CHAPTER III

RESEARCH METHODOLOGY

This chapter consists of methodology of the study, including research method and design, data, data source, and instrument, data collection procedure, and data analysis procedure.

3.1 Research Method and Design

The purpose of this study is to design ICT competences–integrated writing syllabuses for ELESP.

A research method of this study is grounded by the principle of qualitative-based research in the form of research and development (R&D). The term R&D was changed by Richey and Klein (2007) into Developmental Research (DR), which, hereinafter, was changed again into Design and Development Research (DDR).

One of the characteristics of qualitative research, which is interpretive, underlies this selection of research method. It is stated by Creswell (2009: 164) as cited in Ramdani (2016), a qualitative research is a form of interpretive inquiry in which researchers make an interpretation of what they see, hear and understand. The interpretations cannot be separated from their background, history, prior understanding and context. Through this method, researchers are seen as the key instruments collecting the data through examining documents.

A research design of this current study is Design and Development Research (DDR). Richey & Klein (2007) defined the DDR as: "the systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development." This definition has similar meaning to the aim of this study in order to design the procedures to integrate ICT into writing module in ELESP and to design the procedures ICT of integrated writing syllabuses in ELESP.

There are several stages offered in the DDR. Borg & Gall (1989) stated the following stages: 1) the collection of information; (2) planning, designing, and developing program; 3) product/model/program tryout; (4) product/model/program improvement; 5) try out; 6) improvement; 7) operational try out; 8) product/model/main program improvement; 9) final revision; 10) product/model/program distribution and development. According to Nunamaker et al. (1991), there are five major procedures: a) construct the conceptual framework; b) develop the system architecture; c) analyze and design the system; d) build a prototype; and e) test and evaluate the prototype. While, Wademan (2005) suggested the procedures of the design as: 1) problem identification, 2) identification of tentative products and design principles, 3) tentative products and theories, 4) prototyping and assessment of preliminary products and theories, 5) Problem resolution and advancing theory. Meanwhile, Sugiono (2007) presented 10 stages, including: 1) the potential and problems; 2) data collection; 3) design of

the product; 4) validation of the design; 5) revision of the design; 6) products try out; 7) the revision of the product; 8) user trial; 9) the revision of the product; 10) mass production. Based on Ellis and Levy (2010) suggested five steps in Design and Development Research: 1) construct the conceptual framework, 2) develop the system architecture, 3) analyze and design the system, 4) build a prototype and 5) test and evaluate prototype.

Based on the steps of conducting DDR proposed by Borg & Gall (1989), Nunamaker et al. (1991) and Ellis and Levy (2010), the researcher of this present research decides to adapt those steps by combining, reducing and modifying some steps. The decision is supported by statement of Akker, et al (1999) that the researchers are permitted to reduce unnecessary steps in designing and developing the research, and modify the steps in achieving the purposes of the research. Therefore, after reviewing various stages in DDR proposing by several experts, the researcher decides to modify the research steps into five stages. The steps are elaborated in the following figure.

Figure 3.1 Modified Steps of DDR

Those five steps of the modified DDR procedures are elaborated as follow:

1. ***Need Analysis***

   In this step, the researcher conducted need analysis. The researcher collected information from relevant theories related to syllabus design which cover students' needs of writing and ICT competences as well as pedagogical aspects which are teaching, learning and assessment. Besides collecting information from experts' theories, an examination to the existing syllabuses of writing which currently uses by ELESP of some universities in Indonesia conducted as well to enrich the researcher's reference.

2. ***Stating Objectives***

   The second step after collecting information related to the aspect of syllabus design is stating objectives. Related to syllabus design model, this step covers deciding key teaching principles, goals, content, sequencing content, syllabus format, and ways of materials presentation, as well as types of assessment employed in the new syllabus prototype.

3. ***Designing Preliminary Syllabuses***

   The third step is Designing Preliminary Syllabuses. This step covers syllabuses prototype production which is supposed to cover pointers in stage 2 which are writing and ICT competences. Following syllabus development theories explained in chapter 2 and the data evidence in the second stage, the researcher will arrange the pointers and generate the preliminary syllabuses.

4. ***Evaluate the Preliminary Syllabuses***

   After designing the preliminary syllabuses, in this step the researcher tested the draft of the syllabuses through Focus Group Discussion (FGD). Because of the limitation of time to test the prototypical writing syllabuses for S-1 English Language Education Study Program of some universities in Indonesia, so the technique of testing is conducted. In this process, the reviewers involved are the experts in English Language Education Study Program field, such as an expert of Linguistics (Dr. Siti Drivoka Sulistianingrum, M.Pd.) and an expert of Syllabus and Curriculum (Dr. Darmahusni, M.Pd.). From FGD activity, the researcher got feedbacks and suggestions to revise the syllabuses.

5. ***Revising a Syllabus Prototype***

   After the experts gave their feedbacks and suggestions towards the weaknesses of the syllabuses, the researcher revised the syllabuses to be better in quality. The final product will be a set of syllabuses prototype that can be developed further to be more applicable for writing subjects in ELESP.

3.2 Data, Data Source, and Instrument

The data, data source and the instrument utilized in the study are in line with the statements of sub-questions in chapter 1. Based on the sub-questions, the data, data source and the instrument taken are determined to be presented in the following table:

Table. 3.1 Table of Data, Data Source, and Instruments

Sub-Questions No.	Data	Data Source	Instrument
1 To what extent are the ICT competences integrated in the existing syllabuses of writing skills for ELESP?	Writing competence and ICT competence in the existing syllabuses	Existing syllabuses for S-1 English Language Education Study Program	• Researcher • ICT competence – integrated syllabus indicators
2 How are the ICT competences – integrated in the syllabuses of writing for ELESP?	The ICT and Writing indicator based on the literature review	Literature Review Existing syllabus	• Researcher
3 How are the designs of ICT competences – integrated syllabuses of writing for ELESP?	• The gaps of the existing syllabuses and Literature review • Statement from Focus and Group Discussion containing of the suggestions and feedbacks from the experts	Experts feedbacks	• The researcher's supervisor

3.2.1 Data Source

The sample of this research are the existing Writing syllabuses of English language Education Program (ELESP) for undergraduate degree (S1) from some universities in Indonesia. There are 13 existing writing syllabuses for ELESP were collecting as the sample of this research. These 14 syllabuses are from 5 different universities in

Indonesia. The names of the universities are not mentioned, the researcher named the universities as university A, B, C, D, and E.

Those five universities have different number and different name of writing courses. There are three courses of writing found in the first English Language Education Study Program of university A; *Writing I, II* and *III*. There are also three courses of writing found in the second English Language Education Study Program of university B; *Basic Writing, Intermediate Writing* and *Advanced Writing*. There are five courses of writing found in the third English Language Education Study Program of university C; *Writing I, II, III, IV* and *Academic Writing*. There are two courses of writing found in university D; *Writing in Professional Context* and *Writing for Academic Purposes* and there is only one course of writing found in university E; *Academic Writing*.

In order to make the analysis be more efficient, the researcher coded each of the syllabus above as shown in the table 3.1. When the researcher analyzed the data, the researcher applied these codes to represents the name of the syllabus and universities.

No	University	Course Name	Code
1	University A	Writing I	UAW1
2		Writing II	UAW2
3		Writing III	UAW3
4	University B	Basic Writing	UBBW
5		Intermediate Writing	UBIW

6		Advanced Writing	UBAW
7	University C	Writing I	UCW1
8		Writing II	UCW2
9		Writing III	UCW3
10		Writing IV	UCW4
11		Academic Writing	UCAW
12	University D	Writing in Professional Context	UDWP
13		Writing for Academic Purposes	UDWA
14	University E	Academic Writing	UEAW

Table. 3.2 The Existing Syllabuses Code

3.3 Data Collection Procedure

In order to collect the data, the researcher did these following steps. Here are the procedures organized in collecting the data. Since the data are different based on DDR steps, the researcher presented the data collection procedures with the five stages of DDR in the following table:

DDR Stages	Data Collection Procedures
Need Analysis	- Collecting the data of English writing syllabuses from 5 universities. - Doing library research to collect and explore the theories related to the writing skill and teaching writing for undergraduate English Language Education Study Program. - Doing library research to collect and explore the theories of syllabus design. - Doing library research to search and collect the theories about ICT integrated writing syllabuses. - Analyzing the standard of writing competences and ICT competences in the existing syllabuses. - Formulating ICT indicators - Analyzing existing syllabus referring to ICT indicators. - Choosing the appropriate components of syllabus to be integrated into ICT.
Stating the Objectives	
Developing the Preliminary Syllabus	
Evaluate the Preliminary Syllabus Prototype through Focus Group Discussion (FGD)	- Collecting the descriptions of the preliminary syllabus components of ICT integrated into writing. - Proposing the preliminary syllabuses to the linguistics and syllabus experts. - Note or record the evaluation of the experts to the preliminary syllabuses
Revising a Syllabus Prototype	

	prototype then revise the syllabus design.

Table. 3.3 The Data Collection Procedures

3.4 Data Analysis Procedure

In analyzing the data, the researcher performed the following steps:

1. Use the following table of analysis to get the answer of first sub – question.

UNIVERSITY A/B/C/D/E
Writing Courses Name

Code	ICT Competences Indicators	Sources	UNESCO Approaches			Syllabus Components					
			Technology Literacy	Knowledge Deepening	Knowledge Creation	Identitas MK	Deskripsi MK	Standarisasi Kompetensi MK	Pokok Bahasan dan rincian pokok bahasan	Referensi	Evaluasi
U1		UNESCO, 2011									
H1		Healey, 2008									
D1		Dilek Cakiki, 2006									
I1		ISTE, 2008									
P1		Phil Spancer, 2011									

T1		**Tomei, 2005**									
E1		**European Union, 2011**									

Table. 3.4 ICT Competences in the Existing Syllabuses

The existing syllabuses were analyzed based on the ICT competences indicators which are adopted and modified from experts and other theories of ICT competences. The indicators are coded based on the basis theory of it. For example indicator 1 is taken from UNESCO's ICT competency framework, and then the code is U1. Next, Healey also has the Digital Media descriptor to be added as indicator, the code is H1 for example. The table is used to analyze all writing courses in five universities.

2. Interpret the data analysis into the following table of analysis result.

Code	Name of Elements	Names of ICT tools and competence	UNESCO's Approach	Remarks
UAW1				
UAW2				
UAW3				
etc				

Table 3.5 Table of Analysis Result of Existing Syllabus from each University

3. Summarize the result of data analysis into the following table.

Table 3.6 Table Summary of Existing Syllabus from each University

*__W1__: Writing I; **W2**: Writing 2; **W3**: Writing 3; **W4**: Writing 4; **BW**: Basic Writing; **IW**: Intermediate Writing; **AD**: Advanced Writing; **AW**: Academic Writing; **WPC**: Writing in Professional Context; **WAC:** Writing for Academic Purposes

__TL__: Technology Literacy; **KD: Knowledge Deepening: **KC**: Knowledge Creation

CI/BI/IMK= Course Information (CI**); Deskripsi MK/Subject Description= Course Description (**CD**); Standarisasi Kompetensi/Learning Objective/Learning Outcome/CPMK/CPK= Learning Objective (**LO**); Pokok Bahasan dan rincian pokok bahasan/ Topic, Sub-Topics/ Topic = Topic (**T**); Classroom Activities and Media/ Strategy, Method, and Media/ Metode Pembelajaran= Teaching Method (**TM**) ; Referensi/ References/ Daftar

NO	Syllabus Component	ICT Competence Indicators	Universities												
			A			B			C					D		E
			W1	W2	W3	BW	IW	AD	W1	W2	W3	W4	AW	WPC	WAP	AW
1																
2																
..																
UNESCO'S Level of ICT Competence																TOTAL
TL																
KD																
KC																

Referensi = References (**R**); Evaluasi /Indikator Assessment/ Assessment= Assessment (**A**)

4. Use the following analysis table to get the answer of second sub – question.

__Course 1: Basic Writing/Professional Writing/Creative Writing/Academic Writing__

* **TL**: Technology Literacy; **KD**: Knowledge Deepening; **KC**: Knowledge Creation
__P__: Paper; **E: Essay; **A**: Article; **R**: Report; **RP**: Research Paper.

*** **BI**: Basic Information; **CD**: Course Description; **LO**: Learning Objective; **M**: Materials; **TMM**: Teaching Method and Media; **A**: Assessment; **R**: References; **CP**: Course Policies (can add with another syllabus components)

Code	ICT Competences Indicators	Level of ICT Competences*			Infusion (in)												
					Learning Product**					Syllabus Components***							
		TL	KD	KC	E	P	R	RP	A	BI	CD	LO	M	TMM	A	R	CP

Table 3.7 Table of ICT Infusion in the Designed – Syllabus

5. Interpret data analysis of table infusion before designing ICT competences – integrated components of syllabus.
6. Design ICT Competences – Integrated syllabuses of writing skills subjects; Basic Writing. Professional Writing, Creative Writing, and Academic Writing (**see appendix 10**).