

CHAPTER III

RESEARCH METHODOLOGY

This chapter intended to present how the current study was developed. This chapter involved the research design, the research site and participants, the data collection, and the data analysis.

3.1 The Research Design

To answer the research questions, this study adopted exploratory case study design which aims to capturing “things or people as they are, without trying to alter anything” (Zainal, 2007). Yin (2002) defines case as “a contemporary phenomenon within its real life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over the phenomenon and context” (p. 13). Case study is an ideal methodology when a holistic, in-depth investigation is needed (Feagin, Orum& Sjoberg, 1991). Moreover, case study method enables a researcher to closely examine the data within a specific context (Zainal, 2007). This research method is chosen due to its advantage in the data collection which included the examination of the data which is most often conducted within the context of its use (Yin, 1984).

Since this study aimed to describe the characteristics and condition of a certain group at a specific time and investigate the relationships of different variables, the descriptive data presentation method was used (Mitchel & Jolley, 2013).

To get the valuable direct source of data, the methods employed in this study are questionnaires and interview. They were used to address the three research questions presented in chapter I:

1. Which metacognitive knowledge and regulation are used by the students?
2. Which metacognitive knowledge and regulation are used by the students with high-, medium- and low-achievements in English?

One-phase triangulation was used in this research to obtain complementary of many data sources. One-phase design is the type of the triangulation, where the two types of data are collected in the same time frame,

and are given equal weight. Typically, it involves the concurrent but separate collection and analysis of the two types of data, which are then merged, perhaps through data transformation, or perhaps at the interpretation-of-results stage (Creswell & Clark, 2007).

The data were collected from interview and a questionnaire modified from Survey of Reading Strategies (SoRS) and Metacognitive Awareness Inventory (MAI). Then, the two data sets were merged into one overall interpretation.

3.2 Research Site and Participants

The research took place at one of the public high schools in Bandung. The research was held on English class.

The participants of this study are 33 second-graders of senior high school. To gain data on the interview, the purposive sample was used. The researchers intentionally selected 15 participants from the site to cover the high-, medium- and low-achiever students, taken from their achievement in English subject. This sampling method is chosen in order to target those who can provide the best information to achieve the objective of the study (Creswell, 2003).

3.3 Data Collection

In this research, the data was collected using some instruments to meet the purpose of the research. The instruments used to obtain the data are questionnaire, interview and the observation of the comprehension test result. Each instruments played different role and used to answer the research questions.

3.3.1 Questionnaires

The first instrument that was used in this research is questionnaire. Questionnaire is the research tools through which people are asked to respond to the same set of questions in a predetermined order.

The questionnaire was chosen to be one of the two instruments that were used in this study because it is considered to be the appropriate instrument for taking data from large audience. Questionnaire has been proven to be effective and efficient to be used. Moreover, the data gained from the questionnaire can be easily coded. According to Sugiyono (2012), there are two types of questionnaire, which are closed form questionnaire and open form questionnaire. Open form

questionnaire is a question that hopes the respondent to write his or her answer about something descriptively. On the other hand, close form questionnaire will help the respondent to answer quickly, because the researcher gives an alternatives answer to them. In this research, the researcher used close form questionnaire, the students were given some question with few alternative answers which had to be chosen by the students.

Questionnaires are the most frequently used data collection method in educational and evaluation research. In this research, questionnaire was used to help gather information on knowledge, attitudes, opinions, behaviors, facts, and other information about students' metacognitive knowledge and regulation that they use every time they read. The questionnaire in this study was used to analyze the students' perception of their difficulties and moreover, their strategies in overcoming their difficulties in reading the academic material. Later, the results of the questionnaire were matched with the interview.

The instruments developed in this research are based on Brown's model of metacognition. The questionnaire items are collected and combined from various metacognition measurement tools that have been developed and validated by many researchers in metacognition field. The questionnaire items are combined and modified from Schraw & Dennison's "Metacognitive Awareness Inventory" (1994), Mokhtari & Sheorey's "Survey of Reading Strategies" (2002), and Jiménez et al. (2009) "ESCOLA".

The questionnaire used in this study comprised 46 items measuring both metacognitive knowledge and metacognitive regulation which will be presented more clearly in the table 3.1 below.

Table 3.1 Questionnaire items

Category	Category	Items
Metacognitive Knowledge	Declarative	3 items
	Procedural	3 items
	Conditional	3 items

Metacognitive Regulation	Planning	6 items
	Information Management Strategies	14 items
	Comprehension Monitoring	6 items
	Debugging Strategies	6 items
	Evaluation	5 items

The four-point Likert scale ranging from 1 (“never”) to 4 (“always”) was used to indicate the frequent usage of students’ reading strategies. Each number represented as the following:

‘1’ = ‘never or almost never’

‘2’ = ‘only occasionally’ / ‘rarely’

‘3’ = ‘frequently’

‘4’ = ‘always or almost always’

Because the participants are Indonesian students, the questionnaires were translated into Indonesian in order to ensure that all students understand the questionnaire. More details on questionnaire items are provided in appendices section.

3.3.2 Interviews

Since the data from questionnaire are limited and not thorough, the data were completed by interviewing the participants. An interview is a conversation between people in which one person has the role of researcher.

Interviewing is a powerful way of helping people to make explicit things that have been implicit—to articulate their tacit perceptions, feelings and understandings. (Arksey and Knight, 1999). Fetterman (1988), in fact, describes interviewing as the most important data collection technique a qualitative researcher possesses.

As Cohen and Manion (2000) point out, the interview can serve a number of distinct purposes. First, it can be used as the means of gathering information about a person’s knowledge, values, preferences and attitudes. Secondly, it can be

used to test out a hypothesis or to identify variables and their relationships. Thirdly, it can be used in conjunction with other research techniques, such as surveys, to follow up issues. (Alwasilah, 2008).

There are several different types of interview. Interviews may be divided into five categories:

- Structured interviews.
- Semi-structured interviews.
- Non-directive interviews.
- Focused interviews.
- Informal conversational interviews.

The type of interview that will be used in this research is semi-structured interview. Semi-structured interviews are non-standardized, and are often used in qualitative analysis. The interviewer has a list of issues and questions to be covered, but may not deal with all of them in each interview. The order of questions may also change depending on what direction the interview takes. Indeed, additional questions may be asked, including some which were not anticipated at the start of the interview, as new issues arise. Responses will be documented by note-taking and by tape-recording the interview.

The semi-structured interview allows for probing of views and opinions where it is desirable for respondents to expand on their answers. This is vital when a phenomenological approach is being taken where the objective is to explore subjective meanings that respondents ascribe to concepts or events. Such probing may also allow for the diversion of the interview into new pathways which, while not originally considered as part of the interview, help towards meeting the research objectives. This type of interview is chosen based on the realization that the data collection has to portray the phenomena as it is, as natural as possible. Therefore, the instrument used has to be flexible to gather as much information as possible in the most natural way.

The procedure for the interviews will go as follows: the researcher conducted one face-to-face interview with each participant who described his or her metacognition by answering open-ended questions that the researcher wrote on a form used as a guideline. The interviews will be audiotaped and the

recordings will be transcribed by the researcher immediately after each interview. If ambiguities arose concerning their reading strategies, the participants were asked to clarify them either while they were interviewed or over the telephone after the interview.

Below are the interview questions construct administered to the participants:

1. Students' planning process before reading the text.
2. Students' strategies in reading
3. Students' difficulties in reading
4. Students' strategies in facing the difficulties in reading
5. Students' evaluation process after reading

More details on interview questions administered to the students are provided in appendices section.

3.4 Data Analysis

Data analysis of the questionnaire

The data that has been collected went through some of analysis process before the conclusions are drawn. Descriptive statistics were used to analyze the data.

The process of data analysis went through some stages as follow:

After the data was collected, the researcher checked the validity of the questionnaires that has been filled by the participants. The data were included into a table to make the analysis process easier. The model of the table that were used is shown below.

Table 3.2 Data processing table for questionnaire

Category	Statements	Frequency of Respondents' Answer/f
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		Always	Frequently	Rarely	Never
Declarative	I understand my intellectual strengths and weaknesses				
	I have control over my reading process				
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After the data were gained and inserted into the table, the next step of the data analysis was calculating respondents' answer for each statement. Then, the data were converted to percentage to make the analysis of the high-frequent use and low-frequent use metacognition easier.

After the data were arranged into tables, the data were analyzed to look at which metacognitive knowledge and regulation used by the students. Then, the conclusions are drawn based on the analysis of the data.

The thirty-three students were classified into three different group of metacognition, which are High, Medium and Low. The grouping is derived from the range of the data (maximal value-minimal value) and divided with 3, according to the amount of the categories which is consists of High, Medium and Low level of metacognition. The scoring guide of the questionnaire result is presented in table 3.3 below.

Table 3.3 Categorization of Metacognition Usage

Level	Metacognitive Knowledge	Metacognitive Regulation
Low Frequency	9 – 18	37 – 73
Medium Frequency	19 – 27	74 – 110
High Frequency	28 – 36	111 – 148

To investigate the differences in the participants' perceived use of reading strategies and their reading proficiency, the participants were divided into higher and lower proficiency groups according to their grades on last-term English reading exam designed by the English teacher of the class to assess students'

proficiency in English.

The average and mode of the data are counted and the result were converted into percentage. Then, the data were presented in form of tables and figures.

Data analysis of the interview

Meanwhile, the data from the interview were transcribed and coded. Coding is an effective method to analyze the data of verbal protocols such as interviews and observations (Green, 1998). Coding is “the relationship between what are termed task-independent process categories and performance on the task in question” (Green, 1998, p. 69). Some examples of transcriptions from the interviews and are provided with the findings presented in Chapter IV.

3.5 Concluding Remarks

This chapter has discussed research methodology used in this study covering the research design, research site and participants, data collection and data analysis. The next chapter will present the findings and discussion of the metacognition of the students in reading comprehension process.