## CHAPTER III

## RESEARCH METHODOLOGY

In the previous chapter, the related theories supporting the study have been briefly explained. For this chapter, the research methodology related to the study will be explained. This chapter will cover: the research method, including research design, place of research, population and sample, data collection, scoring system and data analysis.

### 3.1 Research Design

As a survey research this study sought to obtain feedback from subject teachers and students involved in the use of English as a medium of instruction at junior high level in Indonesian context. Lavrakas (2008) defined survey as a research method used by social scientists (e.g., economists, political scientists, psychologists, and sociologists) to empirically and scientifically study and provide information about people and social phenomena. He also added that survey studies are scientific because there is an established process that can be followed, documented, and replicated. This survey study is a cross-sectional survey which is used to gather information on a population at a single point in time (Babbie, 2008).

## 3.2    Research Setting and Participants

This research was conducted at two RSBI schools in Bandung, SMPN X Bandung and SMPN Y Bandung. These schools were chosen since they are the only RSBI schools located in the city. SMPN X Bandung was established as RSBI school since 2008 while SMPN Y got the status in 2007. Those schools are some of the first international standard schools in the city. In total, there are 182 students and 17 mathematics and science teachers involved in this study as respondents.

## 3.3    Data Collection

Data were collected using questionnaires, self-evaluation rating, and interview (see Appendix). Two questionnaires were developed, one for the teachers and the other for the students. Questionnaire for the teachers is intended to reveal teachers' perception on the use of English as a medium of subject instruction and their problems in teaching mathematics and science through English. The other questionnaire for the students tried to find information regarding the use of English by the subject teachers and by themselves during the instruction, as well as the problems they encounter in using the language. The translated items from the Stanford Foreign Language Oral Skills Evaluation Matrix (FLOSEM) (Padilla, Sung, & Aninao, 1997) were employed to assess teachers' oral proficiency. And finally, semi-structured interviews were also conducted to four of the teachers for cross-validation purposes.

1)   Questionnaire for teachers

Table 1 Aspects of teachers' perception

| No. | Aspects | Statement Numbers |
|-----|---------|-------------------|
| 1 | The use of EMI | 1 |
| 2 | Teachers' English skill | 2 |
| 3 | Students' English skill | 3 |
| 4 | Use of Indonesian | 4-6 |
| 5 | Teachers' linguistic problems | 7 |
| 6 | Teachers' efforts to overcome the problem | 8-9 |

2)   Students' questionnaire

Table 2 Aspects of students' perception

| No. | Aspects | Statement numbers |
|-----|---------|-------------------|
| 1 | Explanation from Mathematics and science teachers | 1-2 |
| 2 | Students' English speaking skill | 3-5 |
| 3 | Most difficult subject to learn in English | 6-7 |

| 4 | Students' language preference in learning mathematics and science | 8-9 |
|---|---|---|
| 5 | Students' linguistics problems | 10-11 |

Then the translated items from the Stanford Foreign Language Oral Skills Evaluation Matrix (FLOSEM) were used to assess the teachers' oral proficiency. The teachers self-evaluated their English proficiency by choosing which level of proficiency they belong to. There are six levels in each proficiency aspect, from the level 1 to 6.

Table 3: Aspects of FLOSEM

| Rubric | Aspects |
|---|---|
| Level 1-6 | Speaking fluency |
| Level 1-6 | Vocabullary |
| Level 1-6 | Pronunciation |
| Level 1-6 | Grammar |

For cross-validation purposes, semi-sructured interview was used. The purpose of interviewing is to find out what is in or on someone else's mind and to access in the perspective of the person being interviewed (Lavrakas, 2008). Semi-structured interview was usedbecause in this type of interview, the interviewee can express their idea freely. In this research, the writer interviewed 17 teachers to get further information about their perception on the use of English as a medium of instruction

Table 4: Aspect of interview

| No. | Aspects |
|-----|---------|
| 1 | Teachers' education background |
| 2 | Teachers' English training |
| 3 | The use of EMI |
| 5 | Teaching method |
| 6 | The use of Indonesian in the classroom |
| 7 | Teachers' linguistics problems |
| 8 | Teachers' efforts to improve their English skill |

## 3.4    Scoring System

Table 5: Scoring system in teachers' and students' perception questionnaire

| Statements | Score |
|------------|-------|
| Strongly agree | 5 |
| Agree | 4 |
| Not sure | 3 |
| Disagree | 2 |
| Strongly disagree | 1 |

### 3.5    Data Analysis

The aim of this research is to find out teachers' and students' perception on the use of English as a medium of mathematics and science instruction. The data of teachers' and students' perception were obtained from the questionnaire and interview.

The collected data were then analyzed using the following steps:

1. Calculating the number of respondents who answered in each statement

2. Calculating the percentage of the respondent for each answered item

For example:

The number of respondents who choose strongly agree is 30, and the total of respondent is 100. The percentages of respondents choosing strongly agree is,

$$\% = \frac{P}{N} \times 100\%$$

$$\% = \frac{30}{100} \times 100\%$$

$$\% = 30\%$$

Where:

P: Number of respondents

N: Total respondents

(Furqon, 1997)

3. Calculating mean of each statement

To measure the mean of the teachers and students' perception, the following formula was used:

$$\overline{X} = \frac{\sum (fi.xi)}{fi}$$

Where:

$\overline{X}$ = mean

$\sum (fi.xi)$ = the total frequency

fi = the number of sample

(Furqon, 1997)

After getting the mean, the meaning of the mean in each statement or question was reviewed by using the following score category to get the teachers' and students' perception on the use of English as a medium of mathematics and science instruction. The scoring are:

| Mean | Statements |
|------|------------|
| 5 | Strongly agree |
| 4 | Agree |
| 3 | Not sure |
| 2 | Disagree |
| 1 | Strongly disagree |

The finding data itself will be analyzed and discussed in the next chapter.

**3.6    Clarification of Terms**

The title of the research is Teachers' and Students' Perception on the Use of English as a Medium of   Instruction: A Survey on Pilot International Standard Schools (RSBI) in Bandung and in order to avoid confusion and misunderstanding, several terms are clarified as follows:

a. Perception

According to *Oxford Advance Learner's Dictionary* (1995: 305), perception means the way of seeing or understanding something. In this case, teachers' and students' way of seeing and understanding the use of English as a medium of instruction in their classroom.

Psychologically, perception is the process by which information acquired through the sensory receptor (eyes, ears, nose, and skin) is transformed into a precept of what we think, see, hear, smell, taste, or touch (Mussen, 1973:68, as cited in Hermiadi, 2007). Prinz and Bridgeman (1994) defined perception as a creative process that involves much more than simple transformation of stimulus energy by the sensory receptors. It means that teachers and students use their senses to an attractive stimulus that address to them. Regarding the use of English as medium of subjects instruction that this study is concerned with, the teachers and the students in this research will give their responses for the use of EMI in which become the stimulus.

b. Medium of Instruction

Powell and Powell (2010) describes medium of instruction as something that transfer information in a classroom communication context. Hornby (2000) defines medium as subtance, surrounding, in which something exists or through which something moves. Instruction itself, according to him is derived from the word "instruct" that has a meaning as teach a school subject, or a skill (2000). Medium of instruction here refers to the target language the teacher uses in conveying the material of school subject.