysis.

#### **3.1 Research Design**

This study belongs to a qualitative explanatory design in which the researcher seeks to learn about some little-known phenomenon by studying it in depth (Fraenkel and Wallen, 2009: 431). In other words, it attempts to maintain ‘deeper’ understanding of social phenomena about reading strategies used by students (Silverman, 2005: 10). The use of qualitative approach in this study also refers to the statement that

qualitative research focused on the intensions behind human actions, sought to uncover, and interpret the meanings of all that is happening, being done or being understood by those who are involved in activity under investigation (Nunan, 1992: 2).

This qualitative study tries to investigate the reading strategies used by social and natural science students in postgraduate, the reasons of using those strategies, and the differences and similarities between reading strategies used by social and natural science students. The data that emerge from a qualitative study are descriptive that are reported in words (primarily participants’ words) or pictures, rather than in numbers (Cresswel, 2009: 195).

Moreover, this study can be regarded as a case study since it was carried out in a small scale, a single case, and focused on one particular instance of educational experience or practice and was not be generalized. The results of this study cannot be generalized as general conditions of the whole postgraduate students.

In this study, the data were collected by distributing questionnaire and interviewing the participants. The use of multiple method of taking data is called triangulation that attempts to map out or explain fully the richness and complexity of human behavior in human situations and interactions.

### **3.2 Research Site**

This study was conducted at a postgraduate school in Bandung. The postgraduate school was chosen as a research site because the students have used English text materials in most of their subjects. Then, Rahmi and Jefiza (2013: 409) found that there were problems faced by the postgraduate students in reading English text materials. It was assumed that the problems were related to strategies in reading. Thus, this study attempted to explore postgraduate students' strategies in reading.

Moreover, postgraduate school was chosen because the researcher was one of the students there and was studying in English department. The researcher hoped to get access easily to the research site and thus to decrease feasibility of the study. The researcher's familiarity with the situation in the research site was expected to lead natural relation with the participants.

In addition, the researcher involved social and natural science students since relatively natural and social have a different character of text. Generally, they often use different types of reading text: natural science students read the text with symbol, formula and all about the facts, whereas social science students read the description and explanation text which invites some arguments and opinions. It is clear that the natural and social science students also have different strategies in reading. Thus, in

order to find the differences and similarities of the strategies used by both students, this study was conducted to compare these two sciences.

In selecting the participants, this study used purposive sampling to gain important information from research participants (Alwasilah, 2009:146). There were certain purposes underlying the selection of participants. The purposes can be described as follow. First, the researcher was interested to learn more about postgraduate students. Second, the researcher also wanted to explore social and natural science postgraduate students. Third, as a teacher, the researcher can develop a good strategy for their students in reading English text.

The participants were divided into social postgraduate students and natural postgraduate students. There were 25 natural science students and 25 science students involved in this study. The participants were classified into social science students for them who were majoring in economic, geographic, and social education. On the contrary, students who were majoring in math, chemistry, physics, and biology were grouped into natural science students. They were selected randomly from some classes.

The 25 social science students were selected from three classes. 15 students were selected from P2TK social education class; five students were selected from regular social education class, and five students from economic education class. In the other hand, 25 natural science students were selected from one natural education class. The students were chosen because of three reasons. First, most of the students in that class used English text materials as their resources in learning. Second, the students were considered enough to provide information needed for this study. Third, as colleagues, the students want to cooperate in giving important information for this study.

### 3.3 Data Collection Technique

#### 3.3.1 Questionnaire

This study used a questionnaire to collect the data of students' strategies in reading. As informed by Taylor-Powell (1998: 2), a questionnaire can help researcher to obtain information about what people do, what they have, what they think, know, feel, or want. It provides a means of communications between respondents and researcher. The type of question used in this research was close ended which respondents select either one or multiple responses (Taylor-Powell, 1998; Gay et al., 2009).

The questionnaire consisted of 30 statements about reading strategies which were divided into direct strategies and indirect strategies. The statements about direct strategies consisted of five memory strategies, ten cognitive strategies, and four compensation strategies. Besides, the indirect strategies consisted of four metacognitive strategies, four affective strategies, and three social strategies. They were arranged systematically to make it easy to interpret. They were written in Bahasa Indonesia to make it more comprehensible for the students and to avoid misunderstanding. The form of questionnaire written in English and Indonesian can be seen in Appendix 1 and 2. The distribution of items in the questionnaire is presented in Table 3.1 below.

Table 3.1 Distributing items in questionnaire

Cat- Egories	Sub Categories	Numb. of Items	Strategy
<b>Direct Strategies</b>	Memory Strategies	5	1 (grouping) 2(associating/ elaborating) 3 (semantic mapping) 4 (reviewing well) 5 (using mechanical techniques)
	Cognitive Strategies	10	6 (repeating) 7 (recognizing formula) 8 (practicing naturalistically)

			9 (getting the idea quickly) 10 (using resources) 11 (reasoning deductively) 12 (analyzing contrastively) 13 (translating) 14 (taking notes) 15 (summarizing)
	Compensation Strategies	4	16 (using linguistic clues) 17 (using other clues) 18 (using other clues) 19 (selecting the topic)
<b>Indirect Strategies</b>	Metacognitive strategies	4	20 (finding out about language learning) 21 (organizing) 22 (identifying the purpose of language task) 23 (self-monitoring)
	Affective strategies	4	24 (using progressive relaxation) 25 (making positive statements) 26 (taking risks ) 27 (discussing feelings with someone else)
	Social strategies	3	28 (asking for clarification) 29 (cooperating with peers) 30 (developing cultural understanding)

After getting permission from the chairman of both classes ,the researcher made coordination with the students about the time to conduct the research. After that, the researcher explained the purpose of this research and the items of statements before distributing the questionnaire.

### 3.3.2 Interview

This research conducted interviews to collect information from the participants. As mentioned by Gray et.al (2009: 370), the interview is a purposeful interaction in which one person obtains information from another. Genesee mentions that by doing an interview, a researcher can probe the respondents for additional information in responses to interesting or important answers that arise unexpectedly from the planed questions (cited in Haris, 2007). From point of critical thinking

evaluation, the value of individual interview has been observed by Norris and Ennis, who say:

Interviewing students individually is a way of acquiring very detailed information on the students' critical thinking. Interviewing students individually has certain advantages over other information gathering techniques, ...many students can express ideas easier ...in oral rather than in written form. While interviewing the evaluator has also the option to ask students to clarify what they have said, to request further reasons for their conclusion, and to ask specific questions about what might have influenced their thinking (1989, in Emilia, 2005: 82).

Thus, the interview was conducted in order to invite participants' responses in depth and to examine their ideas and feelings.

Furthermore, interview is essentially vocal questionnaire that can be used more flexible and adaptable (McMillan & Schumacher, 2001: 267). McMillan and Schumacher (2001) also state that interviews result in a much higher response rate than questionnaires, especially for topics that concern personal qualities or negative feeling. However, interviews are potential for subjectivity and bias. To mitigate this potential bias, the interview responses can be validated with the data from questionnaires.

In this study, six students were interviewed to collect the data. The students consisted of three students from social science and three students from natural science. They were chosen based on their availability to be interviewed. The students that were chosen must have completed answering questions in the questionnaire.

The interview used in this research was a semi structured interview. The strength of a semi-structured interview, according to Kvale as cited in Emilia (2005: 83) is that:

A semi-structured interview ... has a sequence of themes to be covered, as well as suggested questions. Yet, at the same time there is an openness to changes of sequence and forms of questions in order to follow up the answers given ... by the subjects (Kvale, 1996).

The semistructured questions were asked orally, which the respondents have no choice to select an answer. Rather, the questions are phrased to allow for individual responses.

The interview was used to answer the second research question ‘why do the students employ those strategies?’ It was conducted after the participants complete answering questions in the questionnaire. There were 31 questions orally asked in the interview based on the data from questionnaire. The questions were written in *bahasa Indonesia* in order to help students understood easily. Each question was related to the students’ reasons in employing reading strategies. The questions can be seen in Appendix 3.

The interview was conducted individually to every student that had been chosen. The overview of interview is described in Table 3.2.

Table 3.2 Overview of Interview

<b>Social science students</b>			
<b>No</b>	<b>Respondents’ number</b>	<b>Date</b>	<b>Place</b>
1	R1	May 1 <sup>st</sup> , 2014	Dormitory
2	R2	May 2 <sup>nd</sup> , 2014	3 <sup>rd</sup> floor of pascasarjana
3	R3	May 21 <sup>st</sup> , 2014	Dormitory
<b>Natural science students</b>			
1	R1	May 1 <sup>st</sup> , 2014	Dormitory
2	R2	May 2 <sup>nd</sup> , 2014	4 <sup>th</sup> floor of pascasarjana
3	R3	May 4 <sup>th</sup> , 2014	Dormitory

Before asking specific question, the researcher informed the interviewees about what are going to be discussed and the fact that the conversation would be tape-recorded to avoid the loss of data, and to enable the researcher to transcribe it later. Most of the interviews were conducted in respondents’ dormitory, to allow them concentrate and share their ideas without any concerns and it is enable the researcher to record the talk clearly.

### 3.4 Data Analysis

Data analyses were conducted while collecting the data. Ongoing data analyses were based on data obtained mainly from the questionnaire. The procedures of data analysis were: (1) analyzing the data in accordance with the method of research, (2) displaying the data, (3) interpreting data analyzed, (4) making conclusions and recommendations of the research. In this study there were two kinds of data employed: questionnaire scores and interview.

#### 3.4.1 Analysis of Questionnaire

There were 30 statements of closed-ended items in questionnaire. The data from questionnaire were analyzed by using Likert scale from 1-5. The reading strategy scores were analyzed based on the intensity of use by the students. In this scale, students answered the questionnaire based on five possible options: *always*, *usually*, *sometimes*, *rarely* and *never*. Each answer has its own score starting from five to one. The scoring was dealing with counting on how many people answer each item in the questionnaire. The scale of the questionnaire and profile result can be seen in Table 3.3 below.

Table 3.3 Scale point of Likert scale

Frequency	Scale point
Always (selalu)	5
Usually (sering)	4
Sometimes (kadang-kadang)	3
Rarely (jarang)	2
Never (tidak pernah)	1

After the data are calculated, the average will be known by using the following formula:



$$\bar{x} = \frac{\sum x}{n}$$

$\bar{x}$  = Mean score (average grade)

$\sum x$  = The sum of respondent's grade

$n$  = Number of Respondents

The averages for each part of the SILL show which groups of strategies readers tend to use the most in reading. The overall average indicates how frequent readers use reading strategies in general. Oxford (1990: 291) proposes the key to understanding readers' average in using reading strategies.

High	Always or almost always used	4.5 to 5.0
	Generally used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
Low	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

The first step of processing data in the questionnaire was coding procedures. Coding procedure involves converting the participants' answers to numbers (Dornyei, 2002: 84). Before getting down to actual coding, the data were assigned by an identification code. Each student was coded by using numbers, and a number of statements in the questionnaire were also categorized based on strategies classification. Then, the data from the questionnaire were compared with transcription, data from the interview. It was important to know the validity of data. Finally, the data were interpreted based on the theories.

### 3.4.2 Analysis of Interview

The analysis of interview data was done through three steps as proposed by Maxwell (1996: 78-79). First, the interview recording was transcribed to get the precise and more accurate data. In transcribing the interview data, the name of participants was coded to protect their confidentiality. Second, students' answers were then categorized based on the reasons of strategies used. The reasons were

classified based on the reasons in using memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. Third, the data were interpreted based on the research questions. In the discussion of this data, students' responses in the interview were justified with the theory in reading strategies, especially the theories from Oxford (1990). Then, the data from interview were used to gain in depth information concerning to research question and it was compared to students' answer in questionnaire.

### **3.5 Concluding Remarks**

This chapter has presented the restatement of the purpose of the study; the research methodology, including the research design, the research setting, the participants, the data collection techniques, the data analysis and the concluding remarks. The following chapter will elaborate the findings and discussion of the research based on the analysis provided in this chapter.