CHAPTER III
RESEARCH METHODOLOGY

As previously highlighted in Chapter I, this study is aimed at encouraging debate on the challenge related to being ICT-literate in lecturers' perspective, attitudes, and at the same time raises the awareness and recognition of how lecturers embed the ICT in their teaching performance. It is therefore important to determine the best method to employ.

In this section the detailed description of the methodology the researcher embedded in the study is provided. In sequence the content of this section consists of formulation of problems which represents the matters under investigation, research design, site and participants, data collection techniques, and procedures of collected data analysis.

3.1. Formulation of Problems

In compliance with the aims, this study is conducted to portray two main problems: lecturers' attitudes toward ICT that influence their ICT-integrated use and the reason that governs their ICT literacy. Hence, the problems of the research are formulated as follows.

1. What are the perspectives of lecturers toward ICT literacy in the relation to ICT integration into pedagogical practices?
2. What are language lecturers' attitudes towards ICT for professional purpose?

3.2. Research Design

A descriptive study with qualitative research method (Creswell, 2007) is employed as this study seeks to portray a general description and identify a phenomenon significant with the research questions (Flick, 2009: p. 134). It is evidenced with the characteristic of qualitative research problems, namely to inquiry the meanings a party ascribe to a social or human issue (Creswell, 2007).

What it is like to be in a particular viewpoint is what this study strives to portray, crown it all with the description of participants' experiences of, thoughts about and feelings for the integration of ICT into the participants' professional life as lecturers (Geertz, 1973). It is, as adopted in this study, to identify the point of view of lecturers over the ICT literacy in the embodiment of ICT in their educational practice, their attitudes, and the contribution of the conception and attitudes to some ICT issues mattered. Clearly it frequently follows the interpretative tradition of research, seeing the situation through the eyes of lecturers as the participants, rather than the quantitative paradigm (Cohen, Manion, & Morrison, 2007). In the interpretative paradigm, this study tends to use certain data collection methods of questionnaire and semi-structured interview.

This study began with some guiding questions, yet the types of data and research decisions to establish was revised as the study progressed (Suter, 2012). The significance of research method employed in this study is that there was almost no control over how the content of the data to be collected would emerge. In this sense, there is any possibility involved in what would be figured out and what the relevance of the findings might be.

3.3. Research Site and Participants

To attain the aims of this study which is to examine lecturers' point of view of ICT literacy and their attitudes, this study was undertaken in a state university in Bandung Indonesia with the lecturers of English Education Program and English Literature Program. Moreover the research site was chosen for several reasons.

To confirm the feasibility of study, the first motive is correlated to the focus of the study, concerning the ICT literacy and the ICT integration in classroom teaching, which is believed to be suitable and applicable at this level of higher education. Tertiary level educators, namely lecturers, are considered "to think more conceptually, to write more analytically, and to read more critically" (Emilia, 2005). Besides, tertiary education, including university, is the sector where ICT usage is most diffused. University with the significant investment and cost most probably appears to be lab institution to figure out and monitor the progress of the ICT diffusion in educational instructions (Punie et al., 2008).

The second motive is expected to give positive effect on wider range of life, since university has been defended as a vital public sphere that the moral and pedagogical dimensions contribute to regenerating civic life (Giroux, 1997, in Emilia, 2005). Another consideration comes from the ease of access and availability.

Accordingly, a total of five lecturers were taken to be the subject of research. The small number was taken concisely in order to draw a more detailed description and rich data presentation. It was needed to proceed and interrelate key issues emerging across the individuals (Cohen, Manion, & Morrison, 2007; Croswell, 2007).

In this study, the selection of participants was purposive since they were taken based on selected criteria relevant to the research problems under examination (Cohen et al., 2007; Flick, 2009: p. 122). The participants were the 'young' lecturers which belong to only a generation above their students' (Dudeney & Hockly, 2007). If one generation draws 23 years separation and the students range 17-24 years old, so then for the participants the range is under 46.

3.4. Data Collection Techniques

The collection of data as the study goes around qualitative approach was conducted in a natural setting sensitive to the people and places (Croswell, 2007), though a questionnaire of perspectives was set to be filled by the participants. The following part of this report moves to a closer-grained account of techniques for

collecting data of this study. Questionnaire and interview were administered respectively to be the instrument of this study. Each of the data collection techniques is described thoroughly below.

3.4.1. Questionnaire

The first instrument administered emerged to be questionnaire. This one was conducted to draw assumption of qualitative inquiry that is to understand a complex phenomenon (Suter, 2012). Some statement of consideration of multiple "realities" and perspectives that were probably mattered to the participants was set up in a questionnaire form. It was favored to discover how participants construct their own meanings of ICT literacy in professional practice through the patterns drawn in the questionnaire.

In compliance with the aim of this study and to answer the research problems, a questionnaire consisted of 60 close-ended statements was initially developed based on a review of the related literature on the role of ICT for teacher and divided into two main parts apart from demographic items. The first part consisted of 36 Likert-scale items in which 20 of them were adopted from research instrumentation by Zare-ee (2011) with similar focus of study, and the rest from ICT in Schools Census 2013 by PDST Technology in Education Dublin and UNESCO Teacher Education Guidelines (see Appendix A).

This first part of questionnaire included 12 items on their views about ICT, 8 items on the respondents' familiarity with ICT, 6 items about access and the availability of ICT tools, and 10 more items concerning support for the enrichment of ICT literacy from participants' surroundings. As some other Likert-scale based items, this first part of questionnaire represented five scales of "strongly disagree", "disagree", "neutral", "agree", and "strongly agree" for every statement.

The categorization of each item is presented in the framework of lecturers' questionnaire below.

Table 1

The Framework of the First Part of Lecturers' Questionnaire

No.	Categories	Items Number	
		Positive	Negative
1.	Lecturers' views on ICT	1, 2, 5, 6, 7, 10, 11	
2.	Lecturers' familiarity with ICT	14, 15, 16, 17, 18, 19	23
3.	Access and Availability of ICT tools	28, 32, 33, 34, 35, 36	
4.	Colleague support	20, 21, 24, 26	
5.	Institutional support	22, 25, 27, 29, 30, 31	
6.	Lecturers' values of ICT	3, 4, 8, 9,	12, 13

The next 24 items in the second part of questionnaire were fully adopted from ICT in Schools Census 2013 provided by PDST Technology in Education Dublin. This part mainly focused on the frequency of the ICT use for professional purposes based on the lecturers' experiences. The scales used were "never", "sometimes", "frequently", and "Usually/Always". They represented how often the lecturers harnessed and used the ICT to support their professional performance as a teacher as well as an academician.

Table 2

The Framework of the Second Part of Lecturers' Questionnaire

No.	Categories	Items Number
1.	ICT to provide academic resources	3, 4, 5, 6
2.	ICT to provide teaching media	1, 2, 10, 18, 19, 20, 21, 22, 24
3.	ICT to provide assessment tools	13, 14, 15, 16, 23
4.	ICT to provide interaction and communication tools	7, 8, 9, 11, 12, 17

The questionnaire was attached with some demographic items to obtain knowledge about and information on lecturer distribution of age, gender, qualification, affiliation, years of teaching, and ICT devices ownership. This section generated demographic information addressing whether or not the lecturers had some professional development courses related to ICT integration in teaching.

3.4.2. Interview

To consolidate the qualitative description and to support the validity of data collection, individual interviews were carried out over the participants after the analyzing data from the questionnaire were accomplished. The interview was constructed to identify the participants' perceptions of the concerned and experienced situation (Cohen, Manion, & Morrison, 2007). Five structured 8-17 minutes interview sessions with involving eight major questions were administered (see Appendix A). Lecturers' responses to those questions were recorded through audi-tape recorder and then transcribed to avoid data loss, distortion and to reduce complexity (ibid.).

Table 3

Guideline of the Interview

No	Details	Items number
1.	Identifying lecturers' conception of ICT literacy	1, 2
2.	Identifying teacher's strategies to improve ICT skills for professional purposes	3, 4, 5
3.	The barriers to integrating and enhancing ICT skills	6
4.	The impact of the ICT integration into professional practice	7, 8

Along with the interview over the participants, a set of another interview was also conducted to the teacher students that were taught by the participants (see Appendix A). The purpose of the interview is to crosscheck the information given by the participant in this study. The interview took place to replace the role of observation that was not employed in this study, so it was supposed to be an interview of confirmation. The interview was designed to strengthen the information given by the participants. It was a close-ended and restricted interview that consisted of some questions regarding the ICT use by their lecturers in classroom teaching. A total of 15 teacher students were taken as interviewee in whom every three interviewees gave confirmation about each participant. The interview itself consisted of 21 questions and lasted about 3-5 minutes each.

Questionnaire and interview over the participants were conducted since the participants cannot be directly observed (Creswell, 2009). Through the questionnaire and interview, the researcher was allowed to control over the line of questioning in order to provide the information needed and draw the patterns to be interpreted. The information was provided in a designated place rather than the natural field setting and filtered through the views of participants. The data collection technique was considered adequate enough since this study seek to mainly portray the perspectives of the participants which is full of subjectivity.

The limitations lie under the absence of observation to be instrumented into this study. The data of confirmation from student interview could not guarantee that the data from the participants were holistically and coreespondingly confirmed. There was no variable administered in the data collection, and some matters could emerge. First, there were some possibilities that the lecturers taught more than one course and applied different teaching methods. Second, the number of students interviewed could not be able to represent the population of students taught by the lecturers. Besides, the considerations that not all students were equally articulate and perceptive (Creswell, 2009) were put aside.

3.5. Data Analysis

Having collected, the data gathered was analyzed into two major parts; the analysis of the data from the questionnaire, and the one from the interview. Both the analysis was conducted by going through three analysis strategies of qualitative data (Crewell, 2007): 1) preparing and organizing data, 2) reducing data into theme through coding, and 3) representing data. The analysis was inductive until a comprehensive set of themes was established.

a. Data from Questionnaire

Several steps were undertaken to analyze the data gained through questionnaire. First of all, the data was checked for the completeness, accuracy, and the uniformity (Cohen, Manion, & Morrison, 2007). Conducted manually without the help of computer application, the data was scanned in order to every statement got interpreted uniformly and responded accurately and full. Later, the coding was conducted by assigning a code number to each answer of every statement. The result was calculated to be interpreted into word-based interpretation (see Appendix C).

b. Data from Interview

The first step to do was to transcribe the data from recorded interview into written documents or scripts (see Appendix B). Then the scripts of the result were synthesized before next to be analyzed. In this step, the answers of the participants were classified into selected categories (coding). As noted by Creswell (2007), in the process of coding, it is needed code segmentation that can represent information as expected to find before the study and also represent surprising and conceptually interesting information beyond expectation. The information was classified apart into different categories, themes, and dimensions (see Appendix C).

Each theme in this study was grounded from a detailed description of particular case emerging. The main outlines of the phenomena under investigation ware set out through shifting, sorting, reviewing and reflecting on the situation

emerged. Simultaneously the insignificant feature of data overload was reduced to narrowing the future focus (Cohen, Manion, & Morrison, 2007).

From the categorization in the coding phase, the developing themes emerged and need to be interpreted. The next step to do was interpreting the data and combining it with the result of the other instrument to come to the overall conclusion of the study. Analyzed, all the data was classified into given categories and clarified following the presentation of the description of the findings was the last step of the study. By adopting Creswell's theory (2007), the data was presented in terms of the voices of participants, the reflexivity of the researcher, and a description and interpretation of the research problem.

Altogether, this chapter has presented a detailed account of the research design and methodology according to which this study was conducted. This research takes place under qualitative descriptive approach, utilizing questionnaire and interview technics to achieve the research objectives.