

## **CHAPTER III**

### **METHODOLOGY**

This chapter discusses the methodology of the study. The study represents a development research to answer the research question raised in chapter I. This chapter explains the procedures applied during the selection of the subjects, time, and place of the study, data and data source, instruments, data collection procedures and analysis of the data.

#### **3.1. Method of the Study**

The method of this study was research and development. According to Seels & Richey (1994, p.127) in <http://www.aect.org/edtech/41.pdf>, Research and development (R & D) method is the systematic study of designing, developing and evaluating instructional program, processes and products that must meet criteria of internal consistency and effectiveness. Although this method and the developing process are mostly applied in science and technical study, this method also can be applied in education field (Sugiyono, 2007:29).

According to Borg and Gall (1989) in Sukamdinata (2008, p. 169), there are three main steps in implementing research and development method. The steps are:

1. Research and Documents Study

In research an Documents Study the writer collects need analysis to collect information about your students' learning needs, wants, wishes, desires in developing the insrtument of evaluation. The need analysis is taken from literature study and some considerations of students' score aspect.

## 2. Developing the form of product

Development of instrument of evaluation includes planning, main product revision and final product of revision.

- Planning

Arranging research plans that include abilities of the research implementation, objectives that want to achieve by the research, research design, and possible examiner in definite range.

- Main product revision

Revising or complementing the result of testing.

- Final product revision

The final product is based on the input of field testing implementation.

## 3. Validity

In the process validity, there are preliminary field testing and main field testing to get the validation of product revision.

- Preliminary field testing

Interview and giving questionnaire during the testing.

- Main field testing

Quantitative data of teacher's performance before and after using the instrument of evaluation which is tried and collected. The result of data collecting is collected and if possible compared with other teacher

### **3.2. Time and Place of the Study**

This study was conducted for 8<sup>th</sup> grade English and Mathematics teachers at SMP Labschool. It is located at Jl. Pemuda Komplek UNJ, East Jakarta. It was conducted at the second semester of 2013 starting from December 2012 until January 2013.

### **3.3. Subject of the Study (Research Participant)**

In this study, the participant was a group of 8<sup>th</sup> grade English and Mathematics teachers at SMP Labschool, East Jakarta. The group consisted of four teachers. They were two English teachers and two Mathematics teachers.

### **3.4. Data and Data Source**

The data needed for this study were documents of teaching materials and field data. The sources of the data were syllabus and lesson plan of the English and Mathematics teachers, the transcriptions and the recorded of interview.

### **3.5. Instruments of the Study**

The data gathered through interview, documents study, and classroom observation.

#### **3.5.1. Classroom Observation**

Classroom observation was aimed to gather the information on how the Mathematics teacher conducted the lesson in classroom. Classroom Observation was also conducted in order to get the real description of the difficulties in teaching learning activity.

### **3.5.2. Interview**

The interview was done after observing classroom activity. The purpose of conducting the interview is to obtain information about teachers' toward the use of instrument of evaluation in CBI, bilingual program, teachers' instrument of evaluation and the difficulties the faced in the classroom activities. The interview was design in semi-structure interview and was done in non formal situation to get natural answer from the teachers one by one. The writer just asked every teacher several open-ended questions that have been formulated before and the teacher freely answered the questions. What the writer is looking for in this interview is the teachers' spontaneity. Later, the writer lets the interviewflowed out with the purpose of getting the real data or information. The result of interview used as one of the reference in developing instrument of evaluation in CBI to integrate Mathematics content into English subject.

### **3.5.3. Documents Study**

Lesson plan written by the teachers was used as the references in developing instrument of evaluation in CBI to integrate Mathematics content into English subject.

## **3.6. Data Collection Procedures**

The data of this study were taken on the following procedures:

- a. Observing Instrument of Evaluation in Classroom Activity

The writer observed instrument of evaluation to the teachers by:

1. Record the teachers's activity and instrument of evaluation in the classroom during the teaching and learning process
2. Taking field notes of interaction happened
3. Analyzing of teachers's activity and instrument of evaluation in the classroom

b. Interviewing English and Mathematics teacher

The writer interviewed 8<sup>th</sup> grade English and Mathematics teachers.

The interview was recorded by using tape recorder and took field notes. The steps are:

1. Creating Interview
2. Testing the interview
3. Making interview to the teachers
4. Trascripting the teachers' interview

c. Analyzing Lesson Plan

The writer analyzed the syllabus and Lesson Plan for developing CBI instrument of evaluation to find out what instrument of evaluation in Mathematics that can be implemented and coherent to be used in English subject.

The writer analyzed lesson plan by:

1. Collecting the second semester syllabus of English and Mathematics subject

2. Analyzing lesson plan of English and Mathematics subject by integrating Mathematics content into English subject and developing instrument of evaluation

### **3.7. Data Analysis Procedures**

The data were obtained from review of classroom observation, interview, and documents study. The procedures of the data analysis are:

#### **a. Classroom Observation**

After observing instrument of evaluation in classroom, the writer analyzed the result of classroom observation by:

1. Reviewing the field notes from the teachers' activity in the classroom
2. Analyzing the recorded of teachers' activity and instrument of evaluation in the classroom
3. Evaluating the data by comparing it with the analysis data from interview
4. Listing the result in the table

#### **b. Interview**

After interviewing the English and Mathematics teachers, the writer analyzed the result of the interview by:

1. Listening again to the recorder from the session
2. Transcribing the recorded of the interview
3. Analyzing the result of the interview

#### 4. Summarizing the result of the interview

##### c. Documents Study

After collecting the 8<sup>th</sup> grade lesson plan of English and Mathematics subjects, the writer analyzed it by:

1. Identifying materials of Mathematics that can be implemented into English subject by the teacher from the syllabus
2. Identifying the components of lesson plan used in English and Mathematics subjects
3. Integrating the standard competencies, basic competencies, and indicators achievement and creating instruments to be an integrated lesson plan