

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This chapter discusses a set of methodology, which covers the research purposes, research questions, site and participant of the research design, data collection technique and data analysis. Each of them will be explained below.

#### **3.1. Research Purpose and Research Questions**

As mentioned in Chapter One, this study aims to, investigate the use of social media in genre-based approach and how it can affect students' argumentative writing and critical thinking.

The inquiry would be guided by the following general questions:

3.1.1 How can social media be used in genre-based approach and affect students' argumentative writing and critical thinking?

3.1.2 How do the students perceive social media as a tool for learning critical thinking skill in argumentative writing?

#### **3.2. Research Design**

This study mainly uses qualitative research because this study seeks to examine the use of social media in genre-based approach and how it can affect students' argumentative writing and critical thinking. Therefore, a case study is used in this research. Gerring (2007, p.33) says that case study research, by definition, is focused in a single, relatively bounded unit. The reason the writer uses case study is also because she wants to describe a case in detail. This is in line with Nunan (2009, p.158) who claims that a case study is a detailed, often longitudinal, investigation of a single individual or entity. Another reason was the fact that this study employed various data collection techniques and analytic procedures to increase the validity of the study, those are the documentation of students' argumentative essays, observation and interview (Cohen and Manion, 1994).

### **3.3. Setting and Participants**

In order to ease the procedure, the researcher conducted the study in a university where she currently works as a lecturer of English. This condition helps the researcher to get access and collecting the data for the research so that the research can be done smoothly (Bogdan B K & Biklen S K, 1998). During the teaching program, the researcher conducted assessments to monitor the program. The subject of the study is English for Economics. From the researcher's personal experience in the past, the writer learned that critical thinking was not implemented systematically, in one semester in 2013; the Department of Economics sees that critical thinking should be one of the subjects taught in the Faculty. However, the students only embrace the basic of CT embedded in subjects taught in their previous high school. As Chafee et al (2002, p.4) said, students at this level are expected to think more conceptually, to write more analytically and to read critically. The Critical Thinking Subject owns 2 semester credits which holds 100 minutes of learning, and served in Bahasa Indonesia but the textbook and handout are mainly in English. To conduct the intended research, classes of students who take the English for Economics subject were included in this study.

As new higher education students, they get only small amount of CT skill from their previous high school. Their ages are varied, but all of them were adult EFL learners above 17. The reason for selecting this sample was the purpose of seeking the difference of before and after the application of social media in their learning argumentative writing and critical thinking. These subjects are also called the population of the study. This is in line with Burns (2000: 83) who states that "a population is an entire group of people or objects or events, which all have at least one characteristic in common and must be defined specifically and unambiguously"

Cohen (2007: 100) argues that sample is a smaller group of population in the study that the writer needs to get the data. The samples of this study were six argumentative writings from three students; three pre-test and three post-test.

This sample was taken by using purposive sampling. According to Cohen (2007: 114), in purposive sampling, often (but by no means exclusively) a feature of qualitative research, researchers handpick the cases to be included in the sample on the basis on their judgement of their typicality or possession at the particular characteristics being sought. In this way, they build up a sample that is satisfactory to their specific needs. It is obviously that purposive sampling technique is the most appropriate sampling technique for this study because it is handpicked based on a certain consideration for the purpose of the study.

### **3.4. Data Collection Techniques**

In this study, the researcher employed three data collection techniques which are the documentation of students' argumentative essays, observation, and interview. Each of the technique is explained below.

#### **3.4.1 Documentation of Students' Argumentative Writings**

As the first procedure, documenting of students' argumentative essays was conducted twice. The first one was the diagnostic test (pre-test), when the students have not involved in the teaching program. The second one (post-test) was when they had been given the teaching program. Both the pre-test and post-test were analyzed later by using SFL. The rest of the detailed procedure is explained below. This technique was done by choosing three students' argumentative essays out of thirty five students in order to represent different levels of achievement, low achiever student (Text 1 and Text 2, with temporary GPA <3), middle achiever student (Text 3 and Text 4, with temporary GPA ranged 3-3.5), and high achiever student (Text 4 and Text 5, with temporary GPA >3).

##### **3.4.1.1 Argumentative Writing Pre-Test and Post-Test**

In documenting the students' argumentative essays, there are three procedures that were be used. The first procedure was conducting the first assessment to explore students' preconceived critical thinking skill. In order to meet the purpose of this study, the three students participating in this research were asked to give response to a controversial topic as they wished. As suggested by Chaffee et al, (2002),

controversial issues are effective to generate students' CT. As the final result, the low achiever student chose the issue of *Corruption* as represented by "Indonesia should give corruptors the death penalty"; the middle achiever student decided on the topic of *Cheap Car* as represented by "Cheap car is not the answer"; and the high achiever student chose *Religion* as represented by "Being agnostic is not a bad idea". These issues were chosen because they had attracted public attention nationally. They had been in the national TV and newspaper headlines for weeks. The reasons behind choosing these topics can be seen in the interview. They were not limited to choose their topic. By their choosing their burning topics, it is safe to assume that those students have had background knowledge of this issue which is primarily important for them to demonstrate their CT through their thoughtful writings (Chaffee, 2000). It is also in line with Freebody's argument who stated that students' actual achievements can be evaluated through their producing many kinds of texts which in this case is expository text (2002, p. 179).

The second procedure was documenting the teaching argumentative writing in class for 8 meetings started on the odd semester and Twitter discussion online (dated 9<sup>th</sup> September 2013-25<sup>th</sup> November 2013). The researcher worked on the field notes to record things happened during the observation both in the classroom and students' activities online. The students were asked to find facts and evidence relating to the writing topics that they had chosen to be argued about and the teacher guided the students in tweeting. This happens in order to follow the GBA SFL rules, the Building Knowledge of the Field. All the three students participated in this process and teacher were observed the whole time.

The third procedure was similar to the first procedure, conducting assessment. However, this time, students were instructions to write argumentative composition based on the critical thinking skill guided by the teacher after the whole program has ended. This was done on the 8<sup>th</sup> meeting. The writing topics were the same as the topic they had chosen at the first assessment. Both the pre-tests and post-test of the students' compositions were then analyzed with SFL in terms of CT elements as in thesis, arguments, and restatement of the thesis to check the

progress in order to answer the purpose of this study; the use of social media in genre-based approach and how it affects students' argumentative writing and critical thinking. This analysis later on became helpful in assisting students not only to make them critical but also make a room for them to enhance their writing ability particularly the argumentative one (see Chaffee et al, 2002).

### **3.4.2 Observation**

The second procedure of the data collection technique was the observation. According to Merriam (1998: 102), observation is a major means of collecting data in case study research. It gives a first hand account of situation under study and, when combined with interviewing and document analysis, allows for a holistic interpretation of the phenomenon being investigated. In this observation, the writer acted as a teacher-researcher in which she taught explicitly the argumentative writing and critical thinking skill by employing genre-based approach in the classroom. She also monitored the treatment and also did the research. The observation was done in eight meetings resulting two assessments. The writer observed and created field notes secretly in order to keep everything natural and authentic. Students did not aware that the writer is intended to examine development of the critical thinking in their argumentative writing. They were told that the purpose of the present study is to analyze classroom interaction. Then, the researcher documented both teaching sessions and tweeting sessions for six weeks, excluding the pre-test and the post-test.

### **3.4.3 Interview**

The third data collection technique used in this study was an interview with the three students participating students in this study. The interview was conducted on 19<sup>th</sup> December 2013. The interview data in this study were used to find out the students' perception of using social media as a tool for learning argumentative writing and critical thinking. This interview enabled the researcher to check the accuracy and verify the impression she got from the document analysis and observation conducted in this study. In addition, the interview allowed the researcher to obtain immediate responses to a question. It also allowed her to

enquire as to why individuals act in the way that they do especially related to what they have done so far. From the CT point, it is argued that interview was also an important means to evaluate students' critical thinking (Norris and Ennis, 1989).

This study used individual semi-structured interviews with open-ended questions (Cohen & Manion 2004; Dawson, 2009). In his book, Kvale (1996, p.124) stated that a semi-structured interview has a sequence of themes to be covered as well as suggested questions. He also added that this type of interview, an openness to change of sequence and forms of questions in order to follow up the answers given by the participants can be seen. In this interview, the researcher arranged the interview appointments and facilitated a quiet environment where interruptions could not happen during the interview.

The results were then transcribed and all participants were asked the same questions. This made it possible for the participants to remain anonymous. The interview was conducted in *Bahasa Indonesia* but then translated and compiled in English. The interviewer also used English in expressing the ideas. In this interview, the questions were given to the students and procedures were organized in order to get more information based on the analysis results of their writing and classroom observation. In addition, this interview was conducted after the teaching program had been completed. The purpose of this is to obtain more comprehensive data on their consciousness regarding the use of social media as a learning tool to develop their argumentative writing and critical thinking.

In order to follow the rules of interview by Dawson (2009, p.149) and in regard of the ethics in conducting research, right before the interviewer conducted the interviews, there are three rules to follow. The interviewer informed the interviewees some important things like (a) points to be discussed; (b) the use of pseudonym in the research report and (c) the fact that the conversation would be recorded and transcribed. All these were conducted in order to make the interviewees to disclose a lot of personal information (Dawson, 2009, p. 149) during the progressing interview.

Seeing from the perspective of critical thinking evaluation, interviewing a student in person and individually is a way of acquiring very detailed information of the students' critical thinking (Norris and Ennis, 1989, p. 145-146; see also Emilia, 2005, p. 82) and has certain benefits over other information gathering techniques. By doing interview, many students can express ideas easier and more coherently. While interviewing, the researcher had the option to ask students to clarify or reclaim what they have said, to request additional reasons for their conclusion and to ask for specific questions about what might have influenced their thinking.

### **3.5 Data Analysis**

The data analysis in this study was conducted over the course of the study. On going data analysis and interpretation was done based on the data from document analysis which is students' argumentative essays, observation, and interview. Each steps of analysis of the two sources of data is given in the following section.

#### **3.5.1 Analyzing Students' Argumentative Writings (Pre-Test and Post-Test)**

After all the six the argumentative texts collected (three pre-test texts and three post-test texts), the texts were analyzed using SFL in several parts namely CT elements. As what were pointed out by Travers (2002), the procedure of text analysis in case study follows the procedures laid out in the related theory. For this purpose, this study employed the critical thinking theory and Systemic Functional Grammar (SFG) to analyze the students' argumentative compositions. The analysis done was in terms of the critical thinking elements and linguistic features the students used in their works. The result of this analysis tried to answer the first research question, which is to find effect of social media in teaching argumentative writing and CT.

The analysis of students' argumentative texts was done in three steps. The first step was classified students' essays into three categories decided before (low achiever student, mid achiever student, and high achiever student). The second step, using SFG, was the analysis of the logical or schematic structure based on each CT elements; thesis, arguments, and restatement of the thesis (Is the logic

improving? Is the schematic structure changed?), organization and purpose, (Is the organization changed? Is the purpose of the writing clearly stated? Are the arguments become stronger? Is there any changing point of view?) and how each element in the texts performed its function (Do the elements of the writing support each other?). Based on each element, those texts were then analyzed in terms of linguistic features which include the textual (How the writing composition is better in terms of coherence and cohesiveness), ideational (How students express their idea in writing) and interpersonal (How the text can maintain the reader and writer's or student's relationship) metafunctions. Results of these analyses were later related to the aspects of critical thinking proposed by theorists mentioned in the Chapter Two.

### **3.5.2 Analyzing Classroom Observation and Tweets**

There were two sources of data in analyzing data from observation. The observed both class observations and Twitter conversations or discussions that have documented weekly were coded and noted in details seen in the lesson plans. Both of the classroom observation which is shown in the teaching program and the tweet conversation texts were analyzed to answer the first research question, which is to the use of social media in genre-based approach and how it affects students' argumentative writing and critical thinking. The analysis was conducted through several stages as follows. (1) reading and reviewing the teacher's field notes (Merriam, 1991); (2) analyzing and classifying the data into some categories related to the main focus of observation, which were the teaching activity; (3) interpreting the data to address the research question on the use and the effects of social media in teaching argumentative writing and critical thinking in GBA program and the students' perception on using social media as a learning tool. This analysis later supported the use of social media in teaching argumentative writing and critical thinking. Moreover, this analysis showed the ability of students to be autonomous learner in gathering information also from the Internet especially Twitter.

### **3.5.3 Analyzing Interview**

The data gained from the interview were later transcribed, classified, and interpreted to answer the third research question, which is to draw the students' perception on social media as a tool for learning CT in argumentative writing. During the transcription stage, the researcher replaced the students' name with pseudonym (Silverman, 2005). Next, to follow Cohen and Manion (1994) and Kvale (1996), the transcripts were given back to the participants to make sure that it was the exactly what the students said and intended. The transcripts were then compressed into briefer statements in which the main sense of what is said is rephrased in a few words (Kvale, 1996, p.192) as can be seen in appendix 4. Finally, the data were coded and categorized by using thematic data analysis. For this consideration, the researcher classified students' comments into themes that had become the focus of the study, which is students' understanding of the argumentative writing critical thinking concepts by using social media.

### **3.6 Validity**

The make sure the validity of the data, triangulation was then conducted. The triangulation was conducted through triangulation of data, triangulation of theories, and member checks. To ensure the data validity, three data gathering techniques were used in this study which include the documentation of students' argumentative essays, observation, and interview (Cohen and Manion, 2004; Nunan, 2009). The other way to escalate the validity of the data was through triangulation of theories which in this study refer to two main theories, the theory of critical thinking and the theory of SFL (Nunan, 2009). The last work to maintain the validity of the data was through member checks. In this context, the transcripts were returned (Kvale, 1996) to the participants who had been interviewed to make sure that the results were appropriate with their responses given by them.

The subsequent section will provide an account of SFG, which was a tool for students' text analysis.

### **3.7 Conclusion of Research Methodology**

This chapter has discussed the methodology of the study. It showed how this study was conducted. This includes the research questions, the selection of site and participants, method of data collection and data analysis. The data presentation and discussion will now be discussed in Chapter Four.