ENHANCING STUDENTS' LISTENING SKILLS THROUGH DIGITAL LEARNING SYSTEM (DLS): A CASE STUDY OF ENGLISH EDUCATION STUDENTS

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ABSTRACT. This research provided the results of the implementation of Digital Learning System (DLS) and its usefulness for students specifically. Development of learning media through the implementation of Digital Learning System (DLS) for teaching Oral Language Skills in English Education Study Program in one of the state universities in Medan used research and development (R&D) design. This research method used to produce products and test the effectiveness of these products (Sugiono, 2010). The subject was the students of English Department at first semester with oral language skills subject. They were treated by using digital media as the materials, and they used link http://smartdls-yeniade.com that can be accessed in learning subject as Digital Learning System (DLS). In developing online learning media there was lack of interaction between lecturers and students when using media in the network or e-leaning to teach (50%) and students difficulties in operating learning media (average 73.33%). They tend to choose learning media based e-learning and the use of video and images as much as 46.67%. The use of media in explaining the material was the most desirable by students, it can be seen from the amount of percentage obtained from the questionnaire, which is 76.67%, the material is in accordance with basic competencies authentic and clear 46.67%, and in introducing online learning media as 90% students from the samples taken need detailed explanation. The implementation of Digital Learning System (DLS) in the subject can provide convenience for lecturers and students in achieving learning objectives

Keywords*: Digital Learning System (DLS), Online learning media, Oral Language Skills*

Introduction

The low competency of students' language skills has caused problems to become more serious because the language skills courses in the English Language Education Study Program at one of state universities have also not been subjected to meaningful review and development. In fact, learning outcomes of language skills at each level of teaching have not been described in the form of measurable statement formulations based on the results of needs studies. Each teacher uses their own teaching material so that the competencies produced vary greatly. The application of digital learning makes students more independent to learn and explore teaching material, because students can learn anytime and anywhere, both online and offline. In this Digital Learning System (DLS),

can include some teaching material as a reference that can facilitate students in understanding lessons such as: e-book theory, video tutorials, practice questions, experimental simulations, consultations, even enlightenment features or more motivation for students by entering the industrial revolution 4.0, the academics and students and all actors in education at the tertiary level take part in the development of digital devices.

The changes in the world are now entering the era of the industrial revolution 4.0 or the fourth world industrial revolution where information technology has become the basis in human life. Everything becomes borderless with unlimited use of computing power and data, because it is influenced by the development of the internet and massive digital technology as the backbone of the movement and connectivity of humans and machines. This era will also disrupt various human activities, including the fields of science and technology (science and technology) and higher education. The skills in question include English language competency as basic skills that must be possessed by every graduate of higher education in facing global competition. In addition to the low competency of students' Oral Language Skills, the problem has become more serious because the Oral Language Skills course in the English Language Education Study Program at one of universities has also not undergone meaningful review and development. In fact, learning outcomes for Oral Language Skills at each level of teaching have not been described in the form of measurable statement formulations based on the results of needs studies. Each teacher uses their own teaching material so that the competencies produced vary greatly. This directly results in the problem of the standardization of English competence of graduates both internally in relation to quality standardization and externally in relation to the competencies expected by users.

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language skills, the problem is becoming more serious because the language skills courses in the English Language Study Program at one of universities have also not been subjected to meaningful review and development. In fact, learning outcomes of language skills at each level of teaching have not been described in the form of measurable statement formulations based on the results of needs studies. Each teacher uses their own teaching material so that the competencies produced vary greatly. This directly results in the problem of standardization of English competence of graduates both internally in relation to quality standardization and externally in relation to competencies expected by users.

Digital Learning System (DLS) is a new breakthrough in learning technology that is applied for students to learn digitally through the use of technology both software (hardware) and hardware (hardware), online and offline that is packaged in an interesting and interactive way (Sugema). All subject matter based on technology can be integrated in a software, whether in the form of text, images or animation / video. In this Digital Learning System (DLS), include some teaching material as a reference that can facilitate students in understanding lessons such as: e-book theory, video tutorials, practice questions, simulation experiments, consultation, even enlightenment or motivation features for students by entering the industrial revolution 4.0, academics and students and all actors in the world of education at the university level contribute to the development of digital devices. According to Mayer (2001), separate channels of working memory process auditory and visual information during any lesson. Consequently, a learner can use more cognitive processing capacities to study materials that combine auditory verbal information with visual graphical information than to process materials that combine printed (visual) text with visual graphical information. In other words, the multi-modal materials reduce the cognitive load imposed on working memory.

According to Menristekdikti there are five important elements that must be a concern to encourage economic growth and national competitiveness in the era of the Industrial Revolution 4.0, namely: (1) Preparation of more innovative learning systems in higher education such as adjusting the learning curriculum, and increasing student ability in terms of data Information Technology (IT), Operational Technology (OT),

Internet of Things (IoT), and Big Data Analytic, integrating physical, digital and human objects to produce competitive and skilled college graduates, especially in the aspects of data literacy, technological literacy and human literacy. (2) Reconstruction of institutional policies in higher education that are adaptive and responsive to the industrial revolution 4.0 in developing the transdisciplinary science and study programs needed. (3) Preparation of human resources especially lecturers and researchers as well as responsive, adaptive and reliable engineers to deal with the industrial revolution 4.0. (4) Breakthroughs in research and development that support the 4.0 Industrial Revolution and the research and development ecosystem to improve the quality and quantity of research and development in Higher Education, Industry, and the Community. (5) Innovation breakthrough and strengthening of innovation systems to increase industrial productivity and improve technology-based startups.

To answer the preparation of universities in the era of the Industrial Revolution 4.0. learning media development research through the implementation of the Digital Learning System (DLS) is expected to provide educators with an understanding and skills about developing an assessment tool that is concerned with mastering the competencies of the main tasks of an educator in planning, presenting / implementing, evaluating learning. This research is also expected to provide a basis and direction for educators in evaluating the mastery of student competencies after going through the learning process. Distance learning is far more widely used in postsecondary educational settings. In the"2013 Survey of Online Learning," conducted by Babson Survey Research Group, revealed that the number of higher education students enrolled in at least one online course was above 7.1 million, approximately 33 percent of higher education students (Babson Study, 2014). The number of online course enrollments increased by roughly 411,000 students from the fall 2012 term to the fall 2013 term (Babson, 2014). Responses from 2,800 academic leaders where online learning recorded and ninety percent of the participants "believe that it is likely or very likely that a majority of all higher education students will be taking at least one online course in five year time" (Babson, 2014, p. 1).

Methods

Online courses have been found to be conducive to students who favor self-regulated learning (You & Kang, 2014). In a study conducted by Kirtman, a student responded to online coursework by stating, "It is more self-guided so I can spend more time on the concepts that I need help with and less on concepts that I can pick up quickly" (Kirtman, 2009, p. 110). Self- regulated learners have a tendency to use various "cognitive and metacognitive strategies to accomplish their learning goal" (You & Kang, 2014, p. 126). Learners who are able to hone in on their self-regulated learning skills frequently utilized time management, reviewed material online learning regularly, sought help from professors or peers, meet deadlines, and had the skill of metacognition in order to reflect upon their own learning (You & Kang, 2014).

The improving of instructional media through the implementation of the Digital Learning System (DLS) for the teaching of Oral Language Skills in one of universities English Language Study Program used research design (Research and Development). This method is a research method used to produce products and test the effectiveness of these products (Sugiono, 2010). In addition, (Davies 2004 in Mureno 2003) technical support for online learning, lack of access to hardware, poor monitoring of teacher progress and a lack of support by online tutors were just some of the issues raised by the asynchronous online delivery of training. One reason why there is so much discussion around online learning is that there are many purported benefits and uses of online learning. Some of the most important ones are: its effectiveness in educating students, its use as professional development, its cost-effectiveness to combat the rising cost of postsecondary education, credit equivalency at the postsecondary level, and the possibility of providing a world class education to anyone with a broadband connection (Bartley & Golek, 2004; De la Varre, Keane, & Irvin, 2011; Gratton-Lavoie & Stanley, 2009; Koller & Ng, 2014; Lorenzetti, 2013) There are two kinds of online learning and teaching that schools will need to balance based on their circumstances: synchronous (happening collaboratively and at the same time with a group of online learners and usually a teacher) and asynchronous (happening at any time, not necessarily in a group, but with teacher feedback).

Schools should not assume that synchronous teaching is required or even desirable in order to support effective learning. The goal is not to try to re-create face-

to-face (F2F) classrooms, which is impossible to do. Online and blended learning provide opportunities for learners to work more independently, expand their agency, and learn to use tools and strategies that they otherwise might not have. While it is not recommended to experiment in emergency situations, innovation, creativity and resilience are required to make things work. Most schools will discover they need to be adaptive and fast-thinking in order to ensure that learning continues in a healthy way. Research and development is a process or steps to develop a new product or improve existing products, which are accounted (Trianto, 2008).

The study of learning media through the implementation of the Digital Learning System (DLS) for teaching Oral Language Skills in English Education Study Programs has stages such as preliminary stage, development stage, and evaluation stage.

1. Preliminary stage. The preliminary stage is the stage of research development carried out to find out the analysis of problems and needs. This preliminary stage consists of analyzing the needs of learning media through the implementation of the Digital Learning System (DLS) of teaching in the English Education Study Program. Development of learning media through the implementation of the Digital Learning System (DLS) for teaching in the English Study Program.
2. Analysis stage. The need for learning media through the implementation of the Digital Learning System (DLS) for teaching Oral Language Skills is the first stage in research, to obtain information about learning media through the implementation of Digital Learning System (DLS) for teaching Oral Language Skills so that it can be used as a reference for developing the development of instructional media through implementation of Digital Learning System (DLS) for teaching that will be conducted through interviews with lecturers supporting Oral Language Skill courses with reference to interview guidelines.
3. The selection stage. After analyzing the needs, several learning media emerged, including the Digital Learning System (DLS) in e-learning.
4. Limitation analysis stage. This stage is carried out to determine the limits of the development of instructional media through the implementation of the Digital Learning System (DLS) of teaching that is adapted to competency standards and

basic competencies that have learning objectives with the need for delivery time in different classes.

5. The analysis stage of the development of learning media through the implementation of the Digital Learning System (DLS) of teaching. The development phase is the stage where information gathering and product development are carried out. This stage consists of:
   a. Development stage of learning media through the implementation of Digital Learning System (DLS) for teaching Oral Language Skills according to the device.
   b. The validation stage of the development of learning media through the implementation of the Digital Learning System (DLS) towards the development of learning media through the implementation of the Digital Learning System (DLS) of teaching based on standardization at the development stage, validated by 2 expert lecturers in the Department of English Language and Literature, Faculty of Languages and Arts, in one of the universities.
   c. Produce the initial product.
6. Evaluation Phase; The evaluation phase is the stage that aims to find out the development of learning media through the implementation of the Digital Learning System (DLS) of teaching in Oral Language Skill courses. The evaluation phase consists of limited trials, questionnaire distribution, questionnaire data analysis, known initial conclusions regarding the needs of students in the e-learning media.
   a. Doing Try Out

      After the validation stage of the development of learning media through the implementation of the Digital Learning System (DLS) for the teaching of Oral Language Skill lectures and the instrument validation phase is complete, the next step is a limited trial of the learning media that has been created. The trial was conducted by 3 Oral Language Skills lecturers and 25 students by applying Oral Language Skills material.
   b. Spreading the Questionnaire

      Lecturers and students who have finished trying the learning media through the implementation of the Digital Learning System (DLS) of teaching are allowed

to fill in a validated questionnaire. This lecturer assessment is intended to determine the quality of the learning media that is being developed.

c. Analyzing of Questionnaire Data

This stage is carried out after data obtained from a questionnaire filled out by lecturers and students. This data was analyzed using descriptive statistics. Descriptive statistics are statistics used to analyze data by describing or describing data that has been collected as it is without intending to make generally accepted conclusions or generalizations. Each question answer data in a questionnaire is presented first with the following formula:

$$P = \frac{f}{n} \times 100\%$$

Note:

P = persentagae

F = answering Number

N = total of answer

Results and Discussion

In this section, the researchers discusses how digital learning media in network systems or e-learning in Oral Language Skills courses is developed to produce the final product. The processes undertaken include: (1) Analyzing the needs of the student questionnaire by observing the learning of Oral Language Skills courses in the network or e-learning. (2) Developing learning media in network systems or e-learning in Oral Language Skills courses in the form of websites. (3) Validating to experts. (4) Revising the results obtained. (5) Producing a final product in the form of (draft) development of a learning website (e-learning) in the Oral Language Skills course with the address. The answer data questions that have been presented are then described and discussed to obtain initial conclusions about the quality of e-Learning Digital Learning System (DLS) learning media for the teaching of Oral Language Skills. The research location is in the Languages and Arts Faculty, in one of universities, especially in the Oral Language Skills course of English Education Study Program. The population and sample in this research were 3rd semester students in the Oral Language Skills subject Regular Classes Education A and B.

Evaluation and Need Analysis

Evaluation of existing Oral Language Skills material is carried out to find out whether the existing media and learning materials are relevant and meet student needs or not. Researchers found that some students were more interested in using e-learning in Oral Language Skills learning and with learning material content that was more interesting for students to study. This is supported by the results of the questionnaire given to students. The questionnaire was given to students to find out how the current teaching and learning process and how the media and material provided which includes things such as; learning material, aspects of knowledge, learning media, completion of tasks.

The results of the analysis are as follows:

a. Wants

From the aspect of knowledge, understanding in students' interest in using learning media in networks or e-learning is still lacking due to several factors that can be seen from the results of student questionnaires, such as the lack of interaction between lecturers and students when using media in the network or e-leaning to teach (50 %) and student difficulties in operating learning media (sometimes difficult 73.33%). On the other hand, students' understanding of Oral Language Skills material can already be said to be good with a percentage of understanding of 73.33%.

Table 1. The Result of the Student Knowledge

No	Statements	Responses	f	Percentage
1	How do you understand the six tasks of KKNI?	Very Understanding	1	3.33
		Understand	14	46,67
		Less Understand	15	50
		No Idea	-	0
2	What difficulties that you face when using digital / online learning media?	I don’t understand with my lecture’s explanation	10	33.33
		I am not interesting and feel bored in Oral Language Skills subject	4	13.34
		The lecturer didn’t have good interaction with the students when explain the material	15	50
		All	1	3.33
3	Do you feel the difficulty in	Very Difficult	-	0

	understanding learning material with on line submission?	Difficult	5	16.67
		Average	22	73.33
		Easy	3	10
4	Is the Oral Language Skills learning media used in accordance with the topic of discussion (listening and speaking)?	Very Appropriate	6	20
		Appropriate	22	73.33
		Average	-	0
		Not Appropriate	2	6.34

b. Lacks

In the learning media in the Oral Language Skills course, 46.66% of students prefer to study using online media rather than manuals (print-out material), then displaying material and audio in Oral Language Skills courses 83.34% of students say it is necessary. The use of native recordings for explaining the material in the Oral Language Skills course, students tend to want that, according to the findings of 93.33%. Layout on the display of Oral Language Skills subject matter, 53.33% of students wanted material that could motivate them to study in the course. For the learning media desired by students, they tend to choose learning media based on online (e-learning) and the use of video and images as much as 46.67%.

Table 2. Results of Analysis of Student Needs for Learning Media

No	Statements	Responses	f	Percentage
1	Kinds of learning media that you want to study in Oral Language Skills	Visual	5	16.67
		Audio	9	30
		On line (internet)	14	46.66
		Print	2	6.67
		Others	-	0
2	In your opinion, necessity to display images and audio in Oral Language material to support your understanding of the material	Very Necessary	25	83.34
		Average	4	13.33
		Not Necessary	1	3.33
		Others	-	0
3	In your opinion, the need for native speaker sound recordings for explanation in Oral Language Skills learning material that can be accessed online	Very Necessary	28	93.33
		Average	2	6.67
		Not Necessary	-	0
		Others	-	0
4	In your opinion, the color combination between the background and the letters used in the Oral Language Skills course should be…	Less Colorful	2	6.67
		The colorful is appropriate between background and letters	13	43.34
		Audio and material are appropriate	14	46.66
		Others	1	3.33
5	In your opinion, the layout	Interesting	16	53.33

	(layout) in the material Natural Language Skills and audio should be…	Appropriate color combination	6	20
		Motivate in teaching learning	8	26.67
		Others	-	0
6	I prefer learn to use	Book	2	6.66
		Video and pictures	14	46.67
		On line	14	46.67
		Others	-	0
7	I prefer learning English from.. .	Text, dialogue and picture	17	56.67
		Internet (*e-learning*)	4	13.33
		Interesting Video	9	30
		Others	-	0
8	I prefer Oral Language Skills by ...	Manual	4	13.33
		Individual	4	13.33
		Group	11	36.67
		On line (*e-learning*)	11	36.67

c. Needs

In terms of learning material, the use of media in explaining the material is the most desirable by students, this can be seen from the amount of percentage obtained from the questionnaire, which is 76.67%, the material is in accordance with basic competence, authentic and clear 46.67%, and in introducing the KKNI task , as much as 90% of students from the sample taken need detailed explanation. Means it can be concluded that the objectives of the existing Oral Language Skills learning material are less relevant to the objectives of the study program, where the existing Oral Language Skills material does not meet the needs of students to improve their skills (listening and speaking).

Table 3. Results of Analysis of Student Needs for Learning Materials

No	Statements	Responses	f	Percentages
1	Kind of teaching English techniques based on students' needs	Using book in explain the materials	3	10
		Using media in explain the materials	23	76.67
		Discussion	3	10
		Others	1	3.33
2	Kind of material that is appropriate in Oral Language Skills	Appropriate with the basic competencies	1	3.33
		Authentic materials	6	20
		Clear explanation	6	20
		All	17	46.67

3	In your opinion, if your lecturer gives you six tasks, it is better if…	Explain first based on instruction that is related with tasks in manual or online	24	80
		Introduce the kind of media that will be used in teaching learning process	2	6.67
		Give the model of tasks that is appropriate with the material of Oral Language Skills and then developed it.	4	13.33
		Others	-	0

Conclusion & recommendation

It is easier to authenticate student work online than most people think. However, it requires some changes to how assignments are presented and submitted for review. It also requires teachers to monitor students' online activity more closely than in normal classroom situations. Here are some basic guidelines to designing and evaluating online work for authenticity:

- Use more formative assessments that are designed to get students to work together and use online resources.
- Have a very clear policy on how to submit work online. Students who are given a precise procedure is less likely to make mistakes in submissions, which accounts for many online learning integrity violations.
- Create more assignments that are collaborative. If the teacher is working directly with groups of students on their work, it is far easier for the teacher to monitor what the students are doing and to check their understanding.
- Create questions and inquiries that require learners to embed their personal experiences and context into any assessed content. Since many online students will be in different locations, it will be easier for the teacher to see when a student is using their surroundings to compose their work.
- Use plagiarism checkers whenever students have to submit individual work, and assign drafts of parts of the work prior to a final submission. Most plagiarism checkers can accept drafts of assignments to check against final submissions.
- Create more multimedia assignments that require students to remix pictures, videos and text into their own creations.
- Create libraries and pathfinders for students to use as part of assignments, then ask students to quote from them as part of their work. This check how well they

are able to reference and cite work as well as reduce opportunities for copying the work of others.

- Interview students about their work using a synchronous chat with audio or video feeds, if possible. It is much more difficult to produce spontaneous answers when talking online. In general, the materials in the Oral Language Skills material that are less relevant to the needs of students in the English Language Education Study Program make students less motivated in learning English. Oral Language Skills material needed by students according to their needs where flexibility in working and collecting six assignments and learning media in the network or e-learning used in learning materials that are relevant and useful in learning. Development that will be needed in Digital Learning System (DLS) in Oral Language Skills are: uploading material, uploading video, uploading assignment, uploading values, connecting notification, discussion forum. Learning based on networks or e-learning implied by an internet connection enables time, distance, space, and learning styles of students and lecturers to be more effective and efficient. By having the implementation of Digital Learning System (DLS) in the course, it can provide convenience for lecturers and students in achieving digital learning goals.

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