

Received: 5 June 2019  
Revised: 10 June 2019  
Accepted: 14 August 2019  
Published: 31 December 2019

## **DESIGNING ICT COMPETENCES-INTEGRATED SYLLABUSES OF READING COURSES (DESIGN AND DEVELOPMENT STUDY OF ENGLISH LANGUAGE EDUCATION PROGRAM SYLLABUSES)**

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### **Abstract**

ICT education provides the unlimited resources to collect and analyze data, create presentation using ICT tools and acquire depth of knowledge. This research aims to design ICT competence-integrated syllabuses of reading courses (Literal Reading, Critical Reading, Affective Reading, and Syntopical Reading). The types of syllabus for reading courses in this research is process-oriented syllabuses. This research adapted Design and Development Research (DDR). The stages of DDR are need analysis, evaluation, revision, and evaluation. An analysis was also conducted the CEFR-based English reading to provide language learners a set of language qualification to master. The data sources to analyze existing English reading syllabuses were taken from five different universities in Indonesia. The result of sub RQ 1 found that the ICT competences are mostly integrated in teaching methods, and assessments. For the ICT tools in the existing syllabus mostly used computer, laptop, LCD, word and presentation software. UNESCO competence in the existing syllabus mostly integrated implicitly and explicitly in technology literacy. Learning processes mostly appear in the existing syllabus were identifying, discussing, and analyzing. Sub RQ 2 found the integration of ICT into syllabus component can be applied by infusing the ICT indicator into the syllabus components, and the integration of CEFR into learning materials to see the levels of the students. Sub RQ 3 found designing ICT competences-integrated syllabuses of reading courses used process-oriented for the type of syllabus. The components of syllabus that integrated in reading syllabuses were course description, learning outcomes, learning objective, materials, teaching method, assessments, and resources.

**Keywords:** ICT competences, English reading syllabuses, CEFR for languages.

The Internet has become a key driver of social and economic transformation in our world. Education, however, despite the crucial role it has been assigned for the development of the knowledge society. The effect of technologies, in other sectors, has begun to be noticed in the field of productivity. One of the conditions for using the potential of ICT is to have access to the technology that simplify the education officer to gain much information and it is evident that there are wide disparities which those technologies are available to all people. Information and communication technology (ICT) can complement, enrich and transform education for the better.

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The organization scans the world for evidence of successful of ICT in education practices whether in low-resource primary schools, universities in high-income countries, or vocational centers-to formulate policy guidance (UNESCO, n.d.-a). ICT provides education officer with the unlimited resources to collect and analyze data, create presentation using ICT tools and acquire depth of knowledge.

Infusing the use of ICTs into the curriculum must be considered a key priority and part of national strategy for teaching and learning in an online world by every developing countries of the world. The reason for using ICT into the curriculum is that because we live in a technological world where information and communication technologies (ICT) are fundamental to the most activities including pedagogy. Applying ICT in curriculum education areas enables all education members to have an opportunity to become competent, discriminating, creative and productive users of ICT especially in education. field (Tella & Adu, 2009). By using ICT, they can develop the knowledge, skills and capacity to select and use ICT to inquire, develop new knowledge understanding, create and communication with others in order to participate in their environment. The use of ICT helps students and teachers to give contribution for their surroundings. ICT has established the educational landscape by changing the content and modes of delivery/acquisition of learning as well as how the educational institutions operate (Tella & Adu, 2009).

Reading comprehension refers to the ability to understand the information and knowledge that gained by any resources presented in written form. Reading in Indonesia is still struggling. Indonesia students practice reading experience process and comprehension and maintain supportive reading attitudes and behaviors are now still unclear (Tri & Ratri, 2011). Indirect effect of ICT in students' reading achievement help them to get access to knowledge and information at home and school, which also has the outcome of improved reading literacy. The use of ICT that integrated to reading skill will help and change students and learners in developing new skills to access the many activities using eBook, textbooks and reading materials on the web (Lim & Jung, 2019).

The study is expected to give contribution for the educational field especially in the curriculum ICT based development area. By doing this research, the researcher wants to find the missing gap between the existing syllabus, and the use of ICT in development of curriculum. Also, the English reading skill syllabi based on common European standardized curriculum for language, which will be the result of the study, is expected to give more explanation and understanding related to what should be existed in the English reading skill syllabus.

## **METHOD**

The purpose of this research is to design ICT-integrated reading syllabuses for ELESPP. A research design that can be incorporated to this current study is the research and development (R&D). The design and development (DDR), which has similar layout to the research and development (R&D), that reason can be applied in this current study. Research and Development (R&D) is the study of the process and impact of specific design and development efforts, or the study of the design and development process as a whole, or of particular process components (James D., 2014). (Klein & D., 2014) stated that R&D is the systematic study of design, development and evaluation process 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 research will collect theories about R&D from different experts, those are (Geometry & Analysis, n.d.; Mckenney, n.d.; Meredith D. Gall, Walter R. Borg, n.d.; Plomp & Nieveen, 2013.; Richey & Klein, 2007). The researcher decided to use theory from (Meredith D. Gall, Walter R. Borg, 2003) as the main expert for R&D theory. In this research, the approaches consist of five approaches of R&D:

1. Need analysis

Need analysis begun by clarifying how the theories can establish the learning goals, or instructional end points, it examines what the learners know already and what they need to know (Akker et al., n.d.; Nation & Macalister, 2012). Conducting the need analysis gathered information about objective need that can be gathered by analyzing syllabuses of reading courses (Literal Reading, Critical Reading, Affective Reading, Syntopical Reading) from universities in Indonesia. In doing need analysis, observation and analysis involves process and product in doing R&D.

2. Evaluation

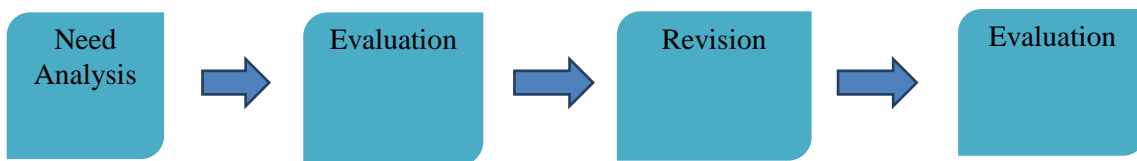
The prototype syllabuses need to be tested to know whether the IC competences have been integrated with the syllabus components. There was a validation from expert judgment to evaluate the prototype syllabuses.

3. Revision

After the validation from the expert judgment, the revision was needed to revise the ICT indicators that have been put in the syllabus components. The ICT indicators that discorded with the needs have to change with the new one.

4. Evaluation

In the second step of evaluation would be evaluated the evaluation after revision. Syllabus products needs to be evaluated to see the quality of syllabus design, and expert judgments satisfaction.



The samples of this research were existing syllabuses of reading courses from various universities. There were 16 existing syllabuses from five universities. Referring to research ethics, the names of the universities are not mentioned, instead, the universities are called as university A, B, C, D, and E. There were 3 syllabuses of reading courses in University A: Basic Reading, Intermediate Reading, and Advanced Reading. There were 3 syllabuses of reading courses in University B: Reading 1, Reading 2, and Extensive Reading. University C provides 4 syllabuses: Reading 1, Reading 2, Reading 3, and Reading 4. There were 3 syllabuses of reading courses in University D: Reading 1, Reading 2, and Reading 3. University E provides 3 syllabuses of reading courses: Reading for general communication, Reading in Professional Context, and Reading for Academic Purposes.

**Data, Data Source, and Instrument**

DDR Steps	Data	Data Source	Instrument
Need Analysis	Syllabus components and related theories of ICT integrated syllabuses of reading courses.	Existing syllabuses of reading courses undergraduate students of ELESP in Indonesia	Researcher, ICT competence-integrated syllabus indicators and table of analysis.
Evaluation			
Revision	Components of syllabuses integrated into syllabuses of reading courses	The result of analysis from the existing syllabuses and related ICT and CEFR documents.	Researcher, Linguistic and Syllabus experts
Evaluation			

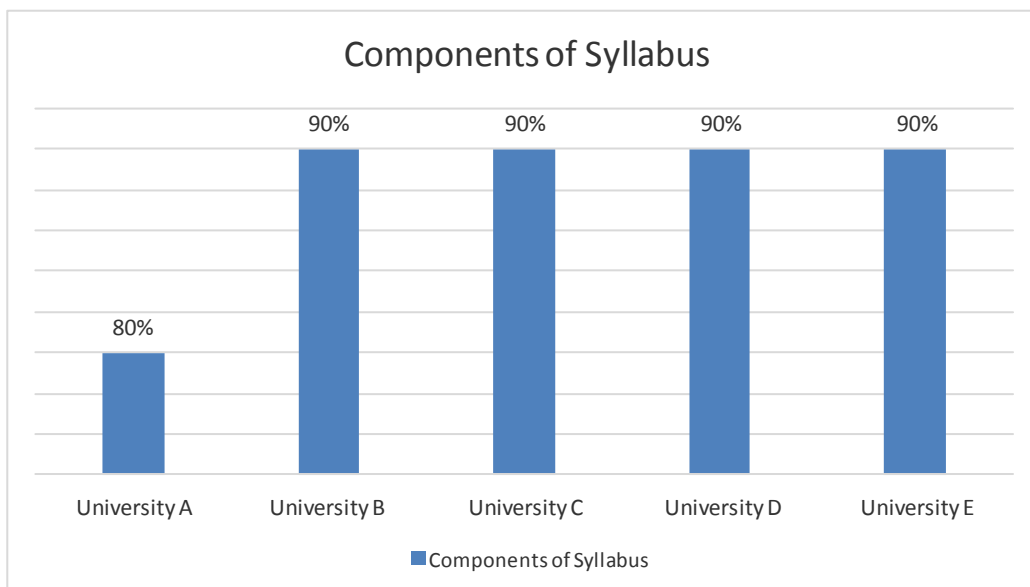
**Data Collection Technique**

R&D Steps	Data Collection Technique
Need analysis	<ul style="list-style-type: none"> <li>• Collecting English syllabuses of reading courses from 5 universities in Indonesia.</li> <li>• Doing library research to collect and explore the theories related to the syllabuses of reading courses for ELESP.</li> <li>• Collecting theories about syllabuses design of reading courses.</li> <li>• Collecting theories about ICT competences-integrated syllabuses of reading courses.</li> <li>• Select the appropriate syllabus components to be integrated into ICT.</li> <li>• Suggesting the preliminary syllabuses of reading courses to the syllabus experts.</li> </ul>
Evaluation	
Revision	
Evaluation	Would be evaluated the evaluation after revision. Syllabus products needs to be evaluated to see the quality of syllabus design, and expert judgments satisfaction.

**RESULTS AND DISCUSSION**

The components appear in the existing syllabuses are identified and analyzed. The encountered components are compared with syllabuses components proposed by the experts. It was discussed in the literature review that some experts such as (Bilfaqih, n.d.; Davis, 2007; Wolf, Czekanski, & Dillon, 2013) suggest various components to be put in a syllabus. They are basic information, course description, learning outcomes, learning objective, materials, teaching method, assessments, schedule & time allocation, policy, and resources. From the figure below, the syllabus components proposed by experts are not fully and completely employed by the existing syllabus. It means that these syllabus components are still needed to be developed and evaluated.

**The Percentage of Components of Syllabus in the Existing Syllabus**



During the process of analyzing reading competences in the existing syllabuses, the reading competences that appear in each syllabus component mostly in the learning outcomes, learning objectives, and materials. The categories of reading CEFR are a mixture between reading purposes and reading particular genres with specific functions. They are reading correspondence, reading for

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orientation, reading for information & argument, reading instructions, and reading as a leisure activity.

### **The analysis of Reading CEFR Competences**

University A consist of 3 reading courses, Basic Reading, Intermediate Reading, and Advanced Reading. In Basic Reading, the CEFR scale mostly appear in reading for orientation in B1 level. Intermediate Reading, the CEFR scale mostly appear in reading as a leisure activity in B1 and C1 level. Advanced Reading, the CEFR scale mostly appear in reading for orientation with B1 and B2 level.

University B consist of 3 reading courses, Reading 1, Reading 2, and Advanced Reading. In Reading 1, the CEFR scale mostly appear in reading for information & argument with B1 and B2 level. In Reading 2, the CEFR scale mostly appear in reading for orientation with B1 and B2 level of reading. In Extensive Reading, the CEFR scale mostly appear in reading for information & argument with B2 level.

University C consist of 4 reading courses, Reading 1, Reading 2, Reading 3, and Reading 4. The in Reading 1, the CEFR scale mostly appear in reading for orientation with B1 level. In Reading 2, the CEFR scale mostly appear both in reading for orientation and reading for information & argument with B1 and B2 level. In Reading 3, the CEFR scale mostly appear in both reading for orientation and reading for information & argument with B1 level. In Reading 4, the CEFR mostly appear in both reading for orientation with B1 level and reading for information & argument with B2 level.

University D consist 3 reading courses, Reading 1, Reading2, and Reading 3. In Reading1, the CEFR mostly appear in reading for orientation with B1 level. In Reading 2, the CEFR mostly appear in reading for information & argument with B1 level. Reading3, the CEFR mostly appear in reading for orientation with A2 and B1 level.

University E consist 3 reading courses, Reading for General Communication, Reading in Professional Context, and Reading for Academic Purposes. In Reading for General Communication, the CEFR level mostly appear in reading for information & argument with B1 and B2 level. In Reading in Professional Context, the CEFR level mostly appear in reading for information & argument with B1 level. In Reading for Academic Purposes, the CEFR level mostly appear in reading for information & argument with B1 and B2 level.

### **The Analysis of ICT Competences in the Existing Syllabuses**

The analysis found that ICT competences appear mostly in the components of syllabus i.e. Course Description, Learning Outcomes, Learning Objectives, Materials, Teaching Methods, Assessments, and Resources. After identifying the competences then compares the competences in the existing syllabuses. with the ideal state that how the ICT can be infused as described in the ICT conceptual framework.

University A has the same syllabus framework from Basic Reading to Advanced Reading. The use of ICT in the syllabus components mostly appear in materials (A5), and teaching method (A6). The components of syllabus that did not integrate with ICT were basic information, schedule, and time allocation. In Basic Reading, the syllabuses component that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL) and identifying were approach and learning process that mostly appear in Basic Reading. In Intermediate Reading, the syllabuses components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL) and identifying were approach and learning process that

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mostly appear in Intermediate Reading. In Advanced Reading, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL) and identifying were approach and learning process that mostly appear in Advanced Reading.

University B has the same syllabus framework in Reading 1 and Reading 2 but when it came to Extensive Reading, it was different with Reading 1 and Reading 2. The use of ICT in the syllabus components mostly appear in Reading 1 and Reading 2 were teaching methods (A6) and resources (A10). In extensive Reading, the use of ICT in the syllabus components mostly appear in teaching methods (A6), and assessments (A7). Components of syllabus that did not integrate with ICT were basic information, course description, learning outcomes, learning objectives, materials, schedule, and time allocation. In Reading 1, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying and discussing were approach and learning process that mostly appear in Reading 1. In Reading 2, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying, discussing, and analyzing were approach and learning process that mostly appear in Reading 2. In Extensive Reading, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying, discussing, and analyzing were approach and learning process that mostly appear in Extensive Reading.

University C has the same syllabus framework from Reading 1 to Reading 4. So, the table of analysis of reading 1, reading 2 and reading 3, and reading 4 were the same. The use of ICT in the syllabus components in Reading 1 and Reading 2 mostly appear in teaching method (A6) and Assessments (A7). The components of syllabus that did not integrate with ICT were basic information, course description, learning outcomes, learning objectives, materials, schedule, and time allocation. Based on the analysis of Reading 3 and Reading 4, the use of ICT in the syllabus components in Reading 1 and Reading 2 mostly appear in teaching method (A6) and Assessments (A7). The components of syllabus that did not integrate with ICT were basic information, course description, learning outcomes, learning objectives, materials, schedule, and time allocation. In Reading 1, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming and identifying were approach and learning process that mostly appear in Reading 1.

In Reading 2, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying and inferring were approach and learning process that mostly appear in Reading 1. In Reading 3, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying and analyzing were approach and learning process that mostly appear in Reading 3. In Reading 4, the syllabus components that integrated into ICT competences were learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in

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basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming, scanning, inferring, analyzing comparing, and criticizing were approach and learning process that mostly appear in Reading 4.

University D has the same syllabus framework from Reading 1 and Reading 2. The use of ICT in the syllabus components in Reading 1 and Reading 2 mostly appear in Assessments (A7). The components of syllabus that did not integrate with ICT were basic information, course description, learning outcomes, learning objectives, materials, schedule, and time allocation. In Reading 3, the use of ICT in the syllabus components in Reading 3 mostly appear in Assessments (A7). The components of syllabus that did not integrate with ICT were basic information, course description, learning outcomes, learning objectives, materials, schedule, and time allocation. In Reading 1, the syllabuses components that integrated into ICT competences were course description, learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming and identifying were approach and learning process that mostly appear in Reading 1. In Reading 2, the syllabuses components that integrated into ICT competences were course description, learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming and identifying were approach and learning process that mostly appear in Reading 2. In Reading 3, the syllabuses components that integrated into ICT competences were course description, learning objectives, teaching methods, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), identifying were approach and learning process that mostly appear in Reading 3.

University E has three courses, Reading for General Communication, Reading in Professional Context, and Reading for Academic Courses. The use of ICT in the syllabus components in Reading for General Communication mostly appear in Assessments (A7). The components of syllabus that did not integrate with ICT were basic information, schedule, and time allocation. The use of ICT in the syllabus components in Reading in Professional Context mostly appear in learning outcomes (A3) and learning objectives (A4). The components of syllabus that did not integrate with ICT were basic information, schedule, and time allocation. The use of ICT in the syllabus components in Reading for Academic Purposes mostly appear in teaching method (A6). The components of syllabus that did not integrate with ICT were basic information, schedule, and time allocation. In Reading for General Communication, the syllabuses components that integrated into ICT competences were course description, learning objectives, materials, teaching methods, assessments, and resources. The tools and competences in basic reading was computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming, scanning, inferring, analyzing, and criticizing were approach and learning process that mostly appear in Reading for General Communication. In Reading in Professional Context, the syllabuses components that integrated into ICT competences were course description, learning objectives, teaching methods, assessments, and resources. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming, identifying, inferring, analyzing, and comparing were approach and learning process that mostly appear in Reading in Professional Context.

In Reading for Academic Purposes, the syllabuses components that integrated into ICT competences were course description, learning objectives, materials, teaching methods, and assessments. The tools and competences in basic reading were computer, LCD, word processing, and cognitive skills. Technology Literacy (TL), skimming, identifying, inferring, analyzing, and comparing were approach and learning process that mostly appear in Reading Professional Context.

## **ICT Competence-integrated into Reading Syllabus Components**

### **1. Basic Information**

The first items of information in syllabus should give course information. This section orients the reader to the basic components of the course. Part of the basic information in this syllabus:

- 1) Course title
- 2) Course Number
- 3) Term/quarter/semester
- 4) Units/time dedicated per week

### **2. Course Description**

Course description include the description as it appears in the most recent course catalog or whatever the official source of information is for given college.

### **3. Learning Outcomes**

Learning outcomes are broad, general statements that are directly related to programmatic goals. Learning outcomes describe a practical purpose for a course. The use of measure verbs in order to help students gained their competence. The use of technology in learning outcomes were divided by reading course level. In ICT competence for literacy represents the simplest level of competence. ICT literacy is fundamental to learning (Tomei, n.d.). literacy requires demonstrated knowledge and skill in the use of computer and other technologies as they apply to the classroom. ICT competence in cognitive domain such general problem solving, and decision making.

### **4. Learning Objective**

Learning objectives are more specific than learning outcomes and address achievable, measurable skill, knowledge, comprehension, application, and analysis. Learning objective typically written with measurable verb to help student understand the clear expectations what they need to master the competencies. When designing ICT competence integrated into learning objectives, it should be concerned with developing clear descriptions of desired student outcomes that describe in general what learners will know or be able to do following the lesson (Tomei, n.d.).

### **5. Materials**

Materials contain the content that students will be used in teaching learning. Designing reading material integrated into ICT competence, the use of CEFR is needed to provide a straightforward tool for enhancing teaching and learning (Cambridge, 2011). Linking materials to the CEFR means relating the features of your own context of learning (the learners, the learning objective, etc.). Focusing on those aspects which can find reflected in the body of the text and in the level descriptor.

### **6. Teaching Methods**

Teaching methods describe the types of formats that will be used in teaching the courses so that they prepare for the learning activity in the class (Johnson, 2006). There are three main categories of ICT competence to classify core managerial competencies in teaching reading skills. First, technical competencies. Second, managerial competencies include skills and abilities for general problem solving and decision making. Third, social competencies include social skills. The ICT competence that have been mentioned aimed to help children acquire ICT competence in teaching and learning activities.

### **7. Assessments**

Assessments can be used to justify the decision in teaching learning activity. Assessments provide information that allow teachers to describe things and offer explanation. The ICT



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competence in assessments measured students cognitive, affective, psychomotor, technological competence of the students. The level of assessments ICT competence based on CEFR level from A1-C2. The use of CEFR in determined the assessments ICT competence were to know the students' level in acquiring the outcomes.

8. Schedule and Time Allocation

Provide students with a calendar of events for the semester, such as topics to be covered each day, assignment due dates, test day, and deadlines. This component helps students prepare in advance for learning environment and balance learner's schedule with many other courses (Johnson, 2006). The ICT competences did not integrate into schedule and time allocation due the limitation of the ICT competence in this component. The implementation of CEFR in schedule and time allocation estimates that learner typically take the following guided learning hours to progress between levels (Cambridge, 2011).

9. Policy

Course policies in reading syllabus were attendance and lateness, class participation, missed exams or assignments, and grading. Policy did not integrate into ICT competence. Policy in reading syllabus aimed to help and provide information about what is expected from the students.

10. Resources

Library is probably the oldest resources. The use ICT in teaching and learning make internet is one of the biggest resources in identifying collections, journals, abstracts, audio or video tape. ICT competence integrated into reading resources in accessing the information, resources from the internet. ICT competence such as cognitive and technology domain was needed in accessing broad information in the internet. The use of skills in operating ICT, critical thinking, and logical reasoning were required to get better information for the students.

### **Designing of ICT Competences-integrated Reading Syllabuses for English Language Education Study Program**

To design the ICT competences-integrated reading syllabus, the syllabus components, the ICT competences, and CEFR analysed in the existing syllabus have been analysed to find the information gap and used the gap to design the new one. The new syllabus designs were:

1. The ICT competences-integrated literal reading syllabus for English language education study program
2. The ICT competences-integrated critical reading syllabus for English language education study program
3. The ICT competences-integrated affective reading syllabus for English language education study program
4. The ICT competences-integrated syntopical reading syllabus for English language education study program.

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