**Developing Electronic Textbook for Students
in Curriculum and Education Technology Department,
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ABSTRACT

This study aims to find out the development of electronic textbook in the Curriculum Development Course. This research used research and development (R & D) method. The methods of data collection was carried out through literature study and questionnaire. The respondents of this study consisted of content and media experts as well as students majoring in Curriculum and Education Technology who passed the Curriculum Development course. Quantitative data analysis used in this research was descriptive percentage analysis. The result of the research shows that the electronic textbook developed by the Curriculum Unit of Education has fulfilled the eligibility requirement with 85% for content and presentation eligibility and 86% for media eligibility. Students response to electronic textbook shows an average percentage response of 81%. It means that electronic textbook are considered good categories and can be used in lectures.

Keywords: electronic textbook; curriculum development; student response

1. INTRODUCTION

Textbook are important components of learning. The availability of relevant textbook will greatly assist the teaching and learning process in universities. According to Priyanto (2012) textbook can support the realization of student centered learning (SCL) program, where the learning paradigm in school / college is directed more to the students as the subject of learning and the teacher/ lecturer acts as facilitator. The spread of lecture contents and lack of reference certainly weaken the learning process in college.

The development of information and communication technology also gives impact to technology development of teaching book. This also affects the interest of readers who switches to reading electronic books rather than regular printed books. Electronic books that can be called e-book offers more convenience and value for the readers. Electronic books (e-books) are easily accessible for students by using home computer devices, laptops and smartphones that are owned by students.

One of the courses to equip students who choose the concentration of curriculum development is Curriculum Development Course. This course examines the characteristics, conditions, challenges and developmental demands faced by one or more educational units at primary, junior and senior secondary education, both on formal and non-formal education; on the types of general education, vocational, academic, vocational-professional, service, community education and special needs education. Also discussed are curriculum and learning models eligible to the units of education; concepts, foundations and principles, the steps of preparation

and design, implementation and evaluation, as well as supporting resources.

The above description of this course provides direction of knowledge and skills for students in developing curriculum in various levels and type of educational unit. Not only in the type and level of primary to secondary education, but from early childhood education to higher education, vocational, service and alternative education which are growing in Indonesia. Learning praxis in Curriculum Development Course still experiences some obstacles, especially the problem of learning resources or reference books availability and the tendency of reading interest among students is still low. Based on the observation results for two semesters, the implementation of Curriculum Development Course, supervised by the researcher, still experience the above two problems. So far, the learning process often uses the theory of curriculum development in general, so the subject is general and less focus on curriculum development in each educational unit. Teaching contents tend to be separated and come from various sources. This certainly gives a bad impact to increase the knowledge and competence of students in their learning outcome.

The obstacles mentioned above become clearer when it comes to the subject of curriculum development at the level of official education unit, vocational education, and alternative education which are now flourishing in the world of education in Indonesia. Students often complain that it is difficult to get the reference book. Even when they can find any, there is little information that can be obtained by students. The problem of course should not be left alone. Addressing the issue of reference availability as the source of learning is important in the development

of textbook. Textbook is a collection of contents or teaching contents that become a guide for lecturers and students in teaching and learning activities in universities.

Textbook is a collection of contents or teaching contents that become guides for teachers/lecturers and students in teaching and learning activities. According to Mudzakir (2009), there are three components that must be considered in the writing of textbook, namely basic components, complementary components and finishing components. Basic components are the parts used as reference in assessing or evaluating a textbook covering: content aspects, presentation aspect, language/ legibility aspects, graphic aspect, security aspect. Complementary components are parts that complement and support the perfection of a book that includes: guidelines, recording contents such as tapes or CDs, student workbooks containing tasks and exercises, as well as the source book. Finishing components, including: color, font size, glossary, index and bibliography.

Textbook is the most important infrastructure that must be owned by every school/ college. The textbook has a major role in classroom teaching at all levels of education. The existence of a quality and relevant textbook will create a systematic and orderly learning. According to Priyanto (2012) the availability of textbook will simplify and accelerate the realization of students-centered learning program (SCL), where the paradigm of learning in school (college) is more directed at students as the subject of learning. Have more reading activity of the content and then do intensive discussion with peers and lecturer. Students are required to be more active in teaching and learning process and lecturers mostly run their role as mentors and learning facilitators. Electronic textbook developed later on will be able to provide various information related to the development of curriculum in various educational units that so far have been very difficult for students to obtain.

2. METHODS

This research used Research and Development method. This research will produce instructional media product in the form of Electronic Textbook through pre-production, production and post-production stage with validations from content expert and media expert which then implemented in learning. The research subjects for product validation are media experts and content experts. The population of the study are the students of Curriculum and Education Technology and sample of the research are students who have taken Curriculum Development Course. The data collection activities used were documentation study techniques (curriculum documents and the lesson plans of curriculum development course), expert validation sheets and questionnaires to find out the students' response to

develop the electronic contents. The data analysis used in this research was percentage descriptive analysis.

3. RESULTS AND DISCUSSION

The research activities were conducted in the Department of Curriculum and Education Technology, Faculty of Education, Semarang State University, on May- October 2016. The research respondents consisted of content and media experts, as well as students majoring in Curriculum and Education Technology, Faculty of Education, Semarang State University, batch 2014. The results of this study can be described as follows.

a. The Development of Electronic Textbook in Curriculum Development

The development of electronic textbook includes the following stages; needs analysis, data collection, product design, design validation, design revisions, internal testing, product revisions, usage trials, final revisions, and final products. First, needs analysis. This stage serves to collect information about textbook expected by lecturers and serves to improve students' learning outcomes. The development of textbook must be in accordance with the needs of lecturers and students to achieve learning achievement. Based on the results of preliminary observations, there were learning contents that are difficult to be accepted and understood by students during lectures, the conditions of the user i.e lecturers and students, as well as facilities and the supporting infrastructure.

Second, data collection. The data collection stage was conducted to collect the required data covering the subject matter, research journal, scientific article and instructional learning books, that all the content will be used as content for making Electronic Textbook.

Third, the product design. At this stage all the information or supporting data that has been collected will be developed into a program. Product design should be tailored according to needs analysis, the steps taken in designing the product include preparation of Semester Learning Plan and making electronic textbook products.

Fourth, product validation. Validation of product design was done to find out whether the program is worthy to be tested to the student or still need revision. Design validation in this research was conducted by one media expert and one content expert. The media expert is one of the media lecturers from the Curriculum and Technology Education Department and the content expert is a curriculum expert. The product validation results can be viewed in table 1 on this page.

Table 1. Content Expert Validation Results

Assessment Aspect	Indicator	Maximum Score	Score	Percentage	Information
Content Eligibility	Contents are in accordance with learning outcome	12	11	92%	very eligible
	Content Accuracy	28	23	82%	very eligible
	Up-to-date	20	17	85%	very eligible
	Triggering Curiosity	8	7	88%	very eligible

Table 1 above shows that the assessment from content experts on the eligibility of the electronic textbook content draft with the following results; 92% score for contents are in accordance with learning outcome, 82% for contents accuracy, 85% for its up-to-date aspect, and the ability to encourage students' curiosity is 88%. The average expert content validation rating is 87%.

From the eligibility aspect, the presentation of the content expert judgment provides an assessment of the presentation technique quality is 88%, presentation support is also 88%, learning presentation is 75%, and 88% is for the coherence and sequence of thought. The eligibility assessment of the textbook draft averaged on the percentage of 84% with very eligible criteria.

From the assessment of the content expert's validator to the eligibility of the content

Table 2. Media Expert Validation Results

Assessment Aspect	Indicators	Maximum Score	Score	Percentage	Information
Graphics Eligibility	Book Size	8	8	75%	very eligible
	Cover Design	32	30	94%	very eligible
	Content Design	76	73	96%	very eligible
Average Score for Graphics Eligibility Aspect				88%	very eligible
Language Eligibility	Direct (to the point)	12	10	83%	very eligible
	Communicative	4	3	75%	very eligible
	Interactive Dialog	8	7	88%	very eligible

Based on table 2 above, it is known that the result of media assessment are as follows; 88% for graphics eligibility aspect and 85% for language eligibility aspect. The overall average result shows the percentage of 86%. When converted by percentage ranges and the eligibility criteria of textbook eligibility, it can be stated that

Average Score for Content Eligibility				87%	very eligible
Presentation Eligibility	Presentation technique	8	7	88%	very eligible
	Presentation support	32	28	88%	very eligible
	Learning presentation	4	3	75%	eligible
	Coherence and sequence of thought	8	7	88%	very eligible
Average Score for Presentation Eligibility				84%	very eligible
Average Score from Content Expert				85%	very eligible

and presentation is averaged 85%. When converted by percentage ranges and the eligibility criteria of textbook eligibility, it can be stated that the level of validity of the textbook produced is at an interval of 82% - 100%. This means that the draft of the textbook is "very eligible" with a description "eligible for trial in the field with revisions". In general, the textbook produced can be applied in lectures after being revised according to the expert input. Based on the results of content experts validation, the given suggestion was that the book should be revised and the concept offered needs to be equipped with real examples of specific cases.

While the expert for media validation was Ghanis Putra Widhanarto S.Pd., M.Pd a media expert. Media expert validation results can be seen in table 2 below.

	Suitable with the students development	8	7	88%	very eligible
	In accordance with language principles	8	7	88%	very eligible
	The use of terminology, symbol, and icon	8	7	88%	very eligible
Average Score for Language Eligibility				85%	very eligible
Average Score from Media Expert				86%	very eligible

the level of validity of the textbook produced is at an interval of 82% - 100%.

This means that the draft of the textbook is "very eligible" with a description of "eligible for trial in the field with revisions". In general, the textbook produced can be applied in lectures after being revised according to the expert media input. Based on the results, of validation of

content experts some the given suggestions were that the book should be revised in terms of layout design and coloring by adjusting the principle of message design and multiplying the illustrations that reflect the content. Meanwhile, the media (teaching contents) is good enough and can be continued to field test .

Fifth, the design revision. The design revisions were made after being validated by experts. Based on the criticism and suggestions given by media experts and content experts, the weaknesses of the product can be gathered. Revising the product is useful for upgrading the finished product to be ready for trial to the student. Based on the results of content and media validation, some parts have been revised in the development of electronic textbook, namely (1) it has now been equipped with real examples of specific cases; (2) improvement of layout design and coloring, in accordance with the principle of message design; and (3) added illustrations that reflect the content. Suggestions from the two experts above have been accommodated and can then proceed with the internal test stage.

Sixth, internal test. Internal test was conducted to test and find some errors the developed product if any. This test has found that some layouts of this electronic textbook must be changed. Seventh, product revision. This revision was made to correct some product errors found in the internal tests. It must be done before be tested into the classroom learning. The revision of this product has produced a textbook that was ready to be tested.

Eighth, the test of the product usage. This test was conducted to implement the developed product to the target of the research. It is the student of Curriculum and Education Technology Department of FIP Unnes. Ninth, final revision. This was made to add and correct some errors after the test of the product usage. Through this final revision, the developed product will be perfect for use in learning. Based on the results of student responses to electronic textbook, the final revision was done well.

Tenth, the final product. The final product was a product that meets all the learning needs required by students and lecturers in the classroom. Based on the results of data collected by questionnaire on validation assessment of media and material experts, student responses questionnaire, and making revision regarding some suggestions and comments, it can be stated that the draft of electronic textbook on Curriculum Development Course especially on the School-based Curriculum can be used as a textbook.

All validators had declared that the quality of textbook was categorized as very

feasible. Furthermore, regarding the comments and the suggestions of the validators, the draft of the textbook was revised for many times so that it became perfect one and finally can be stated as a ready-to-use textbook by students majoring Curriculum and Education Technology in FIP Unnes.

b. The student Responses to the Electronic Textbook

There were 100 students of Curriculum and Education Technology Department has given their responses to the electronic textbook. They are 5th semester students in the academic year of 2016/2017 that had already taken Curriculum Development Course especially on the School-based Curriculum. They had already known the characteristics and the purposes of this course. They were expected to give a very useful assessment and response for the quality of electronic developed textbook.

Based on the student responses, it indicated that the average percentage of student responses to the electronic textbook was 81%. If converted into the percentage range of student responses, it was in the intervals of 63% - 81%. It means that the draft of the textbook was in the good category so that it can be used in lectures. This research was in line with the results of previous research. The display design of the electronic book used three-dimensional e-book technology known as flipbook. Many people are more interested in it. They do reading a book like on the monitor screen (Riyanto et al. 2012). Flipbook was begun to be developed for learning at schools. According to Ramdania (2007), the use of flipbook in learning can improve student-learning outcomes. It was influenced by the interest of students on the appearance that is more interesting and interactive than the printed book. This latest technology provides great opportunities for the utilization of digital books in distance learning (Gorghiu, 2011). In addition, according to Shidieqy and Lestari (2010), there are several things needed to develop digital book as a learning resource. They are learners, facilities and learning media, facilitators/ teachers, and the availability of evaluation/ test.

4. CONCLUSIONS AND SUGGESTIONS

Based on the results of data analysis and discussion, it can be concluded that: (a) the electronic textbook on the School-based Curriculum Development has met the eligibility requirements. The material feasibility and display level of the book was 85% and media feasibility was 86%. It was in the very feasible category and applicable in lectures; (b) the student responses to the electronic textbook showed an average percentage responses of 81%. It means that the

electronic textbook had good category and can be used in lectures.

Lecturers should always develop their textbooks in accordance with the needs and characteristics of students in the Curriculum and Education Technology Department of FIP Unnes to reach the achievement of learning. By using this electronic textbook, the students are expected to be more active in learning (self-learning) to increase their competences. The university, the faculty and the department should facilitate the availability of more comprehensive learning resources as lecturer monumental works. For other researchers, further research is needed to find out the effectiveness and influence of the electronic textbook implementation on School-based Curriculum Development.

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