CHAPTER III

METHODOLOGY

This chapter provides a detailed description of the methodology of this study. There are seven areas discussed in this chapter. The first area consists of research questions of the study. The second area explains the specific research design which is a qualitative study. The third area outlines the setting of the research which was in a state polytechnic context. The fourth area informs the participants involved in this study. The fifth area presents data collection techniques, including observations, document analysis, and interviews. The sixth area describes analysis from the observations, student's texts, and the interviews. The seventh area deals with ethical issue of this study.

3.1 Research Questions

There are two purposes of this study, as defined in Chapter I. First, the study aims to identify how Google Docs is used in collaborative writing activity. Second, the study aims to analyze the development of students' writing skills through Google Docs. Corresponding to the purposes of the study mentioned earlier, this study addresses the following research questions:

a. How is Google Docs used in collaborative writing activity?
b. What aspects of writing are developed by using Google Docs?

3.2 Research Design

In accordance with the purposes and research questions of the study posed previously, this study employed a qualitative method for three reasons. First, the study was conducted to gain an in-depth description (Heigham & Croker, 2009) of a case in actual setting of phenomenon (Malik & Hamied, 2014; Creswell, 2009) which referred to one state polytechnic in Padang. Second, this study was not going to make a generalization as general condition of the whole lecturers and students in Indonesia. This study takes emphasis on gaining understanding of a particular case without attempting to make generalization from the case being

studied (Cowie, 2009). Third, the study employed multiple data sources (Malik & Hamied, 2014; Creswell, 2009; Heigham & Croker, 2009), including data from observations, document analysis, and the lecturer and students' interviews. In this respect, the use of multiple data gatherings was intended to clarify the inferences since the case was viewed from different ways (Stake, 1995).

3.3   Setting

This present study took place in one state polytechnic in Padang, West Sumatra, Indonesia. This polytechnic had five major departments including Electrical Engineering Department, Mechanical Engineering Department, Civil Engineering Department, Accounting Department, and English Department. Then, the research was carried out at the English Department. The research site was chosen for three reasons. First, it was a writing class in English Department which was relevant to the contexts in which this study was conducted, writing skill and collaborative writing contexts, as explained in Chapter I. Furthermore, the students learned to write a narrative essay when this study was conducted. The narrative essay was the text analyzed in this study.

Second, there were availability facilities, for instance computers with Internet access, and free Wi-Fi connection around the campus, provided in this polytechnic in order to support online collaborative writing process. Third, the research site is chosen for the reason of the accessibility (McMillan & Schumacher, 2001) of the researcher to carry out the research. It supports the practicality and feasibility of the research. Besides, the department permitted its students and lecturer to be researched since technology has been infused to teaching and learning process for certain subjects. In this study, technology was integrated in lecturing and learning context.

3.4   Participants

The participants of this study were one lecturer and six students. The participants' selection was guided by purposive sampling (Malik & Hamied, 2014), since they were considered sufficient to provide powerful information in answering the

research questions (Maxwell, 2013). The lecturer involved in this study was chosen because she has experienced blended learning which involved another Web 2.0 tool (Edmodo) in teaching and learning process that was relevant with the Web 2.0 tool (Google Docs) used in this study. In other words, the lecturer was familiarized with the Web 2.0 learning environment. Furthermore, the lecturer has taught writing subject for years in English Department of that polytechnic and other faculties of a university in Padang.

Six students involved in this study were chosen for three reasons. First, the students have experienced Web 2.0 learning environment. As it is stated previously, Web 2.0 tool (Edmodo) has been used in teaching and learning process for certain subjects. Second, six students were considered enough to provide information needed for this study. Third, these students were recommended by the lecturers in order to provide sufficient information for this study. The students were categorized into high and low achiever based on their writing grade in the previous semester. Three students, who graded B+ to A, were categorized as high achievers. Meanwhile three students, who graded B- to B, were categorized as low achievers. All the students were between 17-19 years of age. There were three male students and three female students in the second semester of the study.

3.5   Data Collection Techniques

This study employed three kinds of data collection, which are observations (online and offline), document analysis, and lecturer interview as well as student interviews. The use of the three methods was meant to triangulate data that was to collect information using a variety of methods. Techniques of collecting data are explained in the following sections.

3.5.1   Observations

Observations were intended to find out the answers of research question 1, and were also used to support data for research question 2. The observations were conducted as they allowed for collecting data that could not be covered by other

data collection methods (Maxwell, 2013). In conducting the observations, the researcher took a role as non-participant observer (Creswell, 2009, 2012) by observing the behavior or activity of the respondent of the study without involving in the activity physically and psychologically in the interaction in the classroom (McMillan & Schumacher, 2001).

The observations were done both online and offline in the classroom and outside the classroom. In the classroom, the observations were done during lecturing process, pre-writing stage, and drafting stage. Meanwhile, the activities during offline group discussions, online editing stage and publishing stage on Google Docs were observed outside the classroom. The observations during collaborative writing activity in the classroom and outside the classroom were conducted form May 25th to June 22nd, 2016. In this study, the data from observations were collected mainly through field notes to investigate what was done by the lecturer and students during collaborative writing activity. The field notes were written as the online and offline activities were taking place. Throughout the observation, the researcher made no effort to manipulate variables and noted what happened as things naturally occurred (Fraenkel, Wallen, & Hyun, 2011)

3.5.2 Document Analysis

Document analysis was used in order to answer research question 2, as stated in Chapter I, and support answering both of research questions. Document analysis was applied in this study for three reasons which in congruence with things suggested by (Creswell, 2009), that documents are very convenient for a researcher to access because of the availability, the easiness to analyze, and their context. First, the documents were available and permitted to be downloaded on Google Docs. Second, the documents were established, so that they were easy to analyze. Third, the documents were relevant with this current research.

In this study, the student's texts posted on Google Docs were collected. The students were required to produce a good narrative essay by doing

collaborative writing on Google Docs. There were some requirements that should be accomplished by the students when composing the essay. The selected topic of the essay was an unforgettable experience. The essay must be consisted of at least three paragraphs: introductory, body, and conclusion paragraphs. In addition, students had to use simple past tense form when composing the essay. Students also needed to write the messages that can be learned from the experience. Thus, the requirements should be fulfilled by the students in writing the essay in order to achieve the goal of the lesson.

There were three versions of narrative essay collected from Google Docs: the original version, revised version, and final version of the essay. It was one essay which was composed collaboratively by revising and editing the essay on Google Docs twice in order to produce one final product of narrative essay. Hence, those three versions of the narrative essay were used as the source of data for this study. All those writings were obtained by downloading them from Google Docs.

3.5.3 Interviews

The semi-structured interviews were employed in this study because they provide in-depth information needed for the study (Bell, 2005) and at the same time the questions derived can be limited by the researcher in accordance with the need of the interview (Creswell, 2009). Moreover, these interviews will be helpful to verify the data gathered from the observations (Fraenkel et al., 2011). In this study, individual interview was conducted as a means to understand the experience of the lecturer and students about using Google Docs in collaborative writing activity, and also to figure out students' responses towards the use of Google Docs in collaborative writing activity.

For the lecturer, there were 13 questions to ask. Four questions captured lecturer's experience and her view in teaching English, especially teaching writing, in the research site. Three questions were asked about her opinion about collaborative writing as well Google Docs in general. Five questions were

addressed to capture information about the collaborative writing process using Google Docs, and the development of students writing skill during collaborative writing skill using Google Docs. For students, there were also 13 questions to ask. Four questions captured students' experience and their view in learning English, especially in writing an essay in English. Three questions were asked about their opinion about collaborative writing as well Google Docs in general. Five questions were addressed to capture information about the collaborative writing process using Google Docs, and the development of their writing skill during collaborative writing skill using Google Docs.

Each interview lasted at least 10 minutes. The interview was organized while collaborative writing was occurred, and after collaborative writing activity on Google Docs was ended. Moreover, the interview was conducted in Bahasa Indonesia in order to avoid misunderstanding, so that the participant could elaborate his/her explanation as it was his/her native language. All interviews was audiotaped, transcribed, condensed and translated into English to answer the research questions posed previously.

3.6   Data Collection Analysis

Data analysis is conducted simultaneously during the study as this is a qualitative study (Maxwell, 2013). In this study, inductive analysis is used, "extracting its concepts from the mass particular detail that constitutes data base" (Malik & Hamied, 2014, p. 192). The process of analysis will be based on the data collection techniques: classroom observations, document analysis, and the lecturer and student interviews. Each step of analysis of the three sources of data collection is presented in the following section.

3.6.1   Observations

The analysis of observation was done based on the notes taken during the online and offline observation. Then, the data were categorized into four stages of writing: (1) prewriting stage, (2) drafting stage, (3) revising and editing stage, (4) publishing stage. Then, all of the information from observations was interpreted to

answer the research question 1. The data were also used to validate the data from document analysis and interviews.

3.6.2 Document Analysis

The data from student's writings posted in Google Docs will be directly analyzed by organizing, coding, categorizing, synthesizing, and interpreting the data based on the themes and codes from several theories. There were three versions of narrative essay collected during the collaborative writing process on Google Docs. In analyzing students' writing development, the table adapted from ESL composition profile proposed by Jacobs et al. (1981) was employed.

Table 3.1

ESL Composition Profile (Jacob)

Aspect	Level and Criteria	
Content	30-27	Excellent to very good: knowledgeable, substantive, thorough, development of topic sentence, relevant to assigned topic
	26-22	Good to average: some knowledge of subject, adequate range, limited development of topic sentence, mostly relevant to topic but lacks detail
	21-17	Fair to poor: limited knowledge of subject, little substance, inadequate development of topic
	16-13	Very poor: does not show the knowledge of subject, non-substantive, not pertinent, or not enough to evaluate

Organization	20-18	Excellent to very good: fluent expression, ideas clearly stated/ supported, succinct, well-organized, logical sequencing, cohesive
	17-14	Good to average: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	13-10	Fair to poor: non-fluent, ideas confused or disconnected, lacks of logical sequencing and development
	9-7	Very poor: does not communicate, no organization, or not enough to evaluate
Vocabulary	20-18	Excellent to very good: sophisticated range, effective word/ idiom choice and usage, word from mastery, appropriate register
	17-14	Good to average: adequate range, occasional errors of word/ idiom form, choice, usage but meaning not obscured
	13-10	Fair to poor: adequate range, occasional errors of word/idiom form, choice, usage, meaning confused or obscured
	9-7	Very poor: essentially translation, little knowledge or English vocabulary, idioms, word form or not enough to evaluate
Language Use	25-22	Excellent to very good: effective complex constructions, few errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions

	21-18	Good to average: effective but simple constructions, minor problems in complex construction, several errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions but meaning seldom obscured
	17-11	Fair to poor: major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order/ function, articles, pronouns, prepositions and/or fragments, run-ons, deletions, meaning confused or obscured
	10-5	Very poor: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate
Mechanics	5	Excellent to very good: demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing
	4	Good to average: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured
	3	Fair to poor: frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured
	2	Very poor: no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate

Moreover, error types of each aspect in this study were adapted from those proposed by Hedgock & Lefkowitz (1994) in order to analyze students' writing development.

Table 3.2

Types of Errors in Students' Writing

No	Error types
1.	Organization a. Paragraph sequencing b. Logical development
2.	Content a. Ideas b. Evidence c. Example
3.	Language use (grammar) a. Articles/ determiners b. Verb tense c. Verb form d. Subject-verb agreement e. Pronouns f. Noun endings (singular/ plural) g. Sentence structure
4.	Vocabulary a. Word choice b. Word form
5.	Mechanics a. Punctuation b. Capitalization c. Spelling

3.6.3 Interviews

The analysis of the data from interviews was done through three steps as proposed by Creswell (2012) consisting preparing and organizing the data, reducing the data, and representing the data. First, data in the form of transcriptions or write-ups should be prepared and organized. Therefore, data from audio recorder of the interviews were transcribed. Second, the data were then reduced, broken down, into smaller parts. In this respect, the coding and categorizing were created by matching the data obtained from different participants in order to emerge the pattern and themes about using Google Docs in collaborative activity on the development of writing skill. Third, the analyzed data were explained and represented in the form of narratives to answer the research questions of this study.

1.7 Ethical Challenges

Ethical issues play a crucial role in human research in order to address that participants are not harmed in any manners. Prior to conducting the research, a letter of consent from School of Postgraduate Studies was given to the head of the English Department in the polytechnic. Then, a lecturer and the head of the department were provided with a copy of thesis proposal with detailed information about background of the study, the purpose of the study, and the data collection techniques. Furthermore, the researcher was fully aware that respondents' consent to participate in this study should be voluntary and informed. Thus, in this study, the researcher negotiated with the lecturer to conduct the research in her class. The lecturer was informed that the choice to participate in this study was her own decision.

Moreover, the lecturer and the participant students were informed that the study did not have any risk for them. The information gathered during the research, including the data collected from observations, document analysis and interviews, was only accessed by the researcher for the purpose of analyzing the data. In addition, to ensure confidentiality, participants' personal details were disclosed. Also to maintain the anonymity of the research participants, pseudonyms were used in all reports of this study.

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3.8   Concluding Remark

This chapter has presented the methodology of the research. This chapter encompassed the restatement of research questions of the study, the research design, the research setting, the participants, the data collection techniques, the data analysis. The following chapter will present the findings and discussions of the research based on the results of the analysis provided in this chapter.