

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes the methodology underpinning the research. The methodology includes (1) Research Design, (2) Research Site and Participants (3) Data Collection, and (4) Data Analysis.

3.1 Research Design

The research design can be categorized as “a qualitative program evaluation” based on the research classification by Nunan (1992), as in this study the researcher created and then implemented a teaching program. During the implementation, the researcher estimated the value and the effectiveness of the program through ongoing assessment of the students’ achievement. This assessment was important “to assist the researcher in deciding whether the teaching program needed to be modified or altered in any way so that the objectives may be achieved more effectively” (Nunan, 1992: 185).

As the sources of evidence for the research were multiple (students’ interview, direct classroom observation, students’ journal) as well as written tests (pre and post-test), this study was also called “a case study evaluation embracing quantitative data” (Yin, 2003). Further, Yin states “the initial case study orientation is toward multiple sources of evidence...the case study evaluation can therefore include the use of document analysis, interview, observation, and quantitative analysis...”(2003: 67). In fact in this type of evaluation, quantitative and qualitative data are both considered potentially

important and relevant enabling the research to cover both the processes and outcomes of the program being evaluated (Ibid, 69).

3.2 Research Site and Participants

3.2.1 Research Site

This research was carried out in English Department, the Indonesia University of Education (UPI), Bandung. This institution has been chosen for several considerations. First, the researcher is one of the faculty members in this department, this hopefully would increase feasibility of the research. Furthermore, the researcher's familiarity with the participants and the research context will create a higher degree of naturalness in the study.

Second, the English Department (despite of the change in its curriculum in 2006) has established a series program in Reading subjects including Reading 1-5, and Extensive Reading. Some of the skills and techniques taught in this series as indicated in its syllabus, were important for critical thinking to take place such as finding the thesis statement, differentiating between fact and opinion, and analyzing arguments. See detail of a link between critical thinking and critical literacy in Chapter 2, Section 2.3.

Finally, and the most importantly, the ability to think critically should be taught in all levels of education especially in an institution whose duty is to prepare prospective teachers (Elder and Paul, 2004) in this case, the Indonesia University of Education was the right place to conduct the research (see Chapter 1, Section 1.5).

3.2.2 Participants

The participants of this study were 10 students in the 7th semester who have passed all series of reading subjects. These students were observed, involved in the written tests and invited to write journals after each session. They were voluntarily involved in the teaching program and represented various level of achievement. The first four students belong to high achievers as indicated by the GPA (>3.4), three other students belong to medium ($3-3.4$), and the last three belong to low (<3).

For confidentiality, throughout the thesis all of the students' names will be written in pseudonyms.

3.3 Data Collection

As mentioned above, this research employed multiple techniques of data collection at the beginning of the study, in an ongoing way, and at the end of the study (Fraenkel & Wallen cited in Emilia, 2005). The first data collected was the result from the pre-test that consisted of the raw score from students' written test. Data gathered in the ongoing way comprising direct classroom observation which was conducted in the teaching program for ten sessions and students' journals. Meanwhile students' interview and post-test were conducted at the end of the study. Each of the procedures will be exemplified below.

3.3.1 Classroom Observation

In critical thinking evaluation, as in the case of this study, observing the students while they were engaged in a discussion "attempts to record some aspects of an ongoing classroom situation" (Norris and Ennis, 1989: 32). In this study, this technique was also

used to evaluate “whether lessons specifically designed to encourage students’ critical thinking abilities and dispositions are meeting the immediate goals” (ibid, 150-151).

The classroom observation was conducted over ten sessions within two months in the classroom in which the researcher acted as “her as researcher” (Stake, 1995) and participant-observer. After each sessions, the students were invited to write “a thinking journal” (Barell, 2000) where they conveyed what they “know, want to know and learn” (Barell, 2000a: 88) from the teacher and peers.

During the observation, the researcher took notes on everything that was going on in her class and as soon as leaving class, usually the same day, events reconstructed into field notes (Erickson, 1972; Alwasilah, 2000). The notes attempted to give a complete account, recording as much detail as could be remembered (Grant, 1988). To increase the reliability of observational evidence (Yin, 2003:93), the researcher invited one of her colleagues making an observation. The detail of the teaching program will be described in Chapter 4, Section 4.1.

3.3.2 Interview

The interview was conducted individually at the end of the teaching program. Interviewing a student individually is a way of acquiring very detailed information on the student’s critical thinking (Norris and Ennis, 1989). Furthermore, Norris and Ennis explain the advantages of individual interview over other information-gathering technique:

...many students can express their ideas far easier and more coherently, the evaluator has the option to ask students to clarify what they have said, to request further reasons for their conclusions and to ask specific questions about what might have influenced their thinking (1989: 145-146).

The interview was a guided or semi-structure enabling the researcher to get all information required while at the same time permitted the participants' freedom of responses and description to illustrate the concept (Field & Morse quoted in Emilia, 2005). Questions for the interview were taken specifically from "Critical Thinking Interview Profile for College Students" developed by the Foundation for Critical Thinking (www.criticalthinking.org.instaccount.net/resources/PDF/interview), see detail in Appendix 3. The questions were developed to examine how students could apply their understanding on the concepts, skills and dispositions in reading (critical reading) as taught in the teaching program.

All questions in the interview were tried out to several students who were not involved in the study for suggestion and advice, regarding whether the questions were ambiguous, vague or confusing.

3.3.3 Collection of Students' Journals

The journals contained records and reflections on what has occurred in the classroom. Norris and Ennis emphasize the need to include the students' journals as one of the ways to gather quality information in evaluating students' critical thinking. They argue that "journals of this sort can be useful for examining trends in the growth of students' critical thinking dispositions" (1989: 35-36).

The journals the students wrote in this research consisted of their reflections as well as questions. These journals played an important role to "let the participants share their own words for what goes on in their minds and hearts in difficult situations, ones that call for them to figure out something to do or say" as suggested by Barell (1995: xiii)

particularly in this study regarding their involvement in the teaching program in reading subject.

3.3.4 Written Tests

Two written tests in reading were administered to the students at the beginning (pre-test) and at the end of the program (post-test). The test in the beginning was aimed at finding out their ability in thinking skills focused in the study before the infusion approach was introduced. The second test was intended to disclose any improvement in the students' thinking abilities and dispositions focused in the study (see Chapter 1, Section 1.4) after they involved in the infusion approach.

The pre-test and post-test were a sort of "constructed-response test" (Norris and Ennis, 1989) in which the students responded to relatively specific questions in writing. These tests did not only serve as a means for seeing whether students can coordinate a number of critical thinking abilities but also of gathering information on students' critical thinking dispositions. Another advantage on constructed-response test was "it provided more clearly valid information on students' critical thinking abilities and dispositions" (1989: 31).

The items in both of the tests were similar, thus only the pre-test that was tried out to the students who were not involved in the research to check for its clarity of the sentences and instructions. The questions in the tests were designed to meet the "intellectual standards" (Paul, 1994; Srieven, 1987) that every critical thinkers should have. The standards were manifested in the dispositions and skills focused in the study (see Chapter 1, Section 1.4).