

## **CHAPTER III**

### **METHODOLOGY**

#### **A. Research Method**

Qualitative method is used in this study. According to Denzin and Lincoln (1994), qualitative research focuses on interpretation of phenomena in their natural settings to make sense in terms of the meanings people bring to these settings. According to Creswell (2008) there are five steps comprise the process of collecting qualitative data, first identifying the participants and sites, gaining access, determining the types of data to collect, developing data collection forms, and administering the process in ethical manner. Qualitative research involves collecting information about personal experiences, introspection, life story, interviews, observations, historical, interactions and visual text which are significant moments and meaningful in peoples' lives.

Dealing with the research problem and the objective stated in the previous chapter, in this study the writer will use descriptive technique. This descriptive technique is designed to obtain information concerning particular issues and then describe them. Arikunto states that descriptive technique is not meant to test a certain hypothesis, but it only describes the phenomena, situation and condition that occur during the study. Descriptive technique is to present a board range of activities that have in common the purpose of describing situation or phenomena.

#### **B. Participant**

The research was conducted in Mutiara Nusantara International that elaborate one science teacher and one class of grade nine which consist of nine students, four females and five males.

### C. Research Stages

There are four stages that have done in this research process; first is preparation stage, second is data collection stage, third is data analysis stage, and the last is completion stage that described as follows:

#### 1. Preparation Stage

In this stage researcher analyze Cambridge curriculum in secondary level and then choose what topic that will be observed. In choosing the topic researcher should consider several factors such as the topic should be in 2<sup>nd</sup> semester, the meeting agenda should not be too long or too short and the teacher that teach the topic allow the researcher to observe his/her class and instructional process. After considering all factors, researcher makes instrument that include interview sheet. According to Arikunto, research instrument is tools or facilities that are using by the researcher in order to collect data. So that makes the job easier, complete and systematic. And also researcher prepare the tools that need in taking research data such as audio and video recorder to record the instructional process, voice recorder to record the interview process, and notes to write field notes when observation process occur.

#### 2. Data Collection Stage

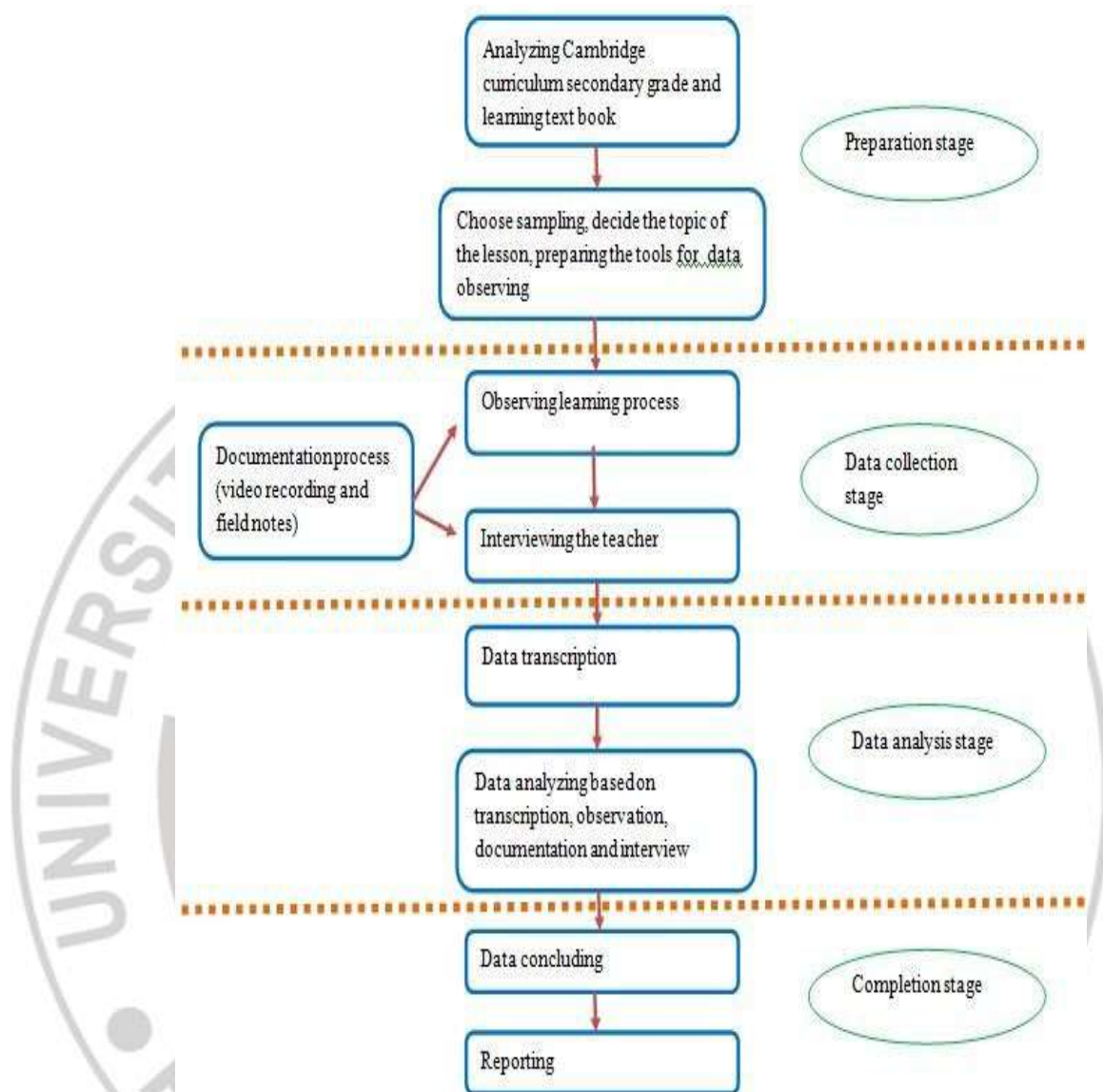
In this stage researcher do the observation and collect observational data in the class. Observation is the process of gathering open-ended, firsthand information by observing people and places at research site. Observations represent a frequently used form of data collection, with the researcher able to assume different roles in the process (Spradley, 90a). In this stage researcher observe learning process by record it, observe by using five sights, and write in the field notes, and also do the interview the teacher to know teacher point of view how to implement Cambridge curriculum. Researcher also does documentation study based on the syllabi, textbook, and students' worksheet.

### 3. Data Analysis Stage

In this stage researcher process the data based on video audio recording, observation (field notes), documents, and interview. The process of data analysis begins with transcript the audiotapes that have recorded (learning process and interview) and analyses the field notes that have write. Transcription is the process of converting audio video tape recording and field notes into text data. Data that has been transcript then will be analyzed. The documents that have researcher get such as lesson plan, students worksheet, and text book will give strengthen to the data that has been analyzed.

### 4. Completion Stage

In this stage, all data that has been analyzes will be concluding and reporting. Research stage is made to make it easier and as a guideline so that the research process is structured and focused. The figure 3.1 that follows shows the research stage of this study:



**Figure 3.1** Research Stages in Taking Data

#### **D. Data Collection**

Qualitative data consists of detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; and excerpts or entire passages from documents, correspondence, records and case histories. This study relied heavily upon qualitative data obtained from video tape, field notes and classroom observations, interviews, and documents that explained more as follows:

## 1. Video Tape

Audiovisual materials consist of video, images and sound that researchers collect to help them understand the central phenomenon under study. Audiovisual materials provide an opportunity to share directly the perception of reality. Audiovisual materials as a method of data collection and means of data analysis have allowed significant methodological improvements to the study of non-verbal behavior. As with audiovisual materials seen to be more reliable than real-time observation and note-taking as it allows for repeated examination of the data and consequently data are not limited by the problems of selective attention or recollection.

## 2. Field Notes

Observation is the process of gathering open-ended, firsthand information by observing people and places at research site. Observations represent a frequently used form of data collection, with the researcher able to assume different roles in the process (Spradley, 90a). Through participant observation, it is possible to describe what goes on, whom or what is involved. When and where things happen, how they occur, and why at least from the standpoint of participants, things happen as they do in learning process. "How you collect data affects which phenomena you will see, how, where, and when you will view them, and what sense you will make of them." [Charmaz, 2007, p.15]. Data record during observation called field notes. Field notes is text that record and write by the researcher during the observation process.

## 3. Interviews

Interview occurs when researcher ask one participant an open ended questions and record the answers. The researcher then transcribes the data into words for analysis. In this study, an interview is done to the teacher as a learning community to give strength and to obtain the appropriate data from audiovisual materials and field notes by verbal communication and to know the respond of the learning process and how to implement Cambridge curriculum. Teacher has the chance to express his/her own perspectives about the curriculum.

#### 4. Documents

Documents is a valuable source of information in qualitative research, it consist of public and private records that qualitative researchers obtain about a site or participants in a study, it can include newspaper, minutes of meetings, personal journals, and letters (Cresswell, 2008). In this study researcher seek the information through lesson plan, Cambridge curriculum, textbooks, and students' worksheet. Documents need as addition in strengthening analysis based on audiovisual material. Documents ready to analysis without necessary transcription that is required with observational and interview data. The table 3.1 that follows shows the forms for data collection:

**Table 3.1** Forms of Data Collection

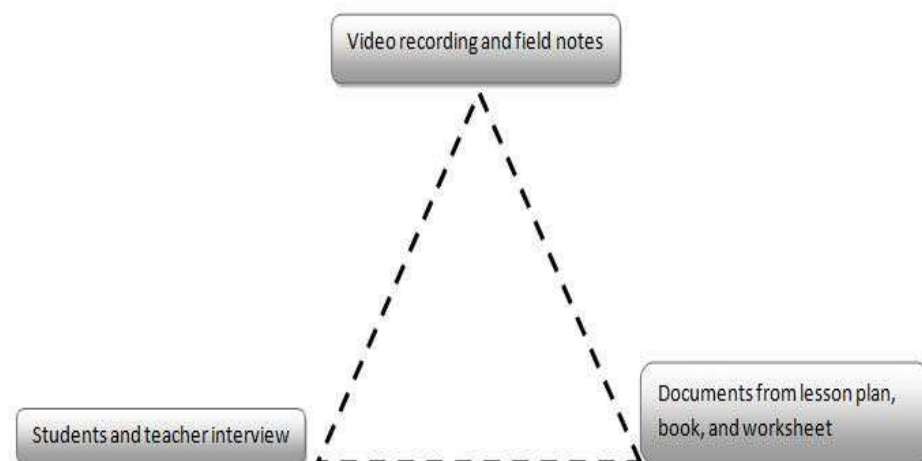
<b>No.</b>	<b>Forms of data</b>	<b>Types of data</b>	<b>Description</b>
<b>1</b>	Audiovisual materials	Video, Picture, photographs, audiotapes that takes in the classroom	Audiovisual materials consisting of images and sounds of learning process that recorded by researcher.
<b>2</b>	Observation	Field notes and sketch drawing that takes in the classroom	Unstructured text of data and sketch taken during observations by researcher
<b>3</b>	Interview	Transcription of open ended question in interviews process	Unstructured text data obtained from transcribing audiotapes of interviewers or by transcribing open ended responses to a questions
<b>4</b>	Documents	Lesson plan, text book, student worksheet	Public record and documents that can analyses by researcher

#### **E. Data Validation**

In order to obtain the depth and detail of data that is denotative of qualitative research, this study relied heavily upon qualitative data obtained from video tape, field notes and classroom observations, interviews, and documents. The use of multiple methods of collecting the data for this study ensured methodological triangulation. The rationale for this strategy is that the flaws of one method are often the strengths of another, and by combining methods, researcher can achieve the best of each, while overcoming their unique deficiencies that described as follows:

### 1. Triangulation

Triangulation is an approach to research that uses a combination of more than one research strategy in a single investigation. Triangulation chooses a different strategy in the same study is to balance them so each counterbalances the margin of error in the other. In this study use more than one data collection strategy, those are: video recording and field notes, students and teacher interview, and documents (lesson plan, book, and worksheet). Below is figure 3.3 that shows the triangulation between them:



**Figure 3.2** The Triangulation between Three Data

The purpose of combining the data collection methods is to get more accurate analysis and better understanding of the phenomenon under study. It

contributes to the completeness and confirmation of findings necessary in qualitative research investigations.

## 2. Member Check

Member check is a procedure largely associated with qualitative research whereby a researcher submits materials relevant to an investigation for checking by the people who were the source of those materials. According to Lincoln (1985) observe, it can be crucial for establishing the credibility of one's findings and can also serve to alleviate researchers' anxieties about their capacity to comprehend the social worlds of others. It can be employed in connection with most forms of qualitative research. In qualitative research, a member check, also known as informant feedback or respondent validation, is a technique used by researchers to help improve the accuracy, credibility, validity, and transferability

Member checking can be done during the interview process and video transcription to increase the credibility and validity (statistics) of a qualitative study. The interviewer should strive to build rapport with the interviewee in order to obtain honest and open responses. If the participants affirm the accuracy and completeness, then the study is said to have credibility. The overall goal of this process is to provide findings that are authentic, original and reliable.

## F. Data Analysis Technique

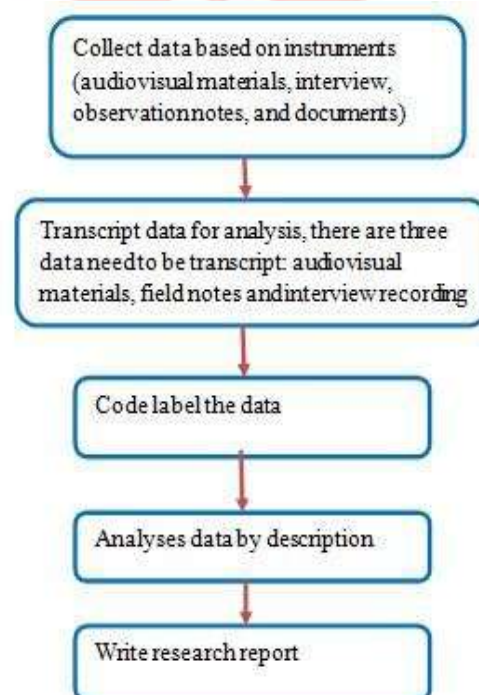
Analyzing qualitative data requires understanding how to make sense of text and images so that it can answers research questions. According to John Creswell there are six steps involved in analyzing and interpreting qualitative data: preparing and organizing data, exploring and coding the database, describing findings and forming themes, representing and reporting findings, interpreting the meaning of findings, and validating the accuracy of findings. In this study there are several steps to analyze the data:

1. Read and review data. Data consist of interview notes or transcripts, notes from field observation, or written documents and records.



2. Code the data. Coding means identifying themes within interview notes, documents, or field observations that relate to the research questions in study. Themes are common ideas and patterns that observe repeatedly as data that have been collected. Researcher has to read through data multiple times to identify all of the themes.
3. Interpret data by attaching significance to the themes and patterns that have observed. Write lists of key themes and review the data again. Consider alternative explanations by looking for differences in responses or observations that have recorded in data collection.
4. Draft a report that details in findings. Then writing the research report based on the data by synthesizing and summarizing it.

Based on the description above, below is the figure 3.2 that shown the process of how to analyses the data:



**Figure 3.3** Data Analysis Technique