

# **CHAPTER 1**

## **INTRODUCTION**

This chapter provides rationale, a discussion about context and topic that will be focused in this research. It consists of Background of the Study where the researcher formulates research gaps and problem statements; Research Questions which are inquisitive of research centrality, and Purposes of the Research whereas the objectives to answer the research questions are listed. The researcher also provides Scope of the Research which is about the research exploration area, and Significances of the Research which mentions the research beneficial. The final section of this chapter is State of the Art that discusses the novelty of this research.

### **1.1. Background of the Study**

Assessment is an essential component in teaching and learning and should promote learning as well as measure or certify outcomes (Clements & Cord 2013). Assessment is used for gathering information about what students have learned. The information can be used to aid teachers in the decision-making process (Anderson, 2003). The primary purpose of assessment is to inform teaching and to promote and encourage learning—to promote optimal individual growth. Assessment also plays an important role in higher education, it can be used in measuring the educational effectiveness and quality of an institution's offering. It helps different stakeholders – students, instructors, and administrators – and answers various questions about student development, the value of specific courses,

and the credibility of an institution (Gomez, 2018). It is also believed that university conducts assessment in order to measure what students learn during college are typically used for ensuring institution accountability, quality and improvement (Ewell, 2009).

An assessment considered as a method used to assess students are some of the most critical of all influences on their learning is a prime requirement of the educators (Jimaa, 2017, Alahakoon, 2012). Moreover, the primary purpose of assessment and evaluation is to inform teaching and to promote and encourage learning—to promote optimal individual growth. No factor influences a learning environment as much as assessment (Anderson, 2003). Research and experience tell us very forcefully about the importance of assessment in higher education. It shapes the experience of students and influences their behavior more than the teaching they receive (bloxham, S. 2007). It means that assessments have a deep impact on what and how students study, how much they study and how effectively they study. It can be concluded that without an effective evaluation program it is impossible to know what students have learned before. The result of assessment indicates the teaching and learning has been effective or not.

Based on the explanation above, it can be concluded that assessment has important impacts on the educational process. Therefore, the purpose of an assessment in higher education can be obtained by using appropriate assessment instruments. Assessment instruments are needed to provide the quality assessment in educational setting. Covacevich, (2014) points out that in ensuring the assessment achieves its purposes, it is essential to make an

appropriate choice of the learning assessment instruments to be used. This statement is supported by University of Cambridge, (2015) and (Boye, 2010) they claim that assessment instruments is one of essential part in course planning or syllabus that must be put explicitly on syllabus to show the compatibility of assessment instruments with the learning objectives.

Enhancement of the 21st Century, Information and Communication Technology (ICT) can be put into consideration in designing assessment instruments. Present is the era of information communication technology (ICT) which made transmission and spread of information most reliable and easiest (Datta, S., 2015). We live in technological era, so we can see that technology has developed very rapidly and has influenced in every human's life. Especially in educational sector, the advanced technology has influenced teaching, learning and assessment process. Information and Communication Technology (ICT) is combined with forums, services, tools, technologies, information, knowledge, etc. which can be used for achieving goals of teaching learning pedagogy, also enhancing performance (Patel, 2017).

Digital age gives a great opportunity for teacher and student where they can exchange of much information through ICT. UNESCO points out that Information and communication technology (ICT) has an essential role in education, it can complement, enrich and transform education for the better. Patil, (2000) suggested that ICT in general and eLearning in particular have reduced the barriers to entry to the higher education business. They also pointed out that advances in computer and

communication technologies enable to store, process and transmit huge amounts of information easily and quickly. Therefore, ICT gives a great education tool which help educator in teaching and evaluating the learners' ability and ICT can be used in designing assessment instruments based on the students need.

As ICT used widespread internationally in educational sector, Indonesian government also has implemented it in school curriculum since 2004 until now. In the 2004, it was started in Competency based-curriculum (KBK), then 2006 curriculum (Education Unit Level Curriculum, called KTSP) and the newest curriculum is 2013 curriculum. Especially for higher education, ICT must be integrated in teaching, learning and assessment process; it can be seen in the Peraturan Pemerintah number 17 Year 2010 which claimed that undergraduate students which in the 6<sup>th</sup> level of KKNI must not only poses academic competency but also competent in technology. Thus teacher and student in higher education must be able to integrate and take the advantage of ICT as educational tool.

ICT has several roles and supports in educational assessment practices. specifically, in relation to assessment, ICT are used to support assessment practice in various ways as a new way of measuring educational outcomes and is well known as technology-based assessment (Marina, 2015) for instance; computers can be used as the medium for testing, to score students' tests using automatic scoring software and as a tool for doing assessment tasks.

According to John and Wheeler (2008), ICT in current advances brings a change in ways that have led it to the revision of the methods, rationale and process of testing in assessment. Moreover, Jonassen et al (2009) points out that the use of technology to support assessment is not only done by converting traditional forms of assessment into a digital format, such as computer-based testing, quizzes or surveys, but it can also be used to assess higher-order learning outcomes.

Based on the data above, it can be concluded that the use of ICT tools ICT offers various models or tools which can be applied as in curriculum, so user/teacher can directly use after understanding that first, it can be used for any the purposes which relate to education and development. Thus, there are excellent assessment tools found in ICT which can be used as assessment instruments to assess or evaluate students' knowledge.

Zhang, Z., & Martinovic, D. (2008) states that the use of ICT over the last two decades, has been an important topic in education in which studies have shown that ICT can enhance teaching, learning outcomes and conducting assessment. Thus, ICT need to be integrated into curriculum, the teachers and pre-service teacher need to be specifically trained in order to integrate ICT in their teaching. However, the service courses in teacher education program were designed by using traditional educational technology and settings.

Although past studies have positive results on using assessment. The result on integration of ICT as an instrument in conducting assessment

won't be significant if the teacher has lack of knowledge in using ICT in conducting the assessment. For example, Khokhar, A. J., & Javaid, S. (2016) investigated on the students and teachers perception of ICT use in classroom teaching learning and assessment; it appears that using ICT can create authentic teaching and learning classroom experiences as well as the assessment but the finding also show from the teacher perception, the teachers felt that they were integrating ICT in their classrooms but students found their teachers' usage of ICT in the classroom teaching and assessment as insufficient. The students felt that their teachers lacked ICT knowledge and skills and should integrate ICT more in their teaching and assessment activities because the present usage pattern provide very little opportunities to use technological tools in their classroom learning. It can be conclude that the findings on this study shows that a lack of teacher's knowledge in integrating ICT especially for conducting assessment need to be conducted more research on it.

Thus, ICT is considered as pedagogical tool which regarded as the use of ICT facilities in educational process, especially in conducting assessment. ICT must be integrated into curriculum to get a lot of benefit in educational process, especially into assessment setting in this case. However, it is still rare for schools in Indonesia to use ICT particularly in English language teaching (UNESCO Bangkok, 2008; Suherdi, 2012). Especially, in higher education in Indonesia, ICT is found implicitly in RKPS of pedagogy course and it also shows that the higher university hasn't used maximally yet, it can be seen through the existing syllabus from five

universities collected by researcher which is going to be studied in this research. Moreover, the research on ICT integrated to assessment is still limited. Therefore, a need to conduct a study on designing assessment instruments integrated to ICT attracts researcher's interest.

In spite of their significant contributions to the learning processes and results, assessment instruments are quite neglected if the use of assessment instruments in higher university is not stated explicitly in some existing RPS or syllabi course of English Language Study Program (ELESP). In the research conducted by Chalipah, (2018) and Fitriani, D., (2018) found that there were no assessment specifications which mentioned explicit assessment instruments relate to the subject of their research found in the existing syllabi. In this present research also found the same result that the existing syllabi and assessment instruments did not provide the assessment specifications or explicit assessment instrument. The RKPS or syllabi course of English Language Study Program (ELESP) in higher education just mentioned the assessment instruments or kinds of assessment; it is not found any RPS of the assessment instrument that is actually used for the exam or assessment. Thus, the RPS, especially the part of table specification is not complete if it doesn't give the information about the test clearly.

Reilly (2007) sees assessment instruments must be selected based on the course needs, if the teacher selects the assessment instruments without using the appropriate choice and application of assessment instruments; it tends to decrease the effectiveness of the assessment to capture the student

achievement of the learning objectives. As explained before, the assessment instruments are needed in order to ensure that the teachers are able to assess their students appropriately. If it is not mentioned well, it is difficult to find out whether the assessment instrument is appropriate, reliable, and valid or not.

Past studies have recorded various results on assessment instruments. First, Rukmini & Saputri, (2017) investigated on the development of assessment instruments android-based students' interest in learning Mathematics *SMP* with CPS model. The result showed that an instrument for assessing interest of android-based student in learning mathematics for Junior High School with a creative problem solving model has been valid, consistent, reliable and practical.

The second study is conducted by Dagostino & Hashim, (2014), their study was entitled:” *Assessment of a Reading Comprehension Instruments as It Relates to Cognitive Abilities as Defined by Bloom’s Revised Taxonomy*”. The result showed that classification used in cognitive level allows one to measure specific cognitive abilities as defined by Bloom’s Revised Taxonomy. This is significant result, because Bloom’s Revised Taxonomy gives us objectives for classifying the learning, teaching and assessing of the cognitive dimension of thought that is central to instruction in most subject areas, and in relationship to their work in reading comprehension as an aspect of assessment of literacy.

Then Susilaningsih, Khotimah & Nurhayati (2018) investigated on development of performance assessment instruments based contextual



learning for measuring students' laboratory skills. The result showed that the research of performance assessment instruments was standard and can be used to assess basic skill student laboratory.

Through the previous studies, it can be concluded that assessment instruments is needed in conducting assessment, but unfortunately the researcher can't find the studies relate to assessment instruments implemented in RKPS of higher education. A study on designing assessment instruments is needed to fill the gap from the previous studies. Thus, this present study is going to extend the previous studies to design the assessment instruments relate to theoretical key teaching competence.

This present study focuses on designing assessment instruments in the pedagogical course limited to theoretical key teaching competence subjects for undergraduate students. This topic is chosen because teachers' competency in pedagogy has a vital role in teaching university, especially for pre service teacher. The course on pedagogy is a compulsory component of teacher training university or English Language Education Study Program (ELESP). According to Shulman (1987) cited in Voss, Kunter, & Baumert, (2011) general pedagogical knowledge as knowledge that appear to transcend subject matter. It's considered primarily in terms of classroom management, in other words, the general pedagogical knowledge rooted in the demands of classroom teaching.

Key teaching competency is considered as the pedagogy competence. Key teaching competences are the competences that must be acquired by teachers in incorporating skills and knowledge in methodology,

lesson and course planning, assessment, and interaction management and monitoring (North, Mateva, & Rossner, 2013). Key teaching competences covers to the *theoretical* and *practical* key teaching competences in *education*. Therefore, key teaching competences are the pedagogical competences that must be mastered by ELESP students as pre-service English teacher for their own academic achievement and the basic of their professional worker as a service teacher.

A pedagogical competence is the ability to manage the learning of students includes an understanding of the learners, the designing and implementation of learning, evaluation results learning, and the development of learners to actualize various potentials (National Education standards article 28, verse 3). Students as pre-service English teacher are expected to understand theoretical pedagogy of learning and then able to do practice of teaching. Teaching is defined as the promotion of learning and ought therefore to be informed by the best of our knowledge about learning. Pedagogy consistent with the theoretical account of learning and based on four elements: situated practice, overt instruction, critical framing and transformed practice. Thus, it is necessary for teachers to embed learning in real-life, or simulated real-life, experiences. In other words, teachers must draw on lived experience of pupils in order to make learning meaningful. So, it is necessary for teachers to extract from the contexts of practice the general structures and principles that can apply elsewhere (Macleod, Flora & Golby, M., 2003).

The courses related to Theoretical Key Teaching Competences which will be designed are English Language Teaching Methodology (ELTM), Curriculum and Material Development (CMD), Digital Literacy in English Language Education (ELE), and Language Learning Theories and Strategies (LLTS).

There are some considerations in designing appropriate assessment instruments as a tool for educational purposes. Implementing table of specification is one of the considerations in designing appropriate assessment. The primary purpose of a table of specification is to ensure alignment between the objective of the test and assessment instruments Development. It is defined as a blueprint for selecting appropriate test items in assessment. It is also defined as a table that helps teachers aligns objectives, instruction and assessment (Chalifah, 2018, Magno, 2015, Alade, & Omoruy, 2014, Notar, Zuelke, Wilson and Yunker, 2004). Fives, (2013) also states that TOS can be used to help teacher's frame the decisions making process of test or assessment construction and improve the validity of teacher's evaluations based on tests constructed for classroom use. Thus, the teacher can use table of specification as a guideline for creating assessment which will be match between what is taught and what is tested using appropriate assessment instruments.

In term of using table of specification in designing assessment, there are some previous studies dealing with table of specifications and test of specification. First study entitle 'using a table of specifications to improve

teacher-constructed traditional tests: an experimental design by Barnes & Fives, (2013).

This previous study investigated if instruction on a table of specification would influence the quality of classroom test construction. The results showed that students exposed to the table of specification strategy constructed a test with higher test content evidence but not response process evidence scores. Furthermore, the researchers also found that treatment participants were able to accurately complete the table of specification tool and choose items that reflected the subject matter specified in the table of specification tool. However, they experienced difficulty selecting items at the cognitive level specified in the table of specification tool.

The second previous study entitled 'Table of specification and its relevance in educational development assessment' conducted by Alade & Omoruy, (2014). This study examined the table of specification and its relevance in educational assessment. The finding showed that there was positive relationship exists between problems of Table of Specification and its Relevance in the Educational Assessment and it was also found that there is significant relationship between general pattern of preparing Table of Specification and its Relevance in the Educational Assessment. Thus, it was recommended that teachers should endeavor to construct a well test blue print that will help improve the validity of teacher evaluation based on given assessment, teachers must ensure that the test constructed measure an adequate sampling of the class at all level of domains and teachers and

students must comply with all the laid down when preparing Table of Specification in schools.

The third previous study entitled ‘The effect of test specifications review on improving the quality of test conducted’ by Zandi, H., Kaivanpanah, S., & Alavi, S. M. (2014). The purpose of this previous study was twofold: how specifications review could help improve the validity of a test in the context of assessment for learning (AFL) and to what extent qualitative review of items can identify poor ones. The findings showed that the potential of the specifications review as part of the priori validation of tests in small-scale assessments where conducting statistical analysis is not usually feasible.

Another consideration in conducting appropriate assessment is European Profiling Grid (EPG). The designed assessment must relate to EPG. EPG is an instrument to describe the fundamental competences of language teachers and presents them in tabular form spanning six phases of developments. One of instruments in EPG relates to the assessment competences, it offers the standard of assessment competences which aim to incorporate teachers’ knowledge in creating assessment. The study on EPG is still limited.

The previous studies on assessment competence which related the EPG was done by Fitriani, D (2018), she investigated how EPG-based assessment specifications of assessment competences for undergraduate English education study program in Indonesia. The findings of the previous study showed that the analysis portrays that the syllabi from five universities

already included the assessment competences in the fifth semester. The finding also shows that the assessment competences in the existing syllabi are align with the descriptors of EPG development phases for experienced teacher.

Chalipah, (2018) also investigated on developing the EPG-Based Assessment specifications of methodology competences for undergraduate English education study program in Indonesia. The findings showed that from 305 courses of five universities only 19 courses cover methodology competences. Then, there are no assessment specifications in 19 courses from five universities in the existing syllabi. Moreover, some methodology competences identified are in line with descriptors of some development phase in EPG. Furthermore, based on the findings which cover the methodology competences from the level of novice teachers (EPG development phase 1.1) up to the level of experienced teachers (EPG development phase 2.2).

In Indonesia, the studies on assessment competence which related the EPG was done by a students from Universitas Negeri Jakarta in 2018, (Fitriani, D., (2018) investigated how EPG-based assessment specifications of assessment competences for undergraduate English education study program in Indonesia. Chalipah, N., (2018) also investigated on developing the EPG-based assessment specifications of methodology competences for undergraduate English education study program in Indonesia.

In this study, the EPG is used as instrument to describe the fundamental competences of language teachers and assessment is presented

in tabular form spanning six phases of developments. (Rossner, 2017). The integration of ICT and EPG in education sector is an interesting topic, the writer found that there are many studies concerning the integration of ICT in learning process, but there is not yet sufficient study on integration of ICT in conducting assessment. ICT-integrated assessment instruments which related the EPG also hasn't yet been done in Indonesia, so it is a need to conduct a study on that topic.

In this present research, the researcher wants to design assessment instruments with ICT competence integrated in it, this research focuses on the pedagogical course limited to theoretical key teaching competence subject for undergraduate students. The assessment instruments in this present study adopt European Profiling Grid (EPG) as the standard of teachers' competencies and UNESCO's ICT Competences Standard. In brief, the researcher carries out the research entitled *designing ICT competences-integrated Theoretical Key Teaching Competences courses assessment instruments for English Language Education Study Program (ELSP)*.

## **1.2. Statement of Research Questions**

Based on the background above, the writer formulates the main research question of this research as:

How are the ICT competences-integrated in the assessment instruments of Theoretical Key Teaching Competences courses for English Language Education Study Program (ELESP)?

The main research question is divided into 5 sub questions:

1. To what extent do the existing assessment instruments of Theoretical Key Teaching Competences courses make use of ICT competences?
2. How are the ICT competences integrated in the tables of specification for Theoretical Key Teaching Competences courses?
3. How are the designs of ICT competences-integrated table of specification of assessment instruments of Theoretical Key Teaching Competences courses?
4. How are the designs of ICT competences-integrated assessments instruments of test for Theoretical Key Teaching Competences courses?
5. How are the designs of ICT competences-integrated assessment instruments of non-test for Theoretical Key Teaching Competences courses?

### **1.3. Purposes of the Study**

Based on the research question presented above, the main purposes of this study are:

To design ICT competences-integrated Theoretical Key Teaching Competences courses for English Language Education Study Program (ELESP).

The sub purposes of the study are:

1. To analyse the use of ICT competences of the existing assessment instruments of Theoretical Key Teaching Competences courses.
2. To describe procedures of integrating ICT competences in the table of specification of Theoretical Key Teaching Competences courses.



3. To design ICT competences-integrated table of specification of assessment instruments for Theoretical Key Teaching Competences courses.
4. To design ICT competences integrated assessment instruments test for Theoretical Key Teaching Competences courses.
5. To design ICT competences integrated assessment instruments non-test for Theoretical Key Teaching Competences courses.

#### **1.4. Scope of the study**

The study focused on designing assessment instruments that are integrated ICT competences for theoretical key teaching competence assessment for English Language Education Study Program (ELESP) subject, such as English Language Teaching Methodology (ELTM), Curriculum and Material Development (CMD), Digital Literacy in English Language Education (ELE), and Language Learning Theories and Strategies (LLTS) which will also adopt European Profiling Grid (EPG) as the standard of teachers' competencies and UNESCO's ICT Competences Standard.

#### **1.5. Significance of The Study**

Based on the objectives of this study mentioned above, this study hopefully can give some contributions as follows:

- a. In terms of theoretical value, the result of this research can be used as a basis for further research, especially for course designer who is interested in developing and designing ICT-integrated model of teaching based on EPG and UNESCO's ICT Competence Standard.

- b. In terms of practical value, this research is hoped to improve the implications and pedagogical recommendations that can be taken from this research.

## **1.6. State of Art**

This present research focuses in designing ICT-integrated assessment instruments of theoretical key teaching competence courses for English Language Education Program, especially for Theoretical Key Teaching Competences courses such as English Language Teaching Methodology (ELTM), Curriculum and Material Development (CMD), Digital Literacy in English Language Education (ELE), and Language Learning Theories and Strategies (LLTS). This present study is expected to give contribution for the curriculum of English Language Education Program.

## **1.7. Definition of Key Terms**

In order to avoid misunderstandings, key terms found throughout this study are defined as follows:

1. Assessment is considered as methods used to assess students in order to measure what students learn during lesson or whether students have met the learning objectives or not.
2. Assessment instrument is part of an assessment tool can be categorized as test and non-test.
3. Assessment instrument test is considered as a device to measure what the students have learned before, during or after the classroom activity. It can either be written, oral, and performance. It takes place at

identifiable times, it also uses prepared administrative procedure. For example written test either subjective or objective purpose.

4. Assessment instrument non-test is considered as a device that does not force students to give their responses. For example: observation checklist, rating scaled, semantic differentials, anecdotal record, project, portfolio, teacher observation. Generally, teacher uses the combination of Test and non-test as assessment instrument as they can cover all domains of learning.
5. Table of Specification (ToS) is a guideline for creating assessment which will be match between what is taught and what is tested; it is used as a planning tool intended to help teachers align objectives, instruction, and assessment.
6. Key teaching competency is considered as the pedagogy competence. Key teaching competences are the competences that must be acquired by teachers in incorporating skills and knowledge in methodology, lesson and course planning, assessment, and interaction management and monitoring (North, Mateva, & Rossner, 2013).
7. EPG, which stands for European Profiling Grid, is an instrument that is used to describe the main competences of language.
8. UNESCO's ICT Competency Standard is used to improve teacher practice that realised in a framework, includes technology literacy, knowledge deepening, and knowledge creation.