CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses the issues concerning the methodology employed in this study. It was the procedures of collecting and analyzing the data. The discussion was first begun by identifying the research questions and the aims of the study. Next, the research design employed was discussed. After that, the answer to such questions as who involved, where and how to obtain the data, and finally how to analyze them, were described.

3.1 Research Questions

The problems of the study were formulated in the following questions:

1. What is the model of bilingual program applied by the school?

2. What is the students' opinion about bilingual program in the school?

3.2 Aims of the Study

According to the research questions, the aims of this study is to find out the model of bilingual program applied by the public senior high school in Bandung and the students' opinion about bilingual program in the school.

3.3   Research Design

This study required the portrait of bilingual program model and the students' opinion about bilingual program in the school. Thus, the study was set as a qualitative research. McMilan (1992) cites some characteristics of qualitative research. First, it is carried out in natural setting. It means that behavior was studied as it occurs naturally, without manipulating data given by participants. Second, qualitative research provides rich narrative descriptions. Every detail is thought to contribute to a better understanding of the model of bilingual program or to obtain a complete understanding of the students' opinion about the bilingual program. Third, it concerns with process. Qualitative methods look for the process through which behavior occurs. Fourth, perspectives of participants are important. The goal in qualitative research is to understand participants from point of view (Creswell, 1994).

This study employed case study as its method and approach. Merriam (1998) claims that case study is an ideal design to understand and interpret observations of educational phenomena. She further explains that a case study is an examination of a specific phenomenon such as program, an event, a person, a process, an institution or a social group. Furthermore, Yin (1984 cited in Nunan 1992) states that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. Thus, since this study concerned with bilingual

program model applied by the school and students' opinion about the program, this study was categorized as a descriptive case study.

3.4 Site and Participants

This study took place in a public senior high school of pilot international standard school in Bandung regency. The selection of the schools as the research setting was based on the distance. The school is so near, that the cost in conducting the study could be minimized.

The participants involved in this study were three teachers and three classes of the first, the second, and the third grade in the public senior high school of the pilot international standard school. More specifically, since the study investigated the model of bilingual program applied by the school, the teacher participants observed were divided into three grades. In the first grade, the biology teacher (T1) was observed. She has been the biology teacher since 1988. She finished her graduate degree in 2009. In the second grade, the math teacher (T2) was observed. She began teaching in 1990, so she had taught for twenty one years. She finished her undergraduate degree in 1992. In the third grade, the biology teacher (T3) was observed. She was graduated her master at UPI Bandung in 2009.

3.5 Data Collection

Various methods of collecting data, i.e. classroom interview, observation, and questionnaires were employed for this study: triangulation—an attempt to

combine more than one method of data collections—was advocated in order to maximize the reliability and authenticity of the study.

3.5.1 Interview

The first data collection was interview. Estenberg (2002) cited in Sugiyono (2008:319) says that interview is a meeting of two persons to exchange information and idea through questions and responses and joint construction of meeting about a particular topic. He also states that there are three kinds of interview; structured interview, semi structure interview and unstructured interview.

In this study, semi structured which is also called in-depth interview was used. The purpose of this interview was to probe the ideas of the participants about the bilingual program model applied by the school. The interview question was prepared before the participants were interviewed and they were used to support the result of observation. However, the answers of the respondent were not predicted by preparing the answers written in the question interview. The answers of the participants were pure from them; it was not based on interviewer's choices.

The three of participants were interviewed from 11th to 12th of April 2011 and an audio-recording was conducted during the interview to support the data presentation. Thus, all of the recorded participants' contribution were transcribed and analyzed.

3.5.2   Observation

The second data collection was classroom observation. It was used to collect the data related to human being behavior, working process, and natural signs (Sugiyono, 2006). The observation was conducted three times for each teacher from 28th of March 2011 to 8th of April 2011. The observation was conducted to support the finding about the bilingual program model applied by the school.

This study used voluntary-based participant observation which focused on passive participation. Passive participation means that there is no interaction or participation by the observer, although the observer presents at the scene of action. Then, Spradley as cited in Sugiyono (2008:34) states that there are three main components of observation. They are place, actor and activity. This study focused on the classroom activity, specially the portion of English as language of instruction.

Recording the teaching and learning process by visual recorder was conducted to give the real situation description in the classroom. Toward this process, Allwright and Bailey (1991:3) suggest that to have more complicated inquiries, a more complete record is needed. It may use audio record or video-record. It used to see what goes on and to go back in detail to what was said, by whom, in what tone of voice, and so on. Finally, the relevant data from observation is presented in chapter four of this paper.

3.5.3 Questionnaire

To collect the data, the third data collection was questionnaire. Questionnaire is a popular data collection technique on the qualitative research (Alwasilah, 2008: 151). In addition, Nasution (1987: 165) defines questionnaire as a list of questions to get some information from participants.

To find out the students' opinion about bilingual program, students' goal to participate in the grogram and information about the portion of English as language instruction in each grade, questionnaire was other instruments used in this study. It is in line with Allwright and Bailey's suggestion (1991: 4) that the obvious alternative to direct observation is ask, giving people opportunity to say what was happened to them and what they think about it. The questionnaire was distributed to the third grade of the school. It was assumed that the students of the third grade have enough information to this study because the students had experienced in the first grade, the second or the third grade. It was expected that the students may give maximum information about their opinion about the bilingual program, their goal to participate in the program and the portion of English as language instruction. This sampling technique which is called purposive sampling is in line with Lincoln and Guba (1985 cited in Sugiyono, 2010: 301) that the participant of qualitative study is based on informational considerations. Its purpose is to maximize information.

There was only one section in the questionnaire, closed question section (in scale form). The statements in the closed questions were divided into three different purposes. First, the purpose was to find out the students' opinion about

bilingual program. There were eleven statements in the closed question to gain the data about the students' opinion about bilingual program. It was distributed from item number 1 to 10 and item number 20. Second, the purpose was to find out the students' goal to participate in the bilingual program applied by the school. There were four statements in the closed question to gain the data about the students' goal in participate in the bilingual program. It was distributed in item number 14, 15, 18 and 19. Third, the purpose was to find out the students' point of view or experience about the portion of English as language instruction in the bilingual program. There were five statements involved to this purpose. The five statements were item number 11, 12, 13, 16 and 17. The following is the detail division of each statement.

Table 3.1

The Division between the Students' Opinion about Bilingual Program, the Students' Goal to Participate in Bilingual program and Students' Point of View about the Portion of English as Language Instruction

Item Number	1	2	3	4	5	6	7	8	9	10
Students' opinion about bilingual program	√	√	√	√	√	√	√	√	√	√
Students' goal to participate in the bilingual program										
Students' point of view about the portion of English as language instruction										

Item Number	11	12	13	14	15	16	17	18	19	20
Students' perception toward bilingual program										√
Students' goal to participate in the bilingual program				√	√			√	√	
Students' point of view about the portion of English as language instruction	√	√	√			√	√			

In addition, the statements in the closed questions were divided into three different purposes; the statements in the closed questions were also divided into negative and positive statement. The positive statement comprised sixteen statements. They were from item number 1 to 10, 12, 13, 15, 16, 17, and 20.

While the negative statement consisted of four statements, they were item number 11, 14, 18, and 19. The following is the detail division of each statement.

Table 3.2
The Division between Positive and Negative Statements

Item Number	Statements	Focus	Item Number	Statements	Focus
1	Positive		14	Negative	Students' goal to participate in the bilingual program
2	Positive		15	Positive	
3	Positive		16	Positive	Student's experiences about the portion of English as language instruction
4	Positive	Students' opinion about the bilingual program	17	Positive	
5	Positive				
6	Positive				
7	Positive		18	Negative	Students' goal to participate in the bilingual program
8	Positive		19	Negative	
9	Positive				
10	Positive		20	Positive	Students' opinion about the bilingual program
11	Negative	Student's experiences about the portion of English as language instruction			
12	Positive				
13	Positive				

The closed questions were then analyzed and organized using the Likert scale, which constructed the format of questions into scale-based categories. Commonly, the Likert scale uses 1-5 scales for the categories of strongly agree (SA), agree (A), uncertain (U), disagree (D), and strongly disagree (SD). However, in order to avoid the mental perceptions of the participants, the uncertain (U) category was eliminated. Each category of the statements was then scored in a scale of 1, 2, 3, and 4. Below is the detail scoring of each response.

Table 3.3
The Score of Response to the Positive Statements

Response	SA	A	D	SD
Score	4	3	2	1

It can be seen in the above table, in the positive statement, the response of strongly agree (SA) would be scored 4. The response of agree (A) would be scored 3. Next, the response disagree (D) would be scored 2, and the response

strongly disagree (SD) would be scored 1. And below is the detail scoring for negative statement.

Table 3.4
The Score of Response to the Negative Statements

Response	SA	A	D	SD
Score	1	2	3	4

The table shows that in the positive statement, the response of strongly agree (SA) would be scored 1. The response of agree (A) would be scored 2. The response disagree (D) would be scored 3, and the response strongly disagree (SD) would be scored 4. The detail of total scores for the closed questions can be seen in the appendix.

3.6 Data Analysis

The data analysis in this research was purposed to find out the model of bilingual program and students' opinion about bilingual program. In the process of data analysis, the data were analyzed through qualitative data analysis. It was started by analyzing the transcript of interview, the video recording of observation and the questionnaire answers.

3.6.1 Interview Analysis

The data from interview were analyzed to find out the model of bilingual program applied by the school. The data were transcribed, organized and classified into several categories. And the data would be clarified clearly in chapter four.

3.6.2 Observation Analysis

The data from classroom observation was transcribed to figure out the portion of English as language of instruction. It was used to find out what model of bilingual program was applied by the school. After the data was transcribed, it was categorized to find the percentage of English as language of instruction. English as language of instruction was also analyzed. It was used to find out about what English used for by the three of teachers. Below is the detail of the framework.

Table 3.5
The Percentage of English as Language of instruction

Teacher's Utterances					Total
English			Switched	Indonesian Language	
	T uses English as medium for:				
Total	:				
Percentage	:…		… %	… %	100%

As shown in the table, the teacher's utterances were categorized into English, Switched or Indonesian Language sentences. After that, the total of each categorization was calculated. Next, the percentage of English, Switched and Indonesian Language sentences was found. The last was categorized what English used for. The result of observation analysis can be seen in the appendix.

3.6.3 Questionnaire Analysis

After all the data from questionnaire had been collected, the answers were analyzed through these several steps.

First, it was to find the maximal and minimal score. The maximal score could be gained through multiplying the highest score for each statement with the

total numbers of participants. As for the minimal score, it could be gained through multiplying the lowest score for each statement with the total numbers of participants. If the score given for each statement was 4, 3, 2 and 1, it means that the highest score was 4 (four) and the lowest score was 1 (one).

Therefore the formula would be:

Maximal score = N X 4 = N4		Maximal score = 30 X 4 = 120
Minimal score = N X 1 = N1	=	Minimal score = 30 X 1 = 30

As a result the range of the score was around N4 to N. Since the amount of students were 30, so the maximal score was 120 and the minimal score was 30.To know the general conclusion of each item the formula "IF" in Ms. Excel was used. For positive statements, if the total scores were from 106 to 120, the students' response was categorized SA (strongly agree). Then, if the total scores were from 76 to 105, the students' response was categorized A (agree). The students' response was categorized D (disagree) if the score was from 46 to 75. Finally, the students' response was categorized SD (strongly agree) if the scores were less than 46. Meanwhile, for negative statements, if the total scores were from 106 to 120, the students' response was categorized SD (strongly disagree). Then, if the total scores were from 76 to 105, the students' response was categorized D (disagree). The students' response was categorized A (agree) if the score were from 46 to 75. Finally, the students' response was categorized SA (strongly agree) if the score were less than 46. The detail result of the categorization can be seen in the appendix.

Second, it was calculating the participants' score. It was to find the percentage of the score and interpreted the result. The percentage of each category can be found out through the formula below.

$$\text{Percentage} = \frac{\text{Total participants who answer an item } (f_o)}{\text{Total participant}} \times 100\%$$

For ease of drawing a conclusion, it was based on a reference by Suryadi (1987: 20) in interpreting the result of percentage. Below is the description.

00.00%   = none

00.15 – 24.99% = a few of participants

25.00 – 49.99% = a nearly half of the participants

50.00%   = half of the participants

50.00 – 74.99% = More than half of the participants

75.00 – 99.99% = nearly all of the participants

100%   = all of the participants

The detail percentage of the questionnaire result can be seen in the appendix.

3.6 Establishment of Trustworthiness

The validity and reliability in qualitative study are comprised by the term of establishing trustworthiness. Qualitative researchers have no single stance or consensus addressing traditional topics such as validity and reliability in qualitative study. The reliability or audit ability refers to the consistency of a study. Both of validity and reliability can be obtained by employing various

techniques of data collection (Alwasilah, 2008: 175). In this study, triangulation was used in order to establish trustworthiness.

Triangulation refers to two concepts, namely plural and stability dimensions. Combination of various sources, methods and techniques will enhance credibility.

> (1) Triangulation of data- Data will be collected through multiple sources to include interviews, observations and data document analysis, (2) member checking- the informant will serve as a check throughout the analysis process. An ongoing dialogue regarding our interpretations of the informant's reality and meanings will ensure the truth value of the data, and (3) long terms and repeated observations at the research site-regular and repeated observations of familiar phenomenon and settings will occur on-site over four months period of time (Creswell, 1994: 167)

In this study, examining archival document, classroom observation and interview were used to ensure the credibility. Further, the triangulation of the methods not only allowed for the exploration of phenomenon of interest in the study effectively during the short period of time, but also enhanced credibility of the study.