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DESIGNING ICT COMPETENCES-INTEGRATED ASSESSMENT INSTRUMENTS OF ENGLISH LANGUAGE ASSESSMENT AND LANGUAGE ASSESSMENT INSTRUMENT DEVELOPMENT COURSES FOR ENGLISH LANGUAGE EDUCATION STUDY PROGRAM

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Abstract

This study aims at designing ICT competences – integrated assessment instruments of English Language Assessment and Language Assessment Instrument Development courses for English Language Education Study Program by analyzing the existing assessment instruments from five universities in Indonesia. The analysis involved the ICT competences proposed by UNESCO and Digital Media and Assessment Descriptors of English Profiling Grid (EPG). The study applied Design and Development Research (DDR) as the research design and qualitative as the research method. The used stages of DDR in this study are Identify Problem; Describe the Objectives, Design and Develop the Prototypes and Validate the Prototypes. The result of the study found that ICT competences are mostly integrated in the use of word-processing of the existing assessment instruments as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word by using features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker. Then the researcher tried to provide the procedure of ICT competences integration and the design of ICT competences-integrated test and non-test assessment instruments and table of specifications of Language Assessment Instrument Development course.

Keywords: ICT Competences; English Language Assessment; Language Assessment Instrument Development; ICT UNESCO Framework

ICT (Information Communication Technology) currently becomes influential thing in the world. The use of ICT has been widely developing to help people doing anything especially in education. This is line with Trucano (2005) who mentioned that ICT in developing countries has positive general impact to enable educational reform, motivate e-learning and promote greater efficiencies in education system with the use of digital and innovative learning tools. The use of ICT in education strongly helps people who are involved in education area. People who are encouraged to use ICT in working and completing their assignments will be more familiar with ICT. Moreover the use of ICT in this 21st Century can help implement lifelong

learning and project based learning. It can also facilitate it by making learning anytime and anywhere, not just in classrooms but also more feasible. Target audience of ICT according to UNESCO ICT Competency Framework for Teachers (2018, p. 11) is teacher-training personnel, educational experts, policy-makers, teacher support personnel and other professional development providers. It will make them easier in designing all of teaching learning subjects, instrument and assessment with integrating ICT competences based on UNESCO guidelines provided.

To support education area by using ICT does not only provide tool service for teaching learning subjects but also every system in education includes instrument and assessment. Dealing with two courses of this study named English Language Assessment and Language Assessment Instrument Development are intended to provide a sufficient insight to the English Study Program students, S1 program, on the concepts of Language Assessment intensively. It is expected to have better understanding of Language Assessment principles not only of first language but more importantly of second language, have comprehensive concepts and insights on the assessment variation in language teaching; on item test analysis to determine good quality of the test items based on standard criteria and be able to design standardized test.

According to Coombe (2010) assessment in language education refers to the systematic process of evaluating and measuring collected data and information on students' language knowledge, understanding, and ability in order to improve their language learning and development. In conducting assessment involves teachers and students need both cooperation between teachers and students that will make the learning objectives achieved. Teachers have responsibility in giving feedback to the students meanwhile students take awareness in assessing themselves from teachers' feedback in order to make improvement on their abilities in learning. This is also in line with Black and Wiliam (1998, p. 2) pointed that assessment also refers to all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged.

Therefore to assess students' work needs instrument. Instrument is a method of measuring person ability, knowledge and performance in given domain Brown & Abeywickrama (2010, p. 353). A key of consideration in choosing instruments must suitable for the objectives of assessments. Technical quality is also important thing of analyzing an instrument. An instrument with a better quality will be more useful. Therefore, it is imperative to use high-quality instruments to perform assessments. The two main elements that account for the quality of an instrument are its validity and reliability. Regarding to Field (2009, p. 11) validity is whether an instrument actually measures what it sets out to measure; a device for measuring sperm motility that actually measures sperm count is not valid. Meanwhile reliability is whether an instrument can be interpreted consistently a cross different situation. The characteristic of reliability is sometimes termed consistency. Briefly, the test is reliable when students' results are consistent on repeated measurement.

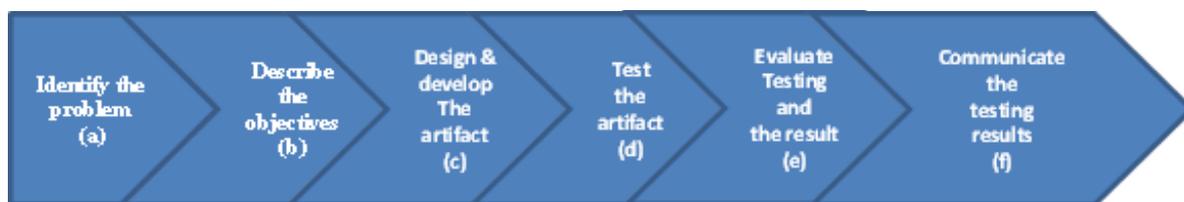
The course descriptions of five universities do not still yet ICT competences integrated. Also two courses of English Language Assessment and Language Assessment Instrument Development have been integrated in one course named Language Assessment, Language Testing and *Evaluasi Pengajaran Bahasa Inggris* from five universities. Regarding to Brown (2004) and Russel and Airasian (2012) about components of assessment instrument contain test information, time allocation, instruction, test format, topics, test item, marking and administrator. The components of assessment instruments of the existing assessment instruments still do not fulfil these components requirements.

The researcher then decides to conduct the research entitled designing ICT competences

integrated into assessment instrument of English Language Assessment and Language Assessment Instrument Development courses for English Language Education Study Program in Indonesia of two courses; English language assessment and language assessment instrument development. Moreover, the researcher conducts this study in order to develop appropriate language assessment and assessment instrument with integrating ICT competences from five Universities in Indonesia.

METHOD

This study applied Design and Development Research (DDR). Design and Development Research Project is based on the concept that the practice of design and development is empirical by nature Preffers et al (2007). There are six main phases defined by Preffers et al (2007), (a) Identify the problem, (b) Describe the objectives, (c) Design and develop the artifact, (d) Test the artifact, (e) Evaluate testing and the result (f) Communicate the testing result.



In conducting DDR, researchers allowed to make “interventions” as needed, such as reduce unnecessary steps and modify them according to the primary aim of the research. This adaptation is supported by statement of Akker, et al (1999) that researchers are allowed to reduce unnecessary steps in designing and developing the research, and modify the steps in achieving the aim of the research. In other words, the researcher is allowed to adapt, reduce, develop and modify the research procedures based on the researchers need to answer their statement of research questions. The researcher decided to adapt the phases by Preffers et al (2007) but reduced two last phases become (a) Identify the problem, (b) Describe the objectives, (c) Design and develop the prototypes, (d) Test the prototypes.



To analyze this study, the researcher formulated a table of analysis of the ICT competences in the existing assessment instruments of English language assessment and language assessment instrument development courses. The researcher used assessment instruments component provided by Brown (2004) and Russell & Airasian, (2012). In this phase, the researcher formulated a table of analysis of the ICT competences in the existing assessment instruments of English language assessment and language assessment instrument development courses. After the data was analyzed, the researcher made conclusion based on problem founded that is to what extent do the existing assessment instrument make use of ICT competences to answer the first research questions.

To design this study, the researcher formulated the procedures of designing table of specifications for test and non-test of language assessment instrument development course which infuse ICT competences to answer sub question 2 (How are the ICT competencies integrated into the table of specification of language assessment instrument development course assessment instruments?).

The researcher then developed the prototypical of the ICT competences-integrated test and non-test of table of specifications based on the procedures elaborated in research question 2 and test and non-test assessment instruments for language assessment instrument development course for English language study program. Thus, the prototypes in this study are ICT competences-integrated test and non-test table of specification and ICT competences-integrated test and non-test assessment instruments. The last step is validate the prototypes, in this phase the researcher validated the prototypes of assessment instruments by using expert judgement.

Based on the statement of problems and the DDR stages, the data, data sources and the instrument are determined to be presented in the following table and in line with the research questions and DDR stages.

DDR Stages	Sub- Research Questions No.	Data	Data Source	Instrument
Identify the Problem	Sub RQ 1	Components of assessment instruments and table of specifications, ICT competency by UNESCO framework and EPG descriptors of assessment and digital media	Existing assessment instruments from mid tests and final tests of English language assessment and language assessment instrument development courses of undergraduate students of ELESP from five universities in Indonesia	Researcher, ICT competences – integrated assessment instrument and table of specifications components and table of analysis.
Describe the Objective	Sub RQ 1			
Design and Develop the Prototypes	Sub RQ 2 Sub RQ 3 Sub RQ 4 Sub RQ 5	Components of assessment instruments and table of specifications from language assessment instrument development course integrated in	Components of assessment instruments and table of specifications and ICT and EPG documents	Researcher and Experts judgement.
Validate the Prototypical Assessment Instruments and Table of Specifications	Sub RQ 3 Sub RQ 4 Sub RQ 5			

ICT

TABLE 1. Research Questions and the Stages of Research Design

RESULTS AND DISCUSSION

Based on existing assessment instruments of English language assessment and language assessment instrument development courses from five universities in Indonesia, course names found integrated with these two courses are language testing, language assessment and *evaluasi pengajaran bahasa inggris*.

a. Language Testing

Based on EPG descriptor by EPG, the integration of ICT competences in existing assessment instruments of both mid test and final test from University A were seen in several components such as course information, time allocation, instruction, test format, topic and test item, which according to Brown (2004) and Russel & Airasian (2012) by stating them in written form which use word-processor software such as Microsoft Word to type the test on a worksheet. The features used in Microsoft Word include page layout, margins, table, font type and size, numbering, space and grammar checker. The assessment instruments of mid test and final test from this university is also categorized into basic and independent phase. In descriptor of basic phase 1.1 states that teachers can use word-processing software to write a worksheet and following standard conventions. Meanwhile in the independent phase 2.1 the descriptor states that teachers can use software for Windows/Mac. Thus it can be concluded that the integration of ICT in the assessment instruments of both mid test and final test from University A is the use of ICT as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word by using features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker.

From UNESCO ICT Competency Framework, these assessment instruments of mid test and final test can be categorized into technology literacy level. The technology literacy level describes that teachers know about basic hardware and software operations, as well as productivity applications hardware and software. Hardware used in mid test and final test of assessment instruments from University A is such as computer, laptop and printer. Meanwhile software used is Microsoft Word. The use of computer or laptop and printer as hardware and Microsoft Word as software produce assessment instruments of mid test and final test in this University become worksheet.

b. Language Assessment

The use of Language Assessment course name in the existing assessment instruments from five universities is University B, University C and University E. The existing assessment instruments of these universities are mid test and final test. Yet for final test of University B is different from others since this university uses non test in form written report project which also use observation and interview to get the data.

As stated by EPG descriptor for digital media, the use of ICT competences – integrated in existing assessment instruments of mid test and final test from University B can be seen in several components such as course information, time allocation, instruction, test format, topic and test item by stating them in written form by using word-processor software such as Microsoft Word to type the test on a worksheet with the features on it such as page layout, margins, table, font type and size, numbering, space and grammar checker. Also, to categorize the assessment instruments of mid test and final test from these universities also can be categorized into basic and independent phase. In basic phase 1.1 the descriptor states that

teachers can use word-processing software to write a worksheet and following standard conventions.

Meanwhile final test of University B can be categorized into the independent phase 2.1 which describes that teachers can use software for handling images, DVDs, and sounds file, windows/mac software, including media players can use software for handling images, DVDs, and sound files. This can be concluded that written report project of final test in this university uses observation and interview. In doing observation needs images in order to be evidence that will be attached in appendix of written report project as well as the use sound file and DVD in doing interview. The result of interview recording will be transcribed into text that also will be attached in appendix as evidence. Thus the integration of ICT in this assessment instruments of both mid test and final test from University B as a tool which use hardware such as computer, laptop, printer as well as software such as Windows/Mac and Microsoft Word by using features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker. However for final test of University B is different level from others which use images, sound file and DVD.

In addition, based on UNESCO ICT Competency Framework, these assessment instruments of mid test and final test in University B also can be categorized into technology literacy level. The technology literacy level describes that teachers know about basic hardware and software operations, as well as productivity applications hardware and software. Hardware used in mid test and final test of assessment instruments from University B such as computer, laptop, printer, camera and recorders. Meanwhile software used is Microsoft Word which produces assessment instruments of mid test and final test in these universities become worksheet and written report project.

However the integration of ICT competences in existing assessment instruments of mid test and final test from University C which is line with EPG descriptor for digital media can be seen in several components such as course information, instruction, test format, topic and test item by stating them in written form by using word-processor software such as Microsoft Word to type the test on a worksheet with the features on it such as page layout, margins, table, font type and size, numbering, space and grammar checker. This university is also categorized into basic and independent phase. Based on basic phase 1.1 descriptor, teachers can use word-processing software to write a worksheet and following standard conventions. Also as stated in independent phase 2.1, this phase describes that teachers can use windows/mac software. In short, the integration of ICT in this assessment instruments of both mid test and final test from University C as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word along the features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker.

Then based on UNESCO ICT Competency Framework, these assessment instruments of mid test and final test in University C are categorized into technology literacy level. This level describes that teachers know about basic hardware and software operations, as well as productivity applications hardware and software. The use of hardware in mid test and final test of assessment instruments from University C is such as computer, laptop and printer. Then this university also uses Microsoft Word as software by producing assessment instruments of mid test and final test become worksheet.

In case of University E, this university has the same level of EPG descriptor for digital media as University A. The ICT competences – integrated in existing assessment instruments of mid test and final test from University E is also in line with EPG descriptor for digital media which have several components such as course information, instruction, time allocation, test format, topic and test item by stating them in written form by using word-processor software

such as Microsoft Word to type the test on a worksheet with the features on it such as page layout, margins, table, font type and size, numbering, space and grammar checker. This university is also categorized into basic and independent phase. Phase 1.1 describes that teachers can use word-processing software to write a worksheet and following standard conventions. Meanwhile in independent phase 2.1 describes that teachers can use windows/mac software. In conclusion, the use of ICT in this assessment instruments of both mid test and final test from University E is also as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word with the features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker.

Additionally, based on UNESCO ICT Competency Framework, the assessment instruments of mid test and final test in University E is categorized into technology literacy level which describes that teachers know about basic hardware and software operations, as well as productivity applications hardware and software. University E use hardware such as computer, laptop and printer. Meanwhile the use of software in this university is Microsoft Word which also produces assessment instruments of mid test and final test become worksheet.

c. Evaluasi Pengajaran Bahasa Inggris

From the existing assessment instruments of mid test and final test in University D which is described on EPG descriptor for digital media, the integration of ICT competences in existing assessment instruments of both mid test and final test from University D were seen in some components such as course information, time allocation, instruction, time allocation, test format, topic and test item by stating them in written form which use word-processor software such as Microsoft Word to type the test on a worksheet. Then some features used in Microsoft Word include page layout, margins, table, font type and size, numbering, space and grammar checker. The assessment instruments of mid test and final test from this university is also categorized into basic and independent phase. In basic phase 1.1 the descriptor states that teachers can use word-processing software to write a worksheet and following standard conventions. Meanwhile in the independent phase 2.1 the descriptor states that teachers can use software for Windows/Mac. Thus it can be concluded that the integration of ICT in this assessment instruments of both mid test and final test from University A is the use of ICT as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word by using features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker.

Meanwhile based on UNESCO ICT Competency Framework, these assessment instruments of mid test and final test can be categorized into technology literacy level. The technology literacy level describes that teachers know about basic hardware and software operations, as well as productivity applications hardware and software. Hardware used in mid test and final test of assessment instruments from University E is such as computer, laptop and printer. Then software used is Microsoft Word. The use of computer or laptop and printer as hardware and Microsoft Word as software produce assessment instruments of mid test and final test in this University become worksheet.

Then to answer sub-question 2 and 3, the design and components of table of specifications are adapted from Carey (1998) and Taylor (2014). These components will be inferred from Carey (1998). After decided to determine the components of developing table of specifications that is inferred from Carey (1998), the researcher described the components that will be designed as table of specifications for Language Assessment Instrument Development with these following components: (1) learning objective; (2) level of learning; (3) cognitive level (4) topics; (5) the test format; (6) total number of the items; (7) time; (8) instruction; (9) criterion for

marking; and (10) administration. Infusing the possible ICT competences into components of table of specifications are in learning objective, cognitive level, topics, instruction and administration. After describing the procedure of infusing ICT competences-integrated into table of specifications for test and non-test, the researcher design it by procedures described which result the prototypes of test and non-test table of specifications for English language assessment and language assessment instrument development course.

Next to answer sub-question 3 and 4, the researcher adapted test components stated by Brown (2004) and Russel & AirAsian (2012) which consist of course information, time allocation, instruction, test format, topics, test type, marking and administration to design test and non-test of assessment instruments for English language assessment and language assessment instrument development course should fulfil these following components. In infusing ICT competences-integrated into these following components, the researcher infused ICT competences into instruction and administration for test and non-test of assessment instruments designed.

Designing of ICT Competences-integrated Assessment Instruments of English Language Assessment and Language Assessment Instrument Development Courses for English Language Education Study Program

To design the ICT competences-integrated assessment instruments, the assessment instruments and table of specifications components, the ICT competences, and EPG analysed in the existing assessment instruments of English language assessment and language assessment instrument development courses have been analysed to find the information gap and used the gap to design the new one. The new assessment instruments and table of specifications designs were:

1. The ICT competences-integrated assessment instruments of test language assessment instrument development course
2. The ICT competences-integrated assessment instruments of non-test language assessment instrument development course
3. The ICT competences-integrated table of specifications of test language assessment instrument development course
4. The ICT competences-integrated table of specifications of non-test language assessment instrument development course

CONCLUSION

Based on the findings from the analysis and synthesizes process of the existing assessment instruments of mid test and final test from 5 Universities, it can be concluded that the existing assessment instrument only made use of ICT competences in extent of technology literacy level and in phase 1.1 and 2.1 of EPG due to the use of ICT competences are still as a tool which use hardware such as computer, laptop and printer as well as software such as Windows/Mac and Microsoft Word by using features on them such as page layout, margins, table, font type and size, numbering, space and grammar checker. The components of existing assessment instruments from 5 universities still have not fulfilled of components requirements as stated by scholars. University A, B, D and E have fulfilled 6 of 8 components which are course information, time allocation, instructions, test format, topics and test items. However these universities are lacking of two components which are marking and administrations. Meanwhile University C has fulfilled 5 of 8 components which are course information, instructions, test format, topics and test items. However these universities are lacking of three components which

are time allocation, marking and administrations.

The procedures of table of specification were adapted consist of learning objective, level of learning, cognitive level, topics, the test format, total number of the items, time, instruction, criterion for marking and administrator. To mark or to score table of specification of language assessment instrument development course used analytic rubric.

After describing the procedures, the researcher then designed table of specification based on the components of table of specification described by scholars. ICT competences infused in components of table of specification were learning objective, cognitive level, topics, instruction and administration.

To design ICT competences-integrated assessment instruments and table of specifications test was adapted by components of assessment instrument and table of specification test described. ICT competences-integrated were infused by ICT competency framework by UNESCO and digital media descriptor by EPG in components of instruction which use digital devices such as smartphone, tablet or laptop in searching resources in answering questions given.

Then in designing ICT competences-integrated assessment instruments and table of specifications non-test was also adapted by components of assessment instrument and table of specification non-test described. In infusing ICT competences by ICT competency framework by UNESCO and digital media descriptor by EPG in components of instruction and administration which use digital devices such as smartphone, tablet or laptop, camera and recorder in conducting observation and interview as well as writing report project. Also, it used email to submit the report project of non-test.

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