

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter concerns about the methodology—procedures of conducting the research—and research design adopted to frame conceptually the practice of the study. It outlines the research objectives and the way the research achieves them. It also provides such practical elements as research site, participants, and data collection method as well as data analysis techniques.

#### **3.1 Research Design**

This study aimed at describing a phenomenon in a classroom. It focused on investigating how a certain strategy was applied and how much influence it had on the students. Therefore, a qualitative approach was employed. A qualitative research is described as "an in-depth exploration and understanding of a phenomenon by gaining insights into the meanings that people give to the world" (Creswell, 2009; Denscombe, 2010 cited in Law; 2012). Cassel and Symons (1994), for instance, define qualitative approach as having some characteristics as described below:

a focus on interpretation rather than quantification; an emphasis on subjectivity rather than objectivity; flexibility in the process of conducting research; an orientation towards process rather than outcome; a concern with context—regarding behaviour and situation as inextricably linked in forming experience; and finally, an explicit recognition of the impact of the research process on the research situation (p.7).

A qualitative case study design was employed in this study since it was intended to gain deep understanding of phenomenon under investigation (Creswell, 2008:62) and to find meanings of the phenomenon that people bring to their natural settings (Denzin and Lincoln, 1994). Through case study the researcher strived "to uncover patterns, determine meanings, construct conclusions and build theory" (Patton & Appelbaum, 2003: 67).

Putting emphasis on case and real world context is the strength of case study. As Cohen, Manion & Morrison (2007: 53) remark case study design allows

researchers to establish cause and effects within the case being investigated. Further, they propound that the establishment of cause and effects are strongly determined by context. Moreover, case study “allows investigators to retain the holistic and meaningful characteristics of real-life events” (Yin, 2003).

Seen from research purpose, qualitative case study is categorized into types: descriptive, interpretive, and evaluative (Merriam, 1988). This study served descriptive and interpretive purposes. It is descriptive in that it describes phenomenon occurring in the real-life context and the context itself (Yin, 2003), involving practices and forming a database with which future researcher can compare, and hence, theory can be built (Merriam, 1998). It is interpretive in nature as the researcher relies heavily on the interpretation of the phenomenon being studied against the theoretical assumptions framing this study in an attempt to make sense of the meanings participants assign to. In this study, not only did the researcher observe what was going on in the classroom but also develop conceptual categories on how the participants’ involvement in the activities resulted in particular learning outcomes.

## **3.2 Research Setting and Participants**

### **3.2.1 Research Setting**

The study was undertaken in a Junior High School in *Jatiwangi-Majalengka*. This school was chosen as the research site because of three considerations. First, the research findings are expected to be taken into account in an attempt to improve English language teaching in the school for the better quality of the school outcomes. Second, the school provides self development program in which English is one of the choices of courses. The students joining the program are considered to have better proficiency of English. Therefore, they are judged to be quite representative for being participants of the research.

### **3.2.2 Research Participants**

The researcher selected 15 eighth graders—comprising 10 female students and 5 male students—joining self development program of English course as the participants of the study. They were selected based on their membership in a subgroup, that is, self development program of English course. The defining characteristics they shared was their similar interest in and proficient capability of English. They are considered to have best understanding of phenomenon being studied.

Self development is an extracurricular program aimed to provide students with opportunity to develop and expresses themselves in either academic or non academic field according to their needs, talents, and interests in accordance with school conditions (Depdiknas, 2006). Self development of English course is one of extracurricullair programs available for students in each grade in this school. It is held to faccilitate students who are interested in English or those who have got talent of English and want to develop their competence. is carried out for eighty minutes (2 periods) every week.

The participants have joined the program since they were in grade seven. All of them join the program because of interest. They were chosen as they are considered to have better proficiency of English compared with those who do not participate in the program. Moreover, they have more motivation to learn English as it is their interest. Therefore, they were considered to be able to provide the researcher with data reflecting their best understandings of reading lessons in which critical thinking is incorporated.

### **3.3 Data Collection Techniques**

The researcher made use of both qualitative and quantitative data. Qualitative data were used to describe thickly and richly about classroom learning atmosphere and students' perceptions towards the teaching practice, whereas quantitative data were used to describe about the development of students critical thinking skills. The qualitative data were gathered from various sources and using various techniques during the research. The researcher employed classroom

observation and in-depth interview and document. The quantitative data were gathered from tests. Each technique of collecting data is elaborated below.

### **3.3.1 Classroom Observations**

Observations were conducted in this research to capture the real portrait of classroom learning atmosphere in which critical thinking-based of reading instruction was carried out. They enabled the researcher to acquire data on the setting of physic, human, interaction and program (Cohen, Manion, & Morrison, 2007). The researcher obtained information on how the teacher created a classroom learning atmosphere including activities, events, object, condition, students' emotions and feelings; subjects' behavior during learning process; interaction between teacher and students or among students; the critical thinking skills and disposition the students demonstrated during the lessons; and other crucial things that were considered to be relevant occurring within the setting. The data found from classroom observation were used to answer research questions 1 and 2.

During the observation process the researcher acted as participant observer and teacher as researcher. In the participant-observer role the researcher got involved in the setting, observed and interacted closely with the participants. The involvement of researcher in the setting was intended to achieve the establishment of meaningful entity within their group (Gall, Gall, & Borg, 2013: 268) and see experiences from the views of participants (Creswell, 2008: 222). He made careful, objective notes about what he saw and recorded all accounts and observations as field notes using data recording protocols (Gall, Gall, & Borg, 2013: 233), that is, forms specifically designed and used to record data during observation and interviews.

### **3.3.2 Semi-Structured Interview**

Another data collection technique used in this study was interview. In the interviews, the researcher meant to gather information from the students that were related with the topics of the research. They are classroom climate, classroom activities, and classroom tasks. Data gathered from interviewing functioned to confirm or deny data collected from observation (Fraenkel, Wallen & Hyun, 2012: 450). Another purpose of using this technique was to gain data that were not obtained in observation. According to Stake (2010: 95) interviewing could help researcher to acquire unique interpretation, various information and unobservable thing from various persons. Through observations the researcher could only come by data from what he saw, heard and felt from what students demonstrated, but he did not know what was in students' minds dealing with the phenomena being investigated. The participants exhibited their behaviour, attitude and cognitive development, but they did not indicate their perception about what was being studied. Interview could stimulate students to show how they perceived of critical thinking-based reading lesson implemented in their classroom.

This study utilized semi-structured interviews since its function is similar to verbal questionnaire (Fraenkel, Wallen & Hyun, 2012: 451). They argued that using semi-structured interview researchers may benefit from respondents' specific answers as the responses to specifically designed questions. The key questions of the interviews were prepared beforehand to enable the researcher to get data as he wished. Patton (as cited in Fraenkel et al., 2012: 453) identifies six basic types questions for asking of people in an interview including their background (or demography), knowledge, experience, opinion, feelings and physical senses (of touch, smell , taste, hearing and seeing). As the expected answers were concerned with students' perception of the classroom activities they encountered only the last three types of questions were posed.

In order to avoid language barriers that lead to miscommunication misunderstanding and the interviews were conducted in Indonesian. It was also intended to have the participants express their thoughts and feelings. The interviews were carried out after the classroom observations. To conduct the

interview, the researcher followed the process proposed by Creswell (2008:228-229). He suggests nine steps of conducting interviews as can be seen below.

1. Identify the interviewees.
2. Determine the type of the interview you will use.
3. During the interview, audiotape the questions and responses.
4. Take brief notes during the interview.
5. Locate a quiet, suitable place for conducting the interview.
6. Obtain consent from the interviewees to participate in the study.
7. Have a plan, but be flexible.
8. Use probes to obtain additional information.
9. Be courteous and professional when the interview is over.

### **3.3.3 Achievement Tests**

In order to find out the data about the students' initial critical thinking skills, the researcher administered achievement tests. The achievement tests were used as one of the research instruments because the tests function to collect data about what students have learnt from the learning materials taught in the lessons in numerical scale and establish how successful individual students or groups of students have been achieving objectives.

Each test consisted of three texts and a total of twenty essay questions: 10 comprehension questions to and 10 critical thinking questions. The comprehension questions were used to monitor students' comprehension, connecting to prior learning and stimulating cognitive growth (Vogler, 2005 cited in Adedoyin, 2010) while the types of questions showing the CT skills incorporated in the teaching of reading in this study were: identifying the author's purpose, responding to material, inferencing, analyzing the author's position, evaluating text organization, paraphrasing/retelling, reading between the lines, predicting and recognizing the tone of text. The number of questions for each text varied.

Before distributing the test paper, the researcher gave them some crucial information concerning the test. First, they were informed that the questions consisted of 20 items: 10 questions were critical thinking questions and the rest were reading comprehension questions. The answers to critical thinking questions were not explicitly stated in the texts, hence, they had to answer the items based on their understanding and interpretation of the texts. Second, they were asked not to be panic and worried about the results since the tests did not relate to their academic achievement at all. Nevertheless, they were asked to answer the questions seriously and do to the best of their ability. They were not allowed to work together or cheat other students' answers for the assurance of their real capability. The researcher allocated 80 minutes for students to finish each test.

The tests were administered three times: pre test, mid test and post test. The pre-test was carried out on the 18 April 2015. The test was carried out at the beginning of the implementation program, before the students were taught critical thinking through reading. The test was intended to know students' initial critical thinking ability.

The mid-test was conducted after the students had five meetings of lessons on May 20, 2015. The purpose of this test was to measure their progress of critical thinking skills after joining part of the program.

The post-test was held after the students accomplished the nine-meeting lessons on June 27, 2015. It was aimed to provide data on the students' final development of critical thinking skills.

All the data from the tests were analyzed using a simple calculation that result in simple figures showing the students' achievement progress. The products of the calculation of the data are the means scores of the students in the three tests. Progress can be seen from the increase of scores after several meetings. The results of the tests were calculated in percentage and presented in a graph to compare the difference of the three test results.

The test items developed to measure student's achievement in this research were essay questions asking students' comprehension of texts and critical thinking

ability. To ensure the validity and reliability of the items, the researcher constructed them by using question stems and examples of critical thinking questions for asking critical thinking skills that are made by experts and available in the recent literature. Indicators of student's learning achievement to be tested include all level of Bloom's cognitive domain comprising: knowledge, comprehension, application, analysis, synthesis and evaluation and some other critical thinking skills that can be achieved through exposure to narrative texts. The test items will be administered in pretest, after the fifth meeting and post-test.

### **3.4 Data Analysis**

This study adopted strategy of analyzing strategy Miles dan Huberman's (1994: 10) Flow Model of data analysis. Analyzing data in qualitative research is carried out either while or after collecting data in a certain period. Data analysis begins by examining the data since the start of data collection until all the data collection is complete. Conducting both data collection and analysis process at the same time allows for "theory development which is grounded in empirical evidence" (Hartley, 2004: 329). When interviewing the participants, for example, the researcher analyzed the participant's response. If the responses analyzed were not satisfactory yet already, the researcher continued interviewing until he obtained credible data. Miles and Huberman (1994) put forward that the activities in analyzing qualitative data must be done interactively and continuously until the data saturated.

#### **3.4.1 Data Reduction**

Following the Flow model data analysis was started by reducing data. In this phase, a large data set that had been collected—either in the form of written-up field notes or transcriptions—were examined and managed through a range of processes such as 1) selecting, 2) focusing, 3) simplifying, 4) abstracting, and 5) transforming (Miles and Huberman, 1994:10). The researcher managed an abundant data by considering valuable part of the data, separating carefully the



data needed from the unimportant data. The relevant and meaningful data were analyzed in order to fit for the research objectives, whereas the unnecessary, irrelevant and meaningless information were discarded. All the selected data were then directly correlated to the research questions and categorized or classified into themes or focusses to make them less complicated and easy to understand. Reducing data was carried out continuously during overlall research project.

### **3.4.2 Data Display**

After being reduced the data were displayed. The process is an integral part of analyzing data (Miles & Huberman, 1994:11; Berg, 2001: 35). To display data the researcher presented the reduced data in “an organized, compressed assembly of information that permits conclusion drawing and action” (Miles and Huberman, 1994:11). The result of this process was extended text (Miles & Huberman (1994) or extensive narrations (Yin, 2003: 234). The texts or narration in this study was supported by excerpts, tables or matrices, and diagrams (Cohen & Crabtree, 2006)

### **3.4.3 Conclusion Drawing**

The last step of analyzing data using Flow model is drawing conclusion and verification. In this step the researcher attempted to formulate the research findings in a higher conceptual level or broader set of ideas (Yin, 2003:220). The process of conclusion drawing was carried out when the researcher came to a decision about what he/she understandood about the data.

## **3.5 Establishing Trustworthiness**

To establish the trustworthiness of findings of this study, the researcher utilized triangulation, member checking and thick and rich descriptions.

### **3.5.1 Triangulation**

The methods triangulation in this study included observations, interviews and studying relevant documents. Triangulation is “the process of corroborating

evidence from different individuals (e.g., a principal and a student), types of data (e.g., observational field notes and interviews), or methods of data collection (e.g., documents and interviews) in descriptions and themes in qualitative research” (Creswell, 2012: 259). Triangulation contributes to the decrease of researcher’s bias and concrete description of reality. Patton (2002) identifies four types of triangulations: methods triangulation, triangulation of sources, analyst triangulation, theory/perspective triangulation.

In this study the researcher utilized methods triangulation and triangulation of sources. Observations were conducted in each reading lesson, while interviews with participants were carried out after the participants accomplished the whole program. Using these multiple methods could help the researchers to avoid the weaknesses of using a single method facilitate to gain more evidence to shed light on the phenomenon scrutinized resulting in a deeper understanding (Yin, 2003).

### **3.5.2 Member Checking**

To assure that the data obtained from the participants, especially from observation and interviews was accurate, fair and complete the researcher conducted member checking (Creswell, 2012). The researcher confirmed the transcripts to all members of participants who involved in this study. They were asked to respond to the data, stating whether or not they agreed with the data, adding or removing parts of the data as they expected (Law, 2012).

### **3.5.3 Thick, Rich Description**

In this study the researcher wrote the narratives or account and presented visual display as accurately and completely as possible in order to give truthful portraits of the phenomena under investigation in the real context (Creswell, 2008). The detailed description covering the participants, their behaviour and meanings, classroom interaction, the setting as well their conceptual development was presented in order to promote the credibility of the research (Shenton, 2004).

### **3.6 Conclusion of Chapter Three**

This chapter provides detailed description of how the study was conducted and the researcher underwent his role as the main instrument for data collection. Started by discussing the research design as the basic beliefs that guided this study, the methodological choice of the research is then described. It is delat with the employment of qualitative case study research design involving fifteen grade students as its purposive sampling and a junior high school as its research site. The way the researcher collected, analized and displayed data in a research report is presented in the next part of this chapter.