

## **CHAPTER III**

### **METHODOLOGY**

This chapter discusses explanation of the method of the research. It covers the descriptions of the design, the setting, the ways the data are collected and analyzed and the triangulation of the data.

#### **3.1 Research Design**

This study is meant to make a description of a practice of teaching learning in one particular class conducted by a particular teacher. It uses a natural setting in which the participants do what they normally do in the place that they do belong. Considering those characteristics, this study may be categorized as a qualitative research because: 1) this research takes place in the natural world of a phenomenon; 2) it focuses on context; 3) it makes use of multiple methods; and 4) it is fundamentally interpretive (see Liamputtong, 2009, p. xii-xiii).

The study focuses on the teacher talk in the actual classroom setting with the use of multiple methods of collecting data and the researcher makes the interpretation of the data. As subjective as the interpretation could be, the multiple methods of collecting data and the cooperation with another fellow researcher sharing the similar setting yet a different focus of investigation study are hoped to provide the credibility of the study.

In addition, this research is also a case study because it focuses on one particular practice of teaching learning activities in a certain setting. No generalization is attempted but it is used because it is “valuable for discovering new behaviours, processes, or anything we have little knowledge of” (Meyer, as cited in Liamputtong, 2009, p. 196). It focuses on finding out certain aspects of teacher talk in a certain setting and participants in order to learn more the phenomenon.

#### **3.2 Setting**

The research was conducted in a junior high school in Bandung in November 2013. The reason the school was chosen because the teacher as the subject of the research teaches there and the school is the natural setting for the teacher. Also the sense of actuality and naturalness as the features of a qualitative research can be achieved through this choice (Liamputtong, 2009).

### **3.3 Participants**

The participants of this study were one teacher and 35 students. The sampling technique used was purposeful sampling. This choice of sampling method is relevant with what Cresswell (2008, p. 214) states that the researcher can intentionally choose the participants to learn and understand the phenomenon that happened in that particular setting. The aim of the study is to describe the teacher talk in the actual classroom setting and a classroom where she usually teaches is the best place to get the sense of actuality. The naturalness of the setting was also sought to fit the characteristics of the natural setting (Liamputtong, 2009).

The teacher is a national instructor of the 2013 Curriculum. She teaches in grade 7 and therefore the class observed used the 2013 Curriculum. The reason of choosing the teacher is because she is a national instructor and is expected to know more about the supposed implementation of the curriculum. This expectation had lead to the choice of the teacher as the subject of the research because it can provide the best possible example of the implementation of the approach.

The class consisted of 35 students. The classroom was equipped with a set of LCD projector and audio set. There were a whiteboard and a blackboard. Each student sat on their own desk. The "Materi Pokok" involved in this study was the fourth theme of the semester, so the students had experienced the process of scientific approach in learning English prior to the time of this research.

### **3.4 Data Collection**

In collecting the data, there were several methods employed in this study, namely observations, audio-video recordings and interviews. The three types of data source were expected to give this study triangulation. The detailed descriptions about the methods are given in the following subsections.

### **3.4.1 Observations**

The observations cover three sessions, each of which consists of two study hours. The duration of the study is justified because the sessions cover a “Materi Pokok” which resembles a Curriculum Macrogenre in that both follow a series of stages starting from an introduction (or Curriculum Initiation) of a topic, main activities comprising the stages of scientific approach (or Curriculum Collaboration/Negotiation), and a closing phase (or Curriculum Closure) (The more detailed account about this can be found in Chapter II.)

The object of the observations was the teacher talk in the sessions. The observations were conducted in the form of video-recording, audio-recording, and field note-making, altogether in each session. This combination of data collection method was done to achieve the triangulation of data. This triangulation is used “to confirm and illustrate emerging themes of interest” (Liamputtong, 2009, p. 26). It is important to say here that the observations made in this research can be categorized into systematic observations as the researcher had presumed that there are certain stages within which each talk was assumed to be in (Mercer, 2010). Yet, although Mercer includes this type of observation as one of the quantitative methods, in this research analyses and conclusions were not based on frequencies of those utterances.

Three session observations were decided because a curriculum macrogenre starts when a new topic is introduced and ends when the topic is concluded (Christie, 2002, p. 23). It had been confirmed prior the observations and the research that the class sessions to be observed were those that had the complete stages of scientific approach, meaning that, the three sessions would start with the Observing stage and be concluded with the Networking Stage. Therefore the three

sessions in which a new topic/*materi pokok* (Things Around Us) was introduced were chosen. However, it should be noted here that the original lesson plan for the *materi pokok* (attached in the appendix) states that the teaching learning activities are to be conducted in two sessions. The third session was added because the teacher deemed that to complete the whole stages of the scientific approach, an additional session was needed.

Therefore, the sessions were not manipulated for the purpose of the research. The research timetable was adjusted to the schedule of the teacher's overall planning, not otherwise. This was done to conform to one of the characteristics of a qualitative research of being natural (Liamputtong, 2009).

The foci of the observations and fieldnotes are the teacher talk used and its functions to lead the students in the stages of scientific approach. The choices of expressions are selected based on whether they scaffold the students' capabilities in scientific approach (Westby & Torres-Velásquez, 2000). More specifically, the observations and fieldnotes also focused on whether the expressions gave the students the scaffolding to improve such skills needed in the scientific approach to learning such as those elaborated by Halonen, et al (2003), Metz (as cited in Lee, 2008), Dyers, Gregersen, and Christensen (2009; Ministry of Education and Culture (2013b and 2013c).

The expressions made by the teacher in her talk were also observed to find whether they took the roles and functions suggested in the regulation (Ministry of Education and Culture, 2013a) and Brown (2001) and Flanders (as cited in Nurhasanah, 2013). It is suggested by the regulations and the experts that a teacher can assume various roles in the interaction with the students. Therefore, through observations, expressions showing how the roles and functions were realized were also searched and examined. The relevance of this effort of recognizing the expressions is that through their examination, how the teacher manufactured ways of achieving the goals of leading the students in the stages of scientific approach could be seen. The choices of roles and functions of teacher

talk could decide the success of the teaching learning objectives in the “Materi Pokok.”

The nature of interaction between the teacher and the students also varied with the choices of the teacher and consequently the discussion of mood and modality of Systemic Functional Linguistics (Eggins, 2004; Emilia, 2014; Gerot & Wignell, 1994; Halliday & Matthiessen, 2004) is relevant in describing the expressions.

### **3.4.2 Interview**

Upon the completion of a session, the teacher and the researcher had a session of interview. The interview was meant to gather information having direct bearing on the research objective (Cohen, Manion, & Morrison, 2007). The topic of each interview was about things that caught the attention of the researcher as a non participant observer. Confirmations were made about things happening in the class. The interviews were also transcribed.

Each interview was started with one open-ended question so that the interviewee “can best voice their experiences unconstrained by any perspectives of the researcher or past research findings” (Creswell, 2008, p. 225). An open-ended question is defined as “a type of question that researchers pose to research participants that allows them to select how they orient to the research topic” (Given, 2008, p. 582). This type of questions is chosen because it can elicit more information regarding the topic at hand while still maintaining the focus on the events previously observed in the class session. Also, this type of questions, in this study, put the interviewee as the key informant.

Open-ended questions can start with general questions followed with probes for more detailed information (Given, 2008). General questions used are as follow:

1. What do you do in the stages of scientific approach?
2. In the stage of questioning, must the students make their own questions?

Probes can be in the forms of the following questions:

1. So, one of the efforts the teacher does in the questioning stage is leading the students to make questions?

### 3.5 Data Analysis

There are three types of data in this research. They are those coming from: observations, audio records of teacher talk and interviews. How the data are analyzed is presented below.

The data from observations are used as reference to describe the physical activities carried out in the observed teaching learning sessions. It covers mainly the visible activities that the class have during the stages of scientific approach while the data of teacher talk and interviews need to be transcribed before they are ready for analysis. The stages of analysis are as follows:

1. First the data were examined carefully and each activity was categorized whether they were relevant with the teaching learning activities or not.
2. Those relevant activities were then further categorized into the stages of scientific approach, whether the activities belonged to one of the stages.
3. Last, the activities observed were further analyzed to see which part of teacher talk that was relevant with the activities.

In relation to the data from the recordings during the classroom sessions, a careful examination of the recording is needed so that a clear picture of what had happen during the recordings can be produced. Therefore, teacher talk and also interviews need to be transcribed “verbatim, word by word, keeping all the informal conversation style and emotional expressions” (Liamputtong, 2009, p. 57).

The next steps are unitizing and categorizing the data. These steps are needed to allow an interpretation because an interpretation will be made on the data by the unitizing and categorizing the “raw data” (Emilia, 2008). The process of unitizing and categorizing is as follows:

1. First, the researcher listen carefully the audio records over and over

again.

2. Then, he transcribes the audio voices into a written form.
3. After finishing the transcription, he consults the subject of the research, the teacher concerned, to make sure what he hears is what is actually spoken by the teacher.
4. Upon getting the approval of the teacher, the next thing to do is to start excluding irrelevant expressions which are not related with the teaching learning activities.
5. The teacher talk is then screened into the regulative and instructional registers.

The teacher's utterances that are related to the pacing and the management of activities are categorized as the regulative register and those dealing with the content taught belongs to the instructional register (Christie, 2002). The data may start from hundreds of excerpts or utterances. Those utterances will then be condensed into a limited number of excerpts that share similar characteristics. The similarities will become the basis of further codifications.

The last data were the interviews. Similar steps were taken as those in analyzing the data of teacher talk. They are:

1. First, the researcher listen carefully the audio records over and over again.
2. Then, he transcribes the audio voices into a written form.
3. After finishing the transcription, he consults the subject of the research, the teacher concerned, to make sure what he hears is what is actually spoken by the teacher.
4. Upon getting the approval of the teacher, the next thing to do is to start excluding irrelevant expressions which are not related with the practice of scientific approach so that the final excerpts only consist of the expressions that are related with the topic of the research.

After getting the final data, the researcher then proceeded to analyze all the corpora with reference to the theories presented in Chapter II. Each clause was

examined in accordance with the principles of SFL as the tools of analysis, for example, whether an utterance was meant to ask for information or to confirm the students' knowledge. They were also analyzed whether they helped the students in the stages of scientific approach.