The Need Analysis of Interactive Multimedia of MOODLE-Based Academic Writing in Sriwijaya University

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Abstract

In the era of industrial revolution 4.0, teaching is highly suggested to apply innovative technology and based on research. This present study aims at finding out how multimedia teaching of Moodle-based academic writing for Indonesian courses that are required by the students in Sriwijaya University. This is part of research and development. The method used in this research is survey method. The techniques for collecting data were questionnaire, literature review, and interview. The techniques for analyzing data were both qualitative analysis and quantitative analysis. Based on the research findings and discussions, several findings were discovered. At first, interactive multimedia of Moodle-based academic writing has a standard that needs to understand when designing its multimedia. Secondly, teaching academic writing for Indonesian courses in Sriwijaya University has not applied interactive multimedia using Moodle-based academic writing. The third finding is that the students need to study using interactive multimedia for Indonesian courses with some criteria, such as learning outcomes and goal of learning at the end of lesson, presented for each material, guidance in the form of video and text, attractive images, navigation, reading texts, and informative links, presented in the form of tutorial on text, animation, graph, images, audio, video, and completed by games and evaluation; either in multiple choices or essays.

Keywords: interactive multimedia, need analysis, academic writing, e-learning Moodle

INTRODUCTION

Industrial revolution 4.0 is an era which technology becomes the basis in human life. The use of unlimited computer and data is resulted from the development of internet and digital technology. In this era, the students have different characteristics compared to the teachers when they were at schools. Prensky (2011) said that digital generation is a native digital, they are surrounded by a lot of digital devices, such as computer, video games, digital music player, video camera, cellular phone, and many other digital devices.

Looking at this phenomenon, lecturers have to be educators in digital era with its characteristics. In this era, educators are not only having a wide knowledge, acquiring high skills, knowing in choosing and using models, methods, skills or strategy but also able to create and use technology for teaching. Besides, they have to be able to develop based-on-research and innovative technology for

teaching. This is in the line with the vision and mission of Sriwijaya University. Its vision is to become reputable and based-on-research university in science, technology, and arts in 2025. Moreover, the missions of Sriwijaya university are 1) holding and developing higher education in order to generate educated people that can implement, develop, and/or create science and technology; 2) holding and developing research in order to enhance teaching quality, science, technology, and/or arts and to have applicable values in development.

As an innovative step, Sriwijaya university has become a center in e-learning system called MOODLE *E-Learning for Sriwijaya Student* (MoDELss). Sriwijaya university has also supported the use of e-learning in its campus. The lessons are delivered in online using e-learning, online class, or video conferences using facility of ICT (information and communication technology). In e-learning classes, the lecturers are required to use and develop interactive multimedia teaching based on modern and up-to-date teaching technology.

Multimedia is the use of more than one medium, such as a combination of texts, graphs, animation, sound, and videos completed and integrated by two or more types of media, and emphasized on using the computer control as controller of all media combination (Arsyad, 2014). The similar view stated by Oyeyemi, et al. (2016), they define multimedia as a set of software that is mediated by computer or a combination of interactive applications that

combine texts, colors, images, graphics, animation, sound, audio, and moving video in one application. Meanwhile, interactive multimedia is one of the multimedia. It is a tool or a medium that present and deliver messages and foster students' interest and motivation to learn with a combination of elements such as texts, graphics, photos, videos, animation, music, and narrations that is related each other and can make the users do interactive communication (Admaja, 2016). Within interactive multimedia teaching, it can activate and motivate the students to learn because they are interested in multimedia system that provides interactive and attractive teaching.

The development of interactive multimedia teaching for Moodle-based academic writing for Indonesian course in Sriwijaya University is as one of attempts to implement the vision and mission of university. Not only that, it aims at enhancing academic writing ability. It is also known that writing activity is one of the unseparated activities for students in university. Saberi and Rahemi (2013:129—142) stated that academic writing posits a significant role to achieve success in academic field.

Before conducting the development of interactive multimedia, a need analysis to the students as object that use the teaching product is necessary. Its purpose is to gather information about the needs of interactive media of Moodle-based academic writing for Indonesian course in Sriwijaya university. Therefore, this research is necessary to conduct.

METHOD

This current study is part of research and development. the method used on this research was a survey method design. The techniques for analyzing needs were questionnaire, literature review, and interview. The questionnaire was distributed to the student-participants from second semester who entered Indonesian courses/classes. The population of the research in this preliminary study reached 2.424 who registered for Indonesian courses/classes in UPT *Mata Kuliah Pengembangan Kepribadian Universitas*. The sample taken for the research was 10—15 % out of population (Arikunto,2010:112). Therefore, the student-participants that were recruited for the research were 242 participants. Meanwhile, the interview was run for seven student-participants as representatives of seven faculties in Sriwijaya university.

The gathered data on the research were both quantitative and qualitative. Qualitative data was analyzed descriptively; on the other hand, quantitative data was using quantitative descriptive data analysis in the form of percentage. Table 1 show the criteria in categorizing the student needs.

Tabel 1. Categorization of Student Needs

Average percentage	Categories
1.00—1.72	Not necessary
1.73—2.48	less necessary
2.49—3.24	Necessary
3.25—4.00	Highly necessary

RESULT AND DISCUSSION

Nation (2009:27—30) divided needs into three components. There are necessities, lacks, and wants. All components are one set of tools to analyze the students' needs in learning target language. In the other words, these three components were used in analyzing the needs of students upon interactive media of Moodle-based academic writing for Indonesian courses. The first are necessities. They are what the students must learn and acquire. The focus of necessities is on the mastery and situation of the use. Lee and Owens (2004: 6—7) define necessities as a standard need on interactive multimedia teaching. The second are lacks. The lacks refer to the current existing student's knowledge and ability. And the third are wants. The students have their own desires and opinion about what they think useful and beneficial for them. Information about what they want is very useful for designing interactive multimedia teaching that meets the student's need.

Necessities

In this present research, the necessities can be defined as standard interactive multimedia that has to be used on Moodle-based academic writing for Indonesian courses. This is used by the students to meet the standard of process on KKNI (Indonesian National Framework of Qualification), the principles of teaching writing, the principles of

e-learning teaching, the guidance of subject group of *Matakuliah Pengembangan kepribadian* in higher education, and multimedia as a software that is mediated by computer or combination of interactive application that is integrated texts, colors, graphics, animation, sound audio, and moving video in one application used for sending teaching messages.

Lacks

Lacks refer to the current, existing student's knowledge. Information about lacks of interactive multimedia of academic writing for Indonesian courses can be discovered by interview on seven students who represent their classes in Sriwijaya university. From the interview, some findings are 1) learning and teaching activity is monotonous; 2) learning and teaching activity is emphasized only on lecturer's explanation and assignments; 3) the concepts taught in the class are unclear; 4) the ways of teaching are only focusing on one text-book; 5) there is less motivation during the lessons; 6) Direct writing activities are not optimal; 7) half lecturers do not apply *E-Learning* MOODLE provided by Sriwijaya University; 8) teaching academic writing does not use interactive multimedia. The existing teaching only uses *powerpoint, youtube*, and *Camtasia* video. 9) lecturers do not actively involve; 10) the materials taught in the class are unclear; 11) the materials taught in the class do not meet the students' needs; 12) the materials are different among the classes, 13) book and references are limited. 14) the evaluation is

taken only from the; 15) the evaluation system is unsatisfying, 16) the evaluation is too closed; 17) the evaluation for assignments are not conducted.

Needs

Needs refer to the students' needs. They have their own opinions about they think useful and helpful for them. For getting the information about student needs on interactive multimedia of Moodle-based academic writing, the questionnaire was distributed to the 242 student-participants as research samples.

The questionnaire consists of 20 items containing 19 multiple-choice item and one item of short answer type. Table 2 shows the result of students' responses on the given questionnaire of interactive multimedia.

Table 2: The Result of Student Needs of Interactive Multimedia

No.	Statements	Students' Rate	
1.	The use of interactive multimedia on Moodle-based academic writing for Indonesian courses in Sriwijaya University.	3.68	HC
2.	Multimedia is completed with learning goals and learning outcomes.	3.68	HC
3.	Multimedia is presented for each material.	3.49	HC
4.	Multimedia is completed with video tutorial as guidance.	3.61	HC
5.	Multimedia is completed with guidance book.	3.31	HC
6.	The multimedia display is completed with attractive images.	3.33	HC

7.	Multimedia is completed with navigation.	3.28	HC
8.	Multimedia is completed with texts.	3.46	HC
9.	Multimedia is completed with informative links.	3.45	HC
10.	The presentation of multimedia is in the form of tutorial.	3.56	HC
11.	Tutorial is presented in the form of texts.	3.29	HC
12.	Tutorial is presented in the form of animation.	3.48	HC
13.	Tutorial is presented in the form of graphics.	3.05	N
14.	Tutorial is presented in the form of images.	3.08	N
15.	Tutorial is presented in the form of audio.	3.19	N
16.	Tutorial is presented in the form of video.	3.62	HC
17.	Multimedia is completed with games.	3.21	B
18.	Multimedia is completed with evaluation in the multiple-choice form.	3.21	B
19	Multimedia is completed with evaluation in essays.	3.10	B

HC: Highly necessaries
N: necessaries
LN: less necessaries
NN: Not necessaries

From the table above, several points can be highlighted. At first, the students highly need interactive multimedia on Moodle-based academic writing. Secondly, the students think that they need to have interactive multimedia with some characteristics, such as it is completed with learning goals and learning outcomes, presented each material, completed with guidance in the form of video and texts, attractive images, completed with navigation and texts and informative links, presented in tutorial that provides texts, animation, graphics, images, audio and video, also

completed with games and evaluation, either multiple-choice or essay type of evaluation. Not only that, based on the response on short answer, the students need interactive multimedia that is attractive, engaging, using android application, accessible on internet, completed with electronic book, references, examples of academic texts, and feedbacks for each evaluation.

Based on research findings, the students need technology particularly in teaching academic writing on Indonesian courses. Interactive multimedia based on Moodle is one of technology offered to the students. Half of student-participant thinks that technology in teaching is highly needed. This is in the line with Prensky (2011), generations in digital era need digital things because they are surrounded by things digitally.

However, teaching of academic writing for Indonesian courses has not completed with interactive media yet. Half only uses powerpoint presentation, youtube, video camtasia, and many others.

The inability to create interactive multimedia is the biggest cause. Besides, the unavailability of interactive multimedia particularly for Indonesian courses is also one of the causes. The combination of interactive multimedia and electronic teaching device Moodle become innovative step for enhancing the students' academic writing skill. Therefore, based on the need analysis, the development of interactive multimedia of Moodle-based academic writing is significantly needed to

conduct.

CONCLUSION

Based on the research findings and discussion, several results can be concluded. Firstly, interactive multimedia on Moodle-based academic writing has a set of standards when designing its multimedia. At second conclusion, teaching academic writing for Indonesian courses in Sriwijaya University not yet applied interactive multimedia. The third conclusion, the students highly need interactive multimedia for Indonesian courses with a set of criteria.

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